DICTIONARY OF LANDSCAPE ARCHITECTURE AND CONSTRUCTION
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This document was made possible through the kind and understanding patience of my
dear wife, Terry, and six wonderful children while most of my spare time for one year was
spent in research, writing, illustrating, and photographing. Thanks to each of them.

In my opinion, McGraw-Hill provides a great service to the seeker of knowledge, under-
standing, and wisdom in providing progressive, substantive, educational material.

Through the process of writing and going to final copy many people should be thanked,
but I would be especially remiss not to give written appreciation for Cary Sullivan, who
through her vision persisted in pursuing this book to its fruition; and Danielle Lake,
who was most helpful through the editing process.
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This publication represents research and analysis compiled, edited, and written by the author. In that effort, the following information may be helpful to the user for better understanding of this dictionary:

1. Words applicable to landscape architecture but most commonly understood are not defined within this work (i.e., water).

2. Most entries with multiple words do not have the words individually listed and defined so as to avoid redundancy and conserve space (i.e., crop coefficient, or cross connection).

3. Many conglomerate entries (multiple word entries) that are listed and defined as separate words and retain the given meaning of each word are not listed because the meaning is obvious with the meaning of each defined word (i.e., turf irrigation system).

4. Many words, such as definitions of abbreviations, have obvious and universal meaning with almost no variation from source to source. These are recorded without embellishment.

5. Many word definitions are modified, edited, or recorded from the standpoint of a landscape architect.

6. Definitions specific to the landscape industry that are less understood, or those affecting the health, safety, and welfare of people, plants, or other organisms are often expanded and expounded upon with more than a simple definition.

7. Words with the same definition that are commonly interchangeable are given identical definitions so that the user does not have to be referenced to another word before obtaining a definition. However, when there are interchangeable words or terms with one being more acceptable than the other, a reference is made from the less common term or word to the more common word or term for the definition.

8. Some definitions are newly recorded with no available references for gaining an understanding, but instead insight to the landscape industry and its evolving or new individualized jargon afforded the definition (i.e., setting heads).

9. The definitions in this work may be time-sensitive as meanings change over time and may also vary with circumstances. Care has been taken to provide the best definitive information available, understood, and researched by the author from his available sources at the time of writing. This document does not constitute a legal or binding list of definitions.
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ABOUT THE AUTHOR

Alan Jay Christensen, a member of the American Society of Landscape Architects, the American Nursery & Landscape Association, the Irrigation Association, the American Institute of Certified Planners, and the International Ecological Engineering Society, has more than 27 years’ experience in landscape architecture and landscape construction. In successfully operating several businesses for 23 years in the landscape industry, he has performed and managed landscape design, construction, and maintenance. His well-rounded experience in landscape and construction from New York to Hawaii has led him to obtain licenses as Landscape Architect, Irrigation Auditor, Landscape Contractor, Residential Construction Contractor, Commercial Construction Contractor, and Demolition Contractor. The holder of a patent for a method of planting trees that targets contaminants in brownfields, he has taught land planning at Brigham Young University and conducted research at Harvard University. He has special interest in debunking fallacies and misconceptions common in landscape architecture and is the author of several articles for professional landscaping publications.
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A

A, a 1. Abbreviation for acre. The more common abbreviation for acre is ac. 2. Abbreviation for ampere(s). 3. Abbreviation for area. In landscape applications, area is often expressed in square feet, square yards, or square meters. 4. In botanical terms, a prefix meaning not; different from; away from; without.

A1 horizon A soil layer that is a subhorizon of the A horizon, distinguishable by its darker color from the rest of the A horizon due to a higher content of organic matter.

A2 horizon A soil layer that is a subhorizon of the A horizon, distinguishable by its lighter color from the rest of the A horizon due to a lack of organic matter because of leaching or eluviation.

A3 horizon A soil layer that is a subhorizon of the A horizon, similar to the A2 horizon, but also transitional to the B horizon, with visually distinguishable changes from either.

AAA Abbreviation for the American Arbitration Association.

AAN Abbreviation for the American Association of Nurserymen (now known as the ANLA).

AAN Standards The American Standard for Nursery Stock, as published by the American Association of Nurserymen (AAN).

AARS Abbreviation for All-American Rose Selections.

AAS Abbreviation for All-American Selection.

abacus A slab or division that forms the uppermost portion of the capital of a column, usually wider than the column.

abandonment A word often used in contract law to describe the failure of both parties to abide by the terms of a contract.

abate Removal of material, usually in making a design or producing a product from wood, metal, stone, etc. In metal work, this may be descriptive of the beating or pounding of a design into the material.

abat-vent Angled members with some space between them in an opening of an exterior wall or fence used for access to light while blocking wind and screening views. See also louver.

abaxial In botanical terms, the side away from the axis.

ABC 1. Abbreviation for aggregate base course. 2. A reference to a type of soil profile. (See ABC soil.) 3. Abbreviation for Associated Builders and Contractors.

ABC soil A mature soil profile that contains the three major soil horizons.

aberrant A descriptive term given to individual plants or species different in some way from the group they are associated with.

abiotic Not living.

abortive In botanical terms, an imperfectly developed portion of a plant.

Abram’s law The strength of concrete is directly influenced by the ratio of water to cement.

abrasion The act of wearing away by friction.

abrasive A substance harder than the material it is used against in rubbing or grinding to create
friction and wear away the softer material. Examples of useful abrasives are diamonds, carbide steel, metal shot, and sand (as with sandpaper).

**abrasive surface** A surface that is roughened for safety, such as the front tread of a stair.

**abrevoir** A space, gap, or joint between stones that is filled with cement or mortar.

**abscisic acid** A growth-inhibiting plant hormone, which also promotes leaf fall (abscission), the formation of potato tubers, and the change to dormancy in leaf buds.

**abscession** The natural separation of fruit, leaves, or flowers from a plant at a special area of tissue.

**abscission layer** The layer of tissue in a plant that facilitates the dropping of fruit, flowers, and leaves that cease to function.

**absolute pressure** In pumping references, the total pressure above absolute zero.

**absorbed moisture** Water that has been absorbed into the pore spaces of a solid such as soil or wood.

**absorber** 1. That portion of a solar collector that collects and absorbs radiant heat energy. 2. A material that collects and holds pollutants such as oil from water runoff, usually within a catch basin or an oil separator. 3. A device used to arrest the shock of water hammer.

**absorbing well or dry well or waste well** A well collecting surface waters, providing for the water to be dispensed and absorbed into the ground.

**absorption** 1. A process by which a gas and/or liquid enters into a solid material. This occurs through pores in a porous solid material. This process is usually accompanied by a chemical and/or physical change of the solid material. 2. The process by which radiant energy is converted to other forms of energy. 3. The increase in weight of a solid material due to the process described in (1.) 4. The increased weight of a tile or brick when immersed into boiling water or cold water for a determined period of time. This weight change is usually expressed as a percentage of the weight of the dry weight. 5. A process where one substance adheres to the surface of another.

**absorption bed** An excavation that is filled with coarse aggregate and has a piping system for distribution of septic tank effluent.

**ABS plastic or ABS pipe** A plastic of acrylonitrile butadiene styrene often used to make pipe that is resistant to impact, heat, chemicals, and freeze-thaw. It is softer than PVC plastic and usually black.

**abut** 1. To make contiguous or to make a contact point. 2. In real estate, two properties with a common property line.

**abutment** The part of a structure such as a bridge or an arch that bears the weight of the span and is usually made of masonry or concrete.

**abuttals** Those boundaries of one piece of land that are in common with adjacent pieces of land.

**abutting joint** A joint between two pieces of wood, where the direction of the grain in one piece of wood is at an angle (usually 90°) to the grain in the other.

**AC, ac, a-c, a.c.** 1. Abbreviation for acre(s). 2. Abbreviation for alternating current.

**ACA Abbreviation for ammoniacal copper arsenate.** A thorn-like or spike-like protrusion.

**acaulescent** In botanical terms, a plant or leaf that is without a stem, or appears to be without a stem.

**ACC** Abbreviation for acid copper chromate.
accelerated erosion The movement of earthen particles in water runoff increased by human activities influencing the land. Activities causing increased erosion include removal of vegetation, loosening of soil, concentrating areas of runoff, or interruption of natural drainage patterns.

accelerator A material or substance added to concrete, grout, or mortar to increase its rate of hardening, and/or decrease its setting time.

access A way of vehicular, pedestrian, or other approach, entry, or exit.

access door A door that provides access to equipment for maintenance, inspection, or repair.

access panel or access plate A removable panel or plate (usually secured with screws or bolts) in a frame that is usually mounted in a ceiling or wall and provides access to concealed items or equipment. It permits inspection of an otherwise inaccessible area. Wires and/or pipes for irrigation systems or pumps are sometimes concealed behind these panels in buildings. They are also sometimes designed into park restrooms and pavilions for infrequent access to areas in ceilings or behind walls.

accessibility standards Parameters and recommendations regarding accessibility of handicapped persons to walks, structures, etc. See Americans with Disabilities Act and Uniform Federal Accessibility Standards.

accessible 1. Easily accessed. 2. Reachable by removal of a cover, panel, plate, or similar obstruction. 3. Easily accessed by those disabled in wheelchairs or walkers.

accessible means of egress A path of travel, usable by a person who has impaired mobility, that leads to a public way.

accessory building A building with a secondary use to that of the main building located on the same plot. Refer to local jurisdictional agencies for their definition.

accessory structure A subordinate structure detached from, but located near, a principal building. Accessory structures usually include garages, decks, fences, sheds, etc.

acclivity A slope above; an upward slope.

accouplement Placement of posts, columns, or pillars in sets of two (paired).

accrescent A botanical term, something that increases in size with age.

ACD Abbreviation for an automatic closing device.

ACE Abbreviation for Agricultural Conservation Easement.

acerose In botanical terms, a plant part shaped like a needle or having a needle-like tip.

acetone A highly volatile solvent often used in lacquers, paint removers, thinners, etc.
acetylene

A colorless gas, that when mixed with oxygen, burns at a temperature of about 3500°C; used in welding.

acetylene torch  A metal-cutting and welding instrument that operates on compressed acetylene (a colorless hydrocarbon) and oxygen.

achene  In botanical terms, a small, dry, one-celled, one-seeded, indeliscent fruit. In technical terms, it does not include those fruits with specialized features such as a samara, caryopsis, nut, or utricle.

achlamydeous  A flower without a perianth (outside envelope, calyx, corolla).

achromatic color  White light; a color that does not elicit hue.

ACI  Abbreviation for American Concrete Institute.

acicular  In botanical terms, needle-shaped.

acid  1. In reference to soil, this indicates a pH below 7.0 (neutral). 2. A chemical substance capable of releasing excess protons (hydrogen ions).

acid copper chromate (ACC)  A water-borne salt preservative for wood. Wood must be pressure treated for this preservative to be effective. It is highly recommended by experts as it is odorless, clean, does not leach, and its color can be masked easily when dry by painting or applying a solid color stain. This stain is not only good for preserving wood above grade, but can also be used for preservation of wood to be placed underground.

acid etched  A reference to a metallic surface, glass, or concrete that has been treated in an acid bath to provide a rough surface or to remove a portion of its surface.

acidic  1. Soil or water with a pH less than 7.0. Some only consider acidic to be 6.6 or less. 2. Igneous rocks containing more than 65% silica.

acidity  The measure of a substance’s pH below neutral (7.0).

acid rain  Any rain that contains sulfur dioxide.

acid soil  Soil having an acid reaction. It is usually in reference to a soil having a pH value of less than 6.6, but is technically applicable to any value lower than 7.0, which is neutral. These soils are common in areas of high rainfall. The most common cure for highly acidic soils is the addition of lime.

acisculis  An old term for a small mason’s pick, with a flat face and pointed peen.

ACM  Abbreviation for asbestos-containing material. Any material with over 1% asbestos content.

AC pipe  Asbestos-cement pipe that was commonly used for buried pipelines. It combines strength with light weight and is immune to rust and corrosion. It is no longer made because of the health hazards associated with asbestos.

acquiescence  1. An act of concurrence by adjoining property owners that resolves a boundary dispute or establishes a common boundary, where the definite or more accurate position of same has not or cannot be defined by survey. 2. The tacit consent of one owner, by not making a formal objection, to what might be an encroachment by an adjoining property owner over a questionable boundary.

acre  English or U.S. measurement of area equal to 4840 sq yd; 43,560 sq ft; 0.405 hectare; 4046.85 sq m.

acre-foot  1. A reference to a quantity of water required to cover one acre to a depth of one foot.
2. A quantity of any material equal to the amount required to cover an acre one foot deep.

**acrid** Sharply bitter, unpleasantly pungent, or harsh in smell or taste.

**acropodium** 1. A raised pedestal bearing a statue. 2. The lowest member of a pedestal of a statue.

**acrylonitrile butadiene styrene (ABS)** A plastic formulated into piping that is used primarily in landscape work for drainage systems, storm sewers, irrigation systems, and underground electrical conduits. It is softer and much more bendable than PVC.

**ACS** Abbreviation for actual.

**AC soil** An immature, incomplete soil profile with only the A and C horizons present, and no B horizon. These young soils commonly develop from alluvium or on slopes.

**actinomycetes** A group of soil microorganisms intermediate between fungi and bacteria. They may be filamentous much like fungi, and yet produce spores similar to bacteria. They are microscopic in size and are usually the source of the fresh, uniquely pleasant odor of newly tilled soil. They are active in decomposition, especially of cellulose.

**activated sludge** 1. A recycled, dried product of municipal sewage treatment plants. It has higher concentrations of nutrients than composted sludge with a rating of approximately 6-3-0.5 for primary nutrients. It is usually sold in a dry, granular form as a general-purpose fertilizer that does not burn, and is slow to release its nutrients. The long-term effects of using sewage sludge are still under investigation. Heavy metals such as cadmium may be present in the soil where sewage sludge has been used, and they may build up over time. There are possible negative effects depending on the content and origin of the sludge used. 2. Sewage within aerated wastewater treatment basins and its associated complex variety of living microorganisms. After settling, a portion of this microbial sludge is recycled to influent of the treatment system. Microbes there continue to grow. The remaining activated sludge is removed from the treatment system and disposed of another way.

**active earth pressure** The horizontal pressure of retained earth in a horizontal direction.

**active layer** The surface layer in climates where permafrost exists. It is characterized by freezing and thawing.

**active open space** Land designated or reserved for recreational facilities such as swimming pools, ball fields, court games, picnic tables, exercise courses, playgrounds, ice skating, etc.

**active pressure** The force exerted by retained earth.

**active recreation** Athletic activities, or those activities of leisure requiring physical effort and often requiring equipment. This type of activity usually takes place at prescribed places, sites, or fields. It includes such activities as swimming, tennis, other court games, baseball, other field sports, golf, playground activities, jogging, rowing, etc. See also passive recreation.

**active sludge** A sludge that is rich in destructive bacteria; useful in breaking down fresh sewage.

**active solar energy system** A system that collects solar energy and distributes that energy by mechanical devices such as fans or pumps that obtain their energy from a conventional source (not from solar energy).
**Act of God**

**Act of God** An unexpected event not controllable by human influence.

**actual** This word is often used in specifying weight amounts of a specific nutrient in a fertilizer to be applied. This can be determined by taking the percentage of the specific nutrient in the fertilizer mix and multiplying it by the weight of the fertilizer being used.

**actual start of construction** The first placement of a permanent construction fixture on site.

**aculeate** In botanical terms, prickly or beset with prickles.

**acuminate** In botanical terms, sharply tapering to a slender point. (Compare with retuse, cuspidate, aristate, emarginate, acute, mucronate, obtuse.)

**acute** In botanical terms, pointed, or ending in a point less than a right angle. (Compare with retuse, cuspidate, aristate, acuminate, emarginate, mucronate, obtuse.)

**acute angle** Any angle measuring less than 90°.

**acute arch or lancet arch** A sharply pointed arch whose centers are farther apart than the width of the arch.

**AD, ad** 1. Abbreviation for air dried. 2. Abbreviation for access door. 3. Abbreviation for area drain. 4. Abbreviation for as drawn. 5. A designation of the surface grades of two sides of a piece of lumber, especially plywood. 6. A Latin prefix used in botanical terms meaning to or toward.

**ADA** Abbreviation for Americans with Disabilities Act.

**adapt** To make suitable for a particular purpose, requirement, or condition, by means of modifications or changes.

**adapter** 1. A fitting or part that facilitates different types (copper, PVC, polyethylene, galvanized) or sizes of pipe to be connected together. 2. A device manufactured for the purpose of connecting tubing or equipment (especially electric) that is of different size, connection type, or design.

**adaptive use** The extensive alteration, restoration, and/or renovation of an existing structure or building so that it will serve a new purpose.
ADD, add 1. Abbreviation for addendum.  
2. Abbreviation for addition.

addendum A change or revision to drawings,  
specifications, or other information on a project  
out for bid, which has an effect on bids. It occurs  
before receipt of bids, and is usually stated in let-
ter form that ethically should be delivered to all  
bidders (in fairness) with the drawings or papers  
indicating the change so as to allow understand-
ing in comparison of bids. These changes be-
come a part of construction documents for  
contract purposes.

addition 1. Construction that increases the  
height or floor area of an existing building or  
adds such items as a porch or attached garage.  
2. The increase to an existing contract amount.  
The professional procedure for accommodating  
such a change is a change order.

additive A substance added to another sub-
stance to improve its characteristics such as  
those used in paints, plasters, mortars, etc. See  
also admixture.

additive alternate An option on a bid for  
more services or materials not in the base bid,  
showing increased costs, if any, associated with  
the option.

ADF Abbreviation with reference to shipping  
lumber meaning after deducting freight.

ADH, adj Abbreviation for adhesive.

adhesive alternate An option on a bid for  
more services or materials not in the base bid,  
showing increased costs, if any, associated with  
the option.

ADH, adh Abbreviation for adhesive.

adhesive alternate An option on a bid for  
more services or materials not in the base bid,  
showing increased costs, if any, associated with  
the option.

ADJ., adj Abbreviation for adjustable.

adjoining grade elevation The average eleva-
tion of the finish grade adjoining all exterior  
walls of a building or structure calculated from  
grade elevations taken at intervals (usually 10 ft  
or 3 m) around the perimeter of the building.

adjustable hanger An apparatus for holding  
pipes or equipment hung from structures, which  
has the ability to change the elevation of the  
pipe or device held without detachment of the  
apparatus from the structure.

adjustable wrench A wrench with an ad-
justable portion of its jaw movable by a knurled  
firm to facilitate grasping objects of varying sizes  
(e.g., pipe wrench, crescent wrench).

adjusted sodium adsorption ratio An  
index of permeability problems with regard to  
water quality.

admixture A material or chemical added to a  
concrete mix to accelerate cure, retard curing,  
repel water, or change its normal properties.

adobe 1. Clay used in making adobe brick.  
2. Any unfired brick.

adobe brick Clay and straw molded into  
bricks, sun-dried and used in constructing struc-
tures. Adobe brick walls can be coated with lime  
to improve weather resistance.

adpressed In botanical terms, pressed against  
another part.

ADR Abbreviation for alternative dispute reso-
lution.

adsorption Liquids, gases, or suspended matter  
adhering to the surfaces of, or in the pores of, an  
adsorbent material (without a chemical reaction  
or bonding).

ADT Abbreviation for average daily traffic.
advanced irrigation control system

**advanced irrigation control system** A smart controller that controls irrigation by monitoring the weather and/or the soil moisture. They adjust station run time(s) and/or the frequency when there are changes detected in the soil moisture and/or the weather. Some will monitor wind, rain, and/or temperature. Another feature of some of these controllers is that they can monitor flow in pipes to determine if there is a break in the line. The features of these controllers are not all the same, but they include some method of automatically adjusting their schedules through the seasons of the year in an attempt to keep the optimum amount of moisture in the soil. These controllers are quite helpful in preventing waste of irrigation water, but their accuracy and usefulness is only as good as their monitoring devices and monitoring locations.

**advanced wastewater treatment (AWT)** Treatment of wastewater more than the secondary treatment level.

**advance ratio** In furrow irrigation, a ratio of the time for the water to reach the end of the field to the total set time for irrigation.

**advance time** 1. The time required for a selected stream of irrigation water to move from the upper end of a field to the lower end. 2. The time required for a selected surface irrigation stream to move from one point in the field to another.

**adventitious** In botanical terms, developing in an unusual or irregular position, usually in reference to roots.

**adventitious roots** Roots growing from the stems of plants, usually sporadically. They may be a natural component of the plant, such as with *Hedera helix* (English ivy), which attaches itself to walls, plants, cliffs, etc. with these small rootlets. They are also sometimes developed in response to flooding. Flooding may cause these roots to develop on stems when belowground roots are in anaerobic soils.

**adventive** A plant type that has been introduced to an area, but not naturalized, or a plant that is only locally established.

**adverse impact** See negative environmental impact.

**advertisement for bids** A request made for bids for public entities. There is usually a legal requirement that this must be a public solicitation with notices easily available to the public (usually in newspapers) in the area of jurisdiction.

**A/E** Abbreviation for architect-engineer.

**aerate** Mixing air into soil, water, or other substances as a natural process or designed effort.

**aerated concrete** See cellular concrete.

**aeration** 1. Infiltration or mixing of air with a substance. 2. In landscaping, it usually refers to a portion of the micropores, mesopores, and macropores in soil being filled with air. The surface soils (to about 3 ft deep) usually have sufficient aeration for plant growth. 3. In landscape maintenance, it refers to loosening the soil to add air by puncturing it with mechanical means. Some gas-powered aeration machines remove a small round core of soil. This practice not only provides air to roots, but also allows for better percolation of water to roots. This generally improves plant growth. 4. In water treatment and cleaning, providing higher oxygen concentrations for chemical and microbial treatment processes.

**aeration capacity** The volume fraction of air-filled pores in a particular soil at field capacity.

**aerial cable** Any cable (especially electric) suspended overhead.
aerial photograph or aerophoto  A photograph taken directly above the earth's surface.
aerial photomap  An aerial photograph or aerial photomosaic map with information such as place names, boundaries, and so on.
aerial photomosaic  A combination of aerial photographs fit together, showing a portion of the earth’s surface.
aerobic  Indicates the presence of oxygen and/or organisms living or active in the presence of oxygen.
aerophoto  An aerial photograph.
aesthetic  1. The visual appearance or look of an object, view, etc. 2. The theory of beauty or sense of color.
aestival  Appearing or blooming in summer; pertaining to summer.
A-frame  A structural frame shaped like an upright capital letter A.
AG  1. Abbreviation for above grade. 2. Abbreviation for against the grain.
agaric  In botanical terms, a mushroom or having a form like one.
AGC  Abbreviation for Associated General Contractors.
agency  1. A relationship by which one party, usually the agent, is empowered to enter into binding transactions affecting the legal rights of another party, usually called the principal. For example, an agent may enter into a contract or buy or sell property in another's name or on another's behalf. 2. An administrative branch of government (federal, state, or local).
agent  One who is empowered or authorized to enter into binding legal transactions on behalf of another, for a principal, or for an entity.
Agg.  Abbreviation for aggregate.
agglomeration  Collecting tiny suspended particles into a mass of larger size.
AGGR  Abbreviation for aggregate.
aggradation  1. The addition of a material to the ground surface to produce a uniform grade or slope. 2. The filling of a stream channel with sediment. This may occur because of low or slow flows, and/or heavy sediment loads in the water.
aggregate  1. In soils, a group of primary soil particles that cohere to one another more strongly than to other surrounding soil particles. 2. Any of several hard, inert materials such as sand, gravel, or slag. 3. Inert materials (2) individually or a mixture of them placed for weight-bearing stability of pavements, walls, footings, etc. 4. A loose mixture of sand and crushed stone used to mix with cement to create a concrete.
aggregate base course  A layer of aggregate material placed beneath a pavement, structure, etc., for bearing and stability.
aggregate fruit  A fruit formed of two or more pistils, such as a raspberry.
aggregate strength  The strength of an object determined by adding together the breaking strengths of the individual members of which the object is made up (i.e., individual strand members of a wire cable).
aggregation  In soils, groups of individual soil particles, held together naturally and consisting of particles of sand, silt, and clay separated from each other by pores, cracks, or planes of weakness.
aggressive solids  Soils that may be corrosive to cast-iron and ductile-iron pipe.
agitating truck  A truck carrying a drum that mixes hydromulch, concrete, etc., capable of being mixed while moving.
agitation  The process of mixing mulches, seed, liquids, and/or concrete. In mixing concrete, it
must be agitated sufficient to prevent segregation, aggregation, or loss of plasticity.

agitator  1. A mechanical device used to mix various liquids and powders contained in a vessel. 2. A device for mixing and maintaining plasticity while preventing segregation of the components of concrete.

AGL  Abbreviation for above ground level.

agricultural district or agricultural preserves or agricultural security areas or agricultural preservation districts or agricultural areas or agricultural incentive areas or agricultural development areas or agricultural protection areas  A legally recognized geographic area designed to preserve agriculture with a boundary formed by one or more landowners (including government landowners) and approved by at least one government agency. They are usually created for fixed, renewable terms. Enrollment is voluntary; landowners receive a variety of benefits including eligibility for reduced tax assessment, limits to annexation and eminent domain, as well as protection against excessive government regulation and private nuisance lawsuits.

agricultural protection zoning (APZ)  Any local land-use regulation protecting agricultural operations and/or their closely associated uses (e.g., limiting non-farmland uses, prohibiting high-density land development, requiring houses to be built on small lots, restricting subdivision of land into parcels that are too small to farm, etc.).

Agriculture Conservation Easement  A legal agreement usually recorded at the county (U.S.) restricting development on farmland. Easement is restricted to farming and open space use. (See also conservation easement.)

agronomic  The application of soil and plant science to crop production and soil management.

A horizon  The upper, darker soil layer (horizon) in a soil profile, comprised of materials that include organic matter, and characterized by high biotic activity. This is topsoil, which is the best soil for sustaining plant growth without the aid of fertilizers. It is ideal for growing plants when comprised of approximately 45% mineral material, 5% organic matter, 25% water, and 25% air. In some soil profiles, this topsoil layer may be well developed and further divided into subhorizons of A1, A2, A3, etc., or it may not be present (deserts, above timberline, etc.). The only layer that may be present above this layer is the O horizon.

AIA  Abbreviation for the American Institute of Architects.

AICP  Abbreviation for American Institute of Certified Planners.

air break  In a drainage system, a piping arrangement in which a drain from an appliance, device, ground surface area, or fixture discharges into the open air and then into another fixture, receptacle, or interceptor. This is used to prevent back siphonage or backflow.

air compressor  A machine that compresses air, creating higher pressures than the atmosphere and usually storing it in a tank for use. This pressure may be used to inflate objects, blow water out of pipes, operate pneumatic tools, etc.

air-dried lumber  Wood cut to particular dimensions and air-dried in stacks to remove moisture. This drying produces a straighter product of true size, better at holding nails, and not likely to shrink, split, or warp. Lumber is usually marked as follows: S-GRN for green unseasoned lumber with a moisture content of 20% or higher; S-DRY for lumber with a moisture content of 19% or less; MC 15 for lumber that is dried to 15% or less, etc.
**air drill**  See pneumatic drill.

**air-entrained concrete**  Concrete mixed with air-entraining cement or agents to improve its workability and resistance to frost. It incorporates minute air bubbles into the mix.

**air-entraining agent**  Any substance or material added to concrete, mortar, grout, etc. that produces air bubbles during the mixing process. These agents make the mixture easier to work and increase resistance to freezing.

**air gap**  In a drainage system, the vertical space between the outlet of a drainpipe and the high water elevation of the container into which it flows.

**air lance**  A rod-shaped device that shoots compressed air for cleaning surfaces.

**air layering**  In gardening, a propagation method of forcing a branch to root by making a slanting cut or removing a ring of bark below a node, dusting with rooting hormone, wrapping the cut and node in moss, and enclosing in plastic tied tightly to the branch. Roots appear in several months, then the branch can be cut free with its roots and transplanted.

**air-lift pump**  A pump used for raising water from a well that is comprised of a compressed air delivery pipe surrounded by a larger pipe that delivers water from below because of pressure from the smaller pipe.

**air purge valve**  A device that removes trapped air from pressurized pipes.

**air release valve**  A valve that releases air from a pipe or device under water pressure.

**air vessel**  An enclosed chamber with a volume of air connected to a water system in which air is compressed to varying degrees as water pressures fluctuate. This assures a more uniform flow. It also deters water hammer by air compression when water shutoff occurs abruptly.
alidade

alidade An instrument on a table useful for determining the directions of distant points. It was often used in mapmaking before the use of GIS.

alien A reference sometimes made to a plant that is native in one region but is then planted in another region by human activity instead of natural means.

alienation Transfer of title by one person to another in real estate.

alignment In highway and other linear ground designs, this is a drawing plan depicting horizontal direction as distinguished from a profile drawing that depicts the vertical components.

alkaline 1. Composed of a base. 2. Soil or water with a pH higher than 7.0 (neutral).

alkaline soils 1. Soils having a pH greater than 7.0 (neutral). These soils are common in areas of light annual rainfall. 2. Soils having an exchangeable sodium percentage greater than 15%. 3. Soils having a sufficient exchangeable sodium (alkali) to interfere with plant growth and cause dispersion or swelling of clay materials within the soil.

alkalinity The amount of a substance's pH above neutral (7.0). In water, it is a measure of the capacity of water to neutralize acids. It accomplishes this through one or more bases in the water. Those bases can be one or more of carbonates, bicarbonates, hydroxides, borates, silicates, or phosphates.

alkali soils Soils with an excess of sodium often having a pH of over 8.5 and not suitable for the growth of most plants. The common remedy used to prepare alkali soils for planting is to apply gypsum and leach the soil heavily with water.

All-American Rose Selections A nonprofit association of rose growers and introducers dedicated to introducing new rose types and promoting existing exceptional rose types. Since 1938, the AARS seal of approval has annually been awarded to outstanding new rose varieties.

All-American Selection (AAS) Plants recommended (and awarded) annually by an organization as tested, new, previously unsold varieties of flowers and vegetables, giving recognition to those considered outstanding. They have growing facilities in the United States, Mexico, New Zealand, and Canada. Categories include field-grown flowers, vegetables, and bedding plants. The first varieties were chosen in 1932. The candidates are grown and tested at trial gardens located at seed companies, universities, and botanical gardens. There are two types of medals awarded. The gold medal signifies exceptional merit and is seldom awarded. The normal award is given to plants with outstanding characteristics. Because these plants are judged by a panel of experts, credibility is also awarded to the winners.

allée A wide walk, drive, etc., with trees or tall shrubs on either side. This is a French term used for referencing a walk of gravel, sand, or turf, bordered by palisades, hedges or trees usually with branches trained to meet and interweave overhead, shading the surface below (allée cou-
verte). The French sometimes used them in geometrically designed gardens or parks. (Compare to avenue.)

**allelopathy**  A condition in which a plant produces antibiotic chemicals that repress its growth or the growth of other plants.

**Allen wrench**  A hexagonal bent bar used to tighten and loosen screws or bolts that have a hexagonal indentation for insertion.

-all-heart lumber  Lumber that is completely heartwood with no sapwood.

-aliaceous  A plant onion-like in odor or other aspects.

-allochthonous  Substances (usually organic carbon) produced outside of and flowing into a wetland from the surrounding environment.

-allopatric  1. A botanical term to describe plants occupying different geographical regions. 2. In botanical terms, occupying well-separated habitats in the same region. (Compare with sympatric.)

-allotment garden  A privately or publicly owned garden divided into sections and assigned to individuals for their use.

-allowable depletion or allowable soil depletion  1. The portion of plant-available water that is given for plant use prior to irrigation based on plant and management considerations. 2. The amount of water depleted from the soil between irrigation cycles, including that which is lost to drainage and percolation. 3. That part of soil moisture stored in the plant root zone managed for use by plants. This is usually expressed as an equivalent depth of water in inches per acre, or inches. 4. Allowable soil depletion or allowable soil water depletion before wilting point occurs.

-allowable load  The maximum weight safely budgeted for a structural member spanning between two points.

-allowable stress factor \((K_w)\)  The percentage of evapotranspiration in the landscape that can still produce an acceptable plant quality. In some cases, applications as low as 40% of evapotranspiration have allowed a marginal but acceptable plant quality. This is a management decision, and the effects of these adjustments must be closely monitored.

-alloy  A combination of two or more metals, or of a nonmetallic substance with metal, usually for some improved quality.

-alluvial fan  Sediment deposited by a stream in a fan shape (when viewed from the air), usually at the bottom of a slope. This is a common land feature in dry regions at the base of slopes where streams slow, allowing their sediment to settle and deposit.

-alluvium  1. Any material deposited out of water that has been carried from another place. 2. The soils of floodplains and alluvial fans comprised mostly of detrital material.

-alpine  1. Growing on slopes above timberline. 2. A term loosely used in reference to rock garden plants. 3. A plant native to alpine or boreal forest regions. They are often referenced and used in ornamental plantings.

-ALS  Abbreviation for American Lumber Standards.
ALT, alt.

ALT, alt.  1. Abbreviation for alternate. 2. Abbreviation for altitude.

alternate  In botanical terms, any plant parts (leaves, buds, branches, etc.) arranged singly at the stem nodes (not on opposite sides). They alternate which side of the branch they emerge from.

alternate bid  An optional bid to the base bid that deducts or adds services or materials and usually increases or decreases the base bid accordingly.

alternate host  Either of two plants that a fungus or insect finds necessary to sustain its life. Some insects or diseases must alternate from one plant type to another in their life cycle. These diseases and insects can be eliminated if a large enough area does not have one of the necessary host plants. For example, the wooly apple aphid, which depends on both elms and apple trees; some rust diseases that are dependent on barberry and wheat; or rust diseases dependent on juniper and white pine.

alternating current  Electrical current regularly alternating its direction of flow (at a fixed rate) in opposite directions. Power companies use this current to facilitate transmission over long distances.

alternative dispute resolution  The resolution of a dispute without litigation.

ALTN  Abbreviation for alteration.

alum.  Abbreviation for aluminum.

aluminum  1. A silver-white, malleable, metallic element with good thermal and electrical conductivity, resistance to oxidation, and high reflectivity when polished. 2. A metal present in most soils, but more prevalent in acid soils. It becomes more soluble, more available, and more likely to cause toxicity to plants as soil acidity increases. In strongly acidic soils (5.5 pH or below), this is often a detriment to plant growth and can be toxic to them.

aluminum brass  Brass with some aluminum added to increase its corrosion resistance.

aluminum bronze  A copper-aluminum alloy having good corrosion resistance.

aluminum plate  Flat aluminum sheet material.

aluminum-silicon bronze  A copper alloy with aluminum and silicon added to increase strength and hardness.

aluminum sulfate  An inorganic fertilizer that is acidic and lowers pH. Aluminum can be toxic to plants if overused.

ALY  Abbreviation for alloy.

ambient pressure  See working pressure.

ambient sound  The noise level in a space that contains only the noise out of one's control such as rushing water, or street traffic, or motors, etc. It is any combination of sounds from external sources close by or far away.

amendment  See soil amendment.

amenity  Aesthetic characteristics or other features of land development that increase its desirability or its marketability. Amenities may include such things as a unified building design, recreational facilities, security systems, views, landscaping, attractive site design, adjacent open space or water bodies.
ament In botanical terms, an indeterminate spike-like (spicate) arrangement of flowers on a stem (inflorescence) having scaly bracts and unisexual flowers with no petals (apetalous).

amentiferous Descriptive of a plant bearing aments.

American Arbitration Association A non-profit association founded in 1926 to study benefits and techniques of arbitration; offers neutral arbitrators.

American Association of Nurserymen A trade organization that has now changed its name to the American Nursery and Landscape Association.

American Institute of Architects (AIA) A professional organization of architects.

American National Standards Institute (ANSI) Previously known as the American Standards Association. This is an organization of nearly 400 trade associations, technical societies, professional groups, and consumer organizations that establishes standards for materials and devices.

American Nursery and Landscape Association A trade organization providing education, research, and public relations for its members who grow and sell plants or install landscapes. Their web site is www.anla.org (previously known as AAN, American Association of Nurserymen).

American Society for Testing and Materials (ASTM) An organization that performs tests and establishes standard specifications for materials; their standards are usually referred to as ASTM.

American Society of Consulting Arborists An organization with members dedicated to the protection of the environment by promoting tree and plant life for safety, functionality, and beauty.

American Society of Landscape Architects (ASLA) A national (U.S.) professional organization of landscape architects promoting the analysis, design, management, and stewardship of the natural and built environments through education, advocacy, communication, and fellowship. Their web site is www.asla.org.

Americans with Disabilities Act (ADA) A federal law requiring public facilities to be accessible for those with physical disabilities. (See also Uniform Federal Accessibility Standards.)

ammeter An instrument that measures electric current in amperes.

ammoniacal copper arsenate (ACA) A waterborne salt preservative for wood. Wood must be pressure treated for this preservative to be effective. It is highly recommended by experts as it is odorless, clean, does not leach, and its color can be masked easily when dry by painting or applying a solid color stain. Besides being good for preserving wood in weather aboveground, this stain can be used for wood placed in water and underground.

ammonia nitrogen A reduced type of nitrogen made as a by-product of organic matter decomposing and synthesizing.

ammoniated superphosphate A compound chemical fertilizer containing 2 to 4% nitrogen, and 14 to 49% available phosphoric acid (phosphorus).

ammonification Bacterial decomposition from organic nitrogen to ammonia.

ammonium nitrate A nitrogen fertilizer with 15% nitrogen (15-0-0). Also known as nitrate of ammonia. It has 32.5 to 34% immediately avail-
ammonium sulfate

able nitrogen. It must have ventilation or it can catch fire or explode. It cakes easily in storage.

ammonium sulfate A nitrogen fertilizer with 21% nitrogen (21-0-0). See sulfate of ammonia.

amp. Abbreviation for ampere.

ampacity A word combining ampere and capacity that expresses the current-carrying capacity of electrical conductors in amperes.

amperage Electric current expressed in amperes.

ampere, amp The standard unit for measuring electrical current that is based on the number of electrons flowing past a given point per second. One volt acting across a resistance of one ohm provides a current flow of one ampere. Many devices and components of wiring systems are rated for the amount of amperes they can safely carry.

amphibious Plants able to live in water or on land.

amphitheater, amphitheatre An outdoor theater, usually semicircular or elliptical, with a stage or area for performances surrounded by seats that rise above the area allowing participants a view of the action, speaker, or displays.

amplexicaul A botanical term referring to some kinds of leaves clasping a stem at their base.

amplexate A botanical term meaning enlarged or dilated.

an- Greek prefix in botanical terms meaning not, from, or without.

anaerobic 1. Any environment low in oxygen or free of it. 2. Living or existing without air. 3. In landscape work, this usually refers to soils that are waterlogged or need aeration to support most plants. Root rot is a common problem in anaerobic soils. See also backfill.

analysis Separation, examination, investigation, and determination of constituent parts, including detailed aspects of a situation, condition, or phenomenon.

anastomosing vein The veins in a leaf forming a complex network. See also dichotomous vein, simple vein.

anchor Something that holds a member or element securely in place.

anchor bolt Usually an L-shaped bolt set in concrete or masonry with its threaded end exposed and pointing upward for fastening materials, structures, or equipment.

anchoring cement Grout placed in sleeves to anchor pipes or tubing in place within them.

anchor roots The roots of plants that give stability to the plant so that it can stand upright and withstand wind.

androecium A botanical term referring to all of the stamens of a flower, considered collectively.

anemometer A device for measuring wind speed. These instruments and the information they produce assist in determining water needs of plant material. They usually consist of cup-like devices held on arms arranged radially around a point where they spin in the wind, allowing recording of speed through a wire.

anemophilous A botanical term describing pollination by wind. (Compare with entomophilous, ornithophilous.)

angiosperm The name of the division in the plant classification system indicating inclusion of all flowering plants with seeds that develop in an ovary. They are the most prolific vascular plants on earth. This division is made up of two classes: monocotyledons and dicotyledons. See also taxon.
angle dozer  A bulldozer with its blade angled to push the earth to one side.

angle iron  An L-shaped iron or steel piece.

angle of repose  The maximum slope at which a material can be piled or inclined without sliding or falling. This term is often used in reference to clay materials, piled soil, gravel, or wet concrete.

angle valve  A valve for adjusting, turning on, or turning off a flow. This type of valve is configured with its water outlet oriented 90° from its water inlet. It delivers water on a 90° angle from the direction of water entering it.

angular aggregate  Aggregate with more sharp edges than rounded edges. It is often produced by crushing.

anhydrite  A mineral calcium sulfate useful in Portland cement manufacturing to allow for controlling its set time.

anion  A negatively charged ion that is attracted toward the anode during electrolysis. The most common anions in soils and waters are bicarbonate, sulfate, carbonate, nitrate, and chloride ions.

ANLA  Abbreviation for the American Nursery and Landscape Association.

annexation  The legally binding or recognized inclusion of land into an existing community, city, township, etc., that results in a change in its boundary. Annexation generally refers to the new inclusion of properties just outside a city, town, municipality, etc., but it may also involve the transfer of land from one municipality to another.

annual  1. A plant with a life cycle of one year or less. These plants flower, set seed, and die within one growing season. A winter annual germinates in the fall and fruits the following spring or summer. 2. Yearly or over a 12-month period.

anther  The part of the stamen of a flower that produces pollen and consists of two pollen sacs with a connecting layer.

annual rings  A woody (dicotyledenous) plant’s annual circular growth marks of the xylem visible when branches or trunks are cut horizontally (to their longitudinal axis). This is a portion of wood formed in one year of a woody plant’s growth. The rings are concentric and become wider and lighter colored with good moisture and sun, and darker and thinner otherwise.

annular nail  A nail with tapered rings along its shank, difficult to be removed from a material in which it is pounded. Also called a ring nail.

annulus  In plant identification, this means a little ring, and refers to the specialized, thick-walled cells encircling the sporangium of most ferns.

anod.  Abbreviation for anodized.

anodize  A hard, noncorrosive, electrolytic, oxide film on the surface of a metal.

anodized  A metal that has been submitted to electrolytic forces in forming a coat of protective or decorative film.

anoxic  The absence of oxygen (both free oxygen and chemically bound oxygen).

ANSI  Abbreviation for American National Standards Institute.

anther  The part of the stamen of a flower that produces pollen and consists of two pollen sacs with a connecting layer.
anthesis

The period during which a flower is fully expanded and functional.

anthocyanin  A glycoside pigment producing blue or red colors in flowers, leaves, or plant parts.

anthracnose  A plant disease caused by fungi that exhibit lesions of gray, tan, or dark brown on leaves, stem, fruit, or other parts of the plant. It is most common on ash, maple, elm, oak, sycamore, berry bushes, and many vegetable garden plants. On casual observance, this disease can be mistaken for leaf scorch. However, leaf scorch, also known as hot weather scorch, browns the edges of leaves first, and does not usually cause spotting or interior leaf damage. Wet or damp conditions promote this disease. It is treated by fungicide and/or pruning the affected portions of plants and destroying them (preferably by burning).

anthropomorphic  1. In ecology, connoting human influence. 2. In design, ascribing human characteristics to nonhuman things.

antidesiccant or antititranspirant  A material sprayed onto plants to prevent excessive water loss from trunks, foliage, branches, stems, etc. It is sometimes sprayed onto plants before transplanting to reduce moisture loss through transpiration. It can also be helpful during winter when evergreens have their roots frozen (prevents gathering water) or when root-pruning plants.

antislip paint  A paint facilitating high friction for foot traffic, assisting in preventing slipping when dry. It has sand, dust, wood, or other material mixed in it.

antimicrobial  A substance that kills microbial growth.

anti-siphon valve  A device preventing removal or backflow of water or fluids.

ants  Insects usually one-half inch long or less with six legs and three distinct body portions. Their bite can be painful; they disturb seeded areas; they spread bacteria and spores; and they disfigure lawns or pavements with residue. Control is by spray, bait, or dust.

APA  Abbreviation for American Plywood Association.

apetalous  In botanical terms, a flower without petals.

apex  1. In botanical terms, this means tip; uppermost portion; narrowed; pointed; culminating point. 2. The highest point, peak, or tip of any structure.

aphid  An insect the size of a pinhead to about one-eighth inch. They are oval, soft, and can be red, green, gray, pink, or black. As they suck on plants, they secrete honeydew, sticky substance that attracts ants and can encourage sooty mold.

aphyllous  A botanical term meaning without leaves, or not having normal leaves with blades.

apical  In botanical terms, at the apex or summit of an organ.

apical dominance  The suppression of side shoot growth by the terminal bud.

apiculate  In botanical terms, tipped with a short and abrupt point.

apocarpous  A term describing the carpels of a flower being free from each other. (Compare with syncarpous.)

apophysis  A botanical term referring to the expanded end portion of a cone scale of Pinus that is exposed when the cone is closed.

APPD  Abbreviation for approved.

apple scab  This is the most common disease of crabapples and apples. It is caused by the
fungus *Venturia inaequalis*, which grows in cool, moist weather. Spores are carried by the wind in spring. It damages leaves, twigs, and fruit, and can cause fruit and leaves to drop early. To avoid this disease, plant resistant varieties, prune trees to improve airflow for drying after rain, and remove or discard fallen leaves on fruit.

**application for payment** An application or form prepared by a contractor for payment of work completed.

**application rate** In irrigation, the rate at which water is applied to a landscape, or the amount of water applied to a given area in one hour. See also precipitation rate.

**appraisal** A reasonable analysis determining the reasonable value. This is often a requirement on property when sold and is greatly affected by landscape architectural works in place.

**appressed** In botanical terms, lying close and flat against some other plant part.

**approach grafting** See inarching.

**approved equal** Materials, equipment, or methods approved for use in construction as an acceptable equivalent in essential attributes to that which was specified.

**approving authority** The agency, association, commission, department, or other organization created by law and authorized by the state, county, city, province, township, homeowners, etc. to administer and enforce design and construction requirements.

**approx.** Abbreviation for approximate.

**APZ** Abbreviation for *agricultural protection zone*.

**aquaculture** The hatching, raising, breeding, and harvesting of fish, or aquatic plants or animals in a natural or artificial aquatic environment that requires a body of water such as a pond, river, lake, estuary, ocean, or man-made water body.

**aquatic** Referring to watery environments. In hydrologic gradient, the aquatic environment begins at emergent wetlands. These environments are characterized by the growth of floating or submerged plants.

**aquatic plant** A plant that can grow in water whether floating or in saturated soil conditions.

**aqueous** Relating to water.

**aquifer** An underground bed or layer that is a water-bearing formation of permeable material capable of yielding groundwater to provide water to springs, wells, etc.

**aquifer recharge area** An area in which a significant amount of surface water runs into groundwater by: 1. The infiltration into the soil or other rock materials that are directly below the surface: 2. The downward movement of water through the materials that comprise the zone of aeration: 3. The delivery of water into the zone of saturation where it becomes groundwater.

**arable** A term used to describe land that is capable of growing crops. It is tillable, with nutrients and sufficient other qualities to be suitable for agricultural efforts.

**arbitration** An effort for dispute resolution in which the involved parties agree to allow a neutral person to hear evidence from both sides and make a final and binding decision. This is nearly always a less costly and faster way to resolve a dispute than through the court systems.

**arbor** A cover over a walk, gate, patio, or passageway for pedestrians, or a shelter over a significant feature in a landscape made up of vines, branches, or climbing shrubs on latticework, trellises, or wire frames.
arborescent

In botanical terms, treelike in size or form, or becoming a tree.

arboretum An ornamental or functional garden for displaying trees, shrubs, and/or herbaceous plants for functional or educational purposes.

arboriculture The cultivation of trees and shrubs, usually for ornamental purposes.

arborist A person skilled and trained in the care and maintenance of trees.

arc 1. In sprinkler irrigation, how far around in a circular pattern (usually expressed in degrees where 360° is a full circle) a sprinkler will rotate or spray. For example, a sprinkler with a 90° arc would spray a quarter-circle pattern. 2. Something arched or curved. 3. A continuous portion of a curved line.

arcade A covered walk with shops, arches, etc. on each side.

arch An overhead curved portion of a structure spanning an opening between two points of the structure.

arch culvert An upwardly curved opening under a road, path, canal, or embankment usually constructed to allow passage of water, traffic, or pedestrians.

arching A term used in plant descriptions depicting a form that arches up and out. In grasses, this term refers to a grass that arches nearly as far to the side of its point of origin (at the ground) as it rises from its point of origin. (Compare with mounded (2), upright grasses, tufted, upright divergent grasses, upright arching grasses.)
architect 1. A person trained in the design of buildings. 2. A designation reserved by requiring licensure to perform architectural services.

architecture 1. The art and science of designing structures. 2. Structures.

architrave The lowest portion of classical architecture's entablature extending from column to column as a beam. See illustration under entablature.

arch ring In an arched structure, this is the curved portion carrying the load.

arcuate In plant identification and descriptions, a plant part curved into an arc of a circle.

ARC W Abbreviation for arc weld.

arc weld Melting metals together with an electric spark and molten metal from a metallic electrode.

area drain A receptacle or depression designed to collect runoff.

areole Specialized spot-like areas on a cactus stem. They have a rough, uneven, different color (from the rest of the surrounding area), a hard surface, and are usually covered with wooly hair. The spines and flowers of a cactus originate from these spots on the stem.

argentous In plant identification and botanical descriptions, silvery in color.

argillaceous A botanical term describing something with the nature of clay.

arid climate A climate where precipitation averages less than 10 inches per year.

aril An outside appendage or covering that is formed by some seeds after fertilization as a growth from the ovule stalk.

arillate Pertaining to an aril.

aristate In botanical terms, having awns, or being tipped with an awn or bristle, or being sharply pointed as in the tip of a leaf. (Compare with retuse, cuspidate, emarginate, acuminate, acute, mucronate, obtuse.)

armored cabling Electrical wires with a reinforced protective coating to protect the wires from destructive elements and keep safe those around the cable.

armyworms Larvae of caterpillars usually found in armies denuding plant material in their path. They are eaten by birds, toads, other insects, and skunks. Control with poison is available with bait across their path, sprays, or dusts.

arterial road A road having collector roads allowing traffic access and having more traffic than the collector roads.

artesian well 1. A well made by boring into the ground to a point where an underground supply of water is reached with more pressure than needed to bring it to the surface. This creates a well that flows without the need of a pump. 2. A deeply bored well.
article

article In construction specifications, the subdivision of a section that is usually then subdivided into paragraphs, subparagraphs, and clauses.

articulate, articulated In botanical terms, jointed.

artificial marble See artificial stone.

artificial soil mix Any mix for plants to grow in without soil as an ingredient.

artificial stone A mixture of rock portions bonded together.

artisan An individual skilled in an applied art; a craftsman.

AS Abbreviation for automatic sprinkler.


Asb. Abbreviation for asbestos.

ASBC Abbreviation for American Standard Building Code.

as-built A drawing(s) that shows the construction project as designed with any changes made during construction to give an accurate depiction of actual construction.

ASC Abbreviation for asphalt surface course.

ASCA Abbreviation for American Society of Consulting Arborists.

ASCE Abbreviation for American Society of Civil Engineers.

ascending A term often used to describe branches or other plant parts that angle upward from a plant's vertical trunk, stem, etc. (Compare with spreading.)

asepalous A botanical term describing a flower without sepals.

asexual In botanical terms, propagation without sex.

ash dump An opening in a fireplace through which ashes are swept into an ashpit.

ashes See wood ashes.

ashlar Stone produced for construction purposes having edges with more or less right angles, making it easier to stack. It comes in a variety of sizes.

ashlar brick or rock-faced brick A brick whose face has been beaten to resemble hewn stone.

ashpit A chamber below a fireplace for collecting and removing ashes.

ASI Abbreviation for Architects and Surveyors Institute.

ASLA Abbreviation for American Society of Landscape Architects.

aspect The direction in which a structure or slope faces with respect to the points of a compass.

aspect ratio In a rectangular configuration, an expression of the ratio of the long side to the short side of the rectangle.

asphalt 1. A dark, cement-like material, solid or semisolid, made of bitumens that occur in nature or are refined in coal tar or petroleum
production. 2. A mixture of bituminous material with an aggregate for pavements.

**asphalitic base course** A layer of **asphaltic concrete** under various pavements, used for stability and spreading the load.

**asphaltic cement, asphalt cement** An asphalt for direct use in the manufacture of bituminous pavements.

**asphaltic concrete or asphalt paving or blacktop** A mixture of asphalt and aggregate used as paving material over a compacted base. It is usually placed and compacted while hot. For placement without heat, see **cold mix**.

**asphalt joint filler** An asphalt product for filling cracks and joints in pavements.

**asphalt paper** A paper material that has been coated, or impregnated, with asphalt to increase its resistance to wear and water.

**asphalt pavement** A pavement comprised of a surface mineral aggregate, coated and cemented together with asphalt cement on supporting asphalt layers.

**asphalt pavement sealer** A product applied to asphalt pavement to prevent deterioration.

**asphalt prepared roofing** A felt covered with asphalt and mineral material, available in rolls.

**asphalt primer** A material applied to water-proof surfaces to prepare them for asphalt application.

**asphalt prime coat** An asphalt primer.

**asphalt seal coat** A bituminous slurry or aggregate applied to the surface of pavement to waterproof, preserve, and prepare the surface.

**asphalt shingle or composition shingle or strip slate** Shingles composed of roofing felts coated with asphalt and mineral granules on the exposed surface.

**asphalt-shingle nail** See **roofing nail**.

**asphalt soil stabilization** The treatment of soil with liquid asphalt to improve load-bearing qualities and resistance to erosion.

**asphalt surface course** A top layer of asphalt pavement.

**asphalt tack coat** A thin coating of liquid asphalt on a pavement used to produce a bond between the old surface and the asphalt layer to be placed.

**asphalt tile** A floor tile comprised of asbestos fibers, mineral pigments, asphaltic binders, and finely ground limestone fillers that make a wear-resistant, inexpensive tile.

**ASR** Abbreviation for automatic sprinkler riser.

**assembling bolt** A bolt that temporarily holds parts of a structure so that it can be riveted.

**associate** In a design firm, this is a staff member with a special employment agreement.

**Associated Landscape Contractors of America** A trade association promoting business management and profitability for its members, consisting of mostly landscape maintenance firms, landscape installation firms, design/build landscape contractors, and interior landscape firms. Their web site is www.alca.org.

**assurgent** A botanical term describing something ascending (stems or branches, etc.).

**astler** Old term for **ashlar**.

**ASTM** Abbreviation for **American Society for Testing and Materials**.

**astroturf** Man-made, grass-like, outdoor carpeting.

**AT** Abbreviation for **asphalt tile**.

**ATF** Abbreviation for asphalt-tile floor.

**atmospheric pressure** The pressure of the weight of air at any particular elevation, usually
atmosphere

expressed in pounds per square foot. At sea level, the atmospheric pressure is 14.7 psi (33.9 feet of head), and the pressure decreases with increase in elevation. This is important when assuring water will move from a source to the pump for irrigation or water features as there must be more atmospheric pressure than suction loss. See net positive suction head available.

atmosphere  1. A unit of pressure equal to the pressure of the atmosphere at sea level, which is approximately 14.7 lb/sq in or 101.325 pascals (760 mm Hg). At field capacity, water can be extracted by plant roots from soil mesopores with suction pressure (osmotic pressure) of about 0.1 to 0.3 atmospheres (1.4 to 4.41 psi). At wilting point, the pressure required to extract water from soil is approximately 15 atmospheres (220.5 psi). This is the point at which most plants can no longer extract water from the soil, causing wilting. 2. A feeling or ambiance created by surroundings such as a formal landscape, waterfall, serene enclosed landscape, etc. 3. The air surrounding the planet; the outer limit of the biosphere having influence on plants with its dust, pollution, humidity, wind movements, and/or temperature variations, etc.

atmospheric pressure or barometric pressure  Pressure exerted by the weight of the earth’s atmosphere; at sea level, 14.7 lb/sq in (1.01 × 10⁶ pascals), decreasing with elevation above sea level.

atmospheric vacuum breaker  This device prevents back siphonage by allowing an atmospheric break in the pipeline. This is accomplished by a check seat, and an air inlet port within a 90° upright elbow area of a pipe. It is a backflow preventer consisting of a float, which moves up or down to allow atmospheric air into the piping system. It is always placed downstream from all shut-off valves. Its air inlet valve closes when the water flows in the intended direction. But, as water stops flowing, the air inlet valve opens, interrupting the possible back siphoning. This type of backflow device must always be installed at least 6 inches above all downstream piping and outlets that allow water to flow or it is not effective. Also, this assembly must not have shut-off valves or obstructions downstream as it cannot be under continuous pressure to be effective because it relies on the release of water pressure both up and downstream to allow the float check to fall admitting air to the pipes, thus preventing the back siphon of water. A shut-off valve would keep the assembly under pressure and allow the air inlet valve (or float check) to seal against the air inlet port, causing the assembly to act as an elbow instead of a backflow preventer. It must not be used for more than 12 hours in any 24-hour period. It may be used to protect against a pollutant, or a contaminant, but may only be used to prevent a back siphoning condition.

atriolum  A small atrium.

atrium  1. An open patio or plaza with a building surrounding it. It usually contains plants in pots or open planters. 2. A glass enclosure attached to the side of a building. It usually harbors plants of interest, or is used for culinary purposes.

attached dwelling unit  Two or more dwelling units within the same detached dwelling unit structure. There is only one dwelling unit within a detached structure.

attenuate  In botanical terms, becoming narrow and thinner in width gradually, or a tapered portion of a plant part becoming gradually quite slender to a tip. It is more extreme and narrowly pointed than acuminate, or acute. (Compare with cuneate, obtuse, cordate, auriculate, sagitate, hastate, truncate, oblique.)
attenuation  Reduction of sound energy or intensity.

Atterberg limits  See liquid limit, plastic limit, shrinkage limit.

Atterberg limits test  A test of the water content that defines different states of consistency of plastic soils. This test is used to ascertain a soil’s change with the addition of water to determine its tendency to become plastic or liquid.

auger  1. The action of drilling or boring. 2. A device used for boring or drilling wood, soil, etc. that may be handheld, hydraulically operated, or operated by gears with an engine or motor.

auger bit  A bit used in a drilling or boring device.

auricles  In botanical terms, small projecting lobes or appendages often at the base of a plant organ.

auriculate  In botanical terms, earlike appendages or having one or more auricles. (Compare with leaf base descriptions of cuneate, obtuse, cordate, attenuate, sagitate, hastate, truncate, oblique.)

auto  Abbreviation for automatic.

automatic controller  A timing device that turns on and off automatic valves or valve in head sprinklers at desired times and intervals without needing someone to be present to turn these sprinkler elements on or off.

automatic drain  A drain in a sprinkler system that automatically closes when the sprinkler pipe is pressurized and automatically opens to drain the pipe when water pressure is released. They are spring loaded or use a ball that is forced by water into place where it blocks water flow out of the pipe. Some are only rated for lateral lines with intermittent working pressure, while others are rated for use on main lines where they can withstand constant static pressure without failing. They are used at low points on sprinkler pipes in temperate climates to prevent freeze damage to pipe systems.

automatic sprinkler system  In landscape irrigation, a sprinkler system that is turned off and on by an automatic controller at times and intervals within its program capability. Automatic systems are usually controlled by electricity, but the first automatic systems were controlled by small tubes of water using changes in water pressure from the controller to the valves.

automatic timer  A timing device that turns on and off automatic valves or valve in head sprinklers at desired times and intervals without requiring someone to be present to turn these sprinkler elements on or off.

automatic valve  In sprinkler systems, a valve that opens or closes when actuated by an automatic controller.

autotrophic  Creation of organic carbon from inorganic chemicals such as in photosynthesis.

auxin  A plant hormone used to stimulate root growth through cell elongation.
available water

available water (AW) In a soil, the amount of water stored between field capacity and the permanent wilting point. The approximate amount of water capable of being stored in various soil types expressed in inches per inch is as follows: clay, 0.17; silty clay, 0.17; clay loam, 0.18; loam, 0.17; sandy loam, 0.12; loamy sand, .08; sand, 0.06.

avalanche protector A barrier protecting the tracks of excavation equipment from rocks or debris.

AVB Abbreviation for atmospheric vacuum breaker.

avenue 1. Usually a wide, tree-lined street. It is a term of French derivation, meaning an approach or access to a building, usually in the country with regularly planted trees along its length. But it currently describes a wide street with or without trees. 2. An access way.

average daily traffic (ADT) The average number of cars per day that pass over a given point.

AVG, Avg. Abbreviation for average.

AW Abbreviation for available water.

A/W Abbreviation for all-weather.

AWG Abbreviation for American Wire Gauge.

awl A pointed tool used for punching or gouging holes in leather, wood, hardboard, etc.

awl-shaped In botanical terms, sharp-pointed from a broader base.

awn A bristle-like appendage on a plant. In grasses or grains, one of the slender bristles that sometimes terminate the spikelet.

awning A roof-like covering over a door, sidewalk, landscape element, or window, made of fabric, metal, glass, or canvas, etc. They are useful for protection from sun, wind, rain, and snow, but are also valued for aesthetics as decorative embellishments and used as signs. They usually project from a wall or roof.

AWPA Abbreviation for American WoodPreservers’ Association.


AWWA Abbreviation for American Water Works Association.

ax hammer An ax for cutting or shaping rough stone.

axil In botanical terms, the upper angle (its point) between a leaf and the stem, or the point on a plant (being an angle) where a leaf, flower, or branch arises from a stem.
axillary In botanical terms, something occurring in or at an axil.

axis 1. In botanical terms, the central line of any body or the organ around which others are attached. 2. A straight line indicating the symmetrical center usually down the center of the longest dimension.

azimuth In surveying, the horizontal angle measured clockwise from north to the direction of the object being located.

azonal soil Earthen material in a soil profile characterized by not having discernable horizons and resembling the parent material.
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baccate  A botanical term used in plant identification that means berrylike and pulpy.

bacillus popillae  Now known by the name of paenibacillus popillae. A biological (bacteria) control for the grub worms of Japanese beetles.

back charge  A monetary charge for damage, noncompliance with contracted construction design, or faulty construction by an owner, contractor, or subcontractor against any entity supplying or constructing a project.

backer strip  An asphalt-coated, water-repellent piece applied behind shingle joints.

backfill  1. Fill around the exterior of a structure, or around a foundation usually comprised of soil or gravel. The use of gravel or other porous material is meant to allow drainage away from the structure or foundation. 2. Soil material used to fill a planting pit. Unmodified soil from the planting pit is usually deemed best for the plant's future growth and survival. 3. Materials used to refill a ditch or other excavation. 4. The process of placing backfill.

backfill amendment  This term refers to amendments being mixed with the backfill when planting. This practice is usually performed to provide more organic matter, fertilizers, and/or porous soil for the plant. This amendment has been found to create some difficulties for plant material. Changing the backfill creates a difference in the soil surrounding the plant pit and the backfill material within the planting pit. This interface between the soils tends to hold water, causing root rot, and also acts as an apparent barrier to root extension.

backfill concrete  A low-grade, nonstructural concrete mix used under structural concrete or to fill any area needing stability such as areas dug or disturbed under pavements or footings.

backfilled  The completion of backfilling.

backfilling  The action of placing backfill.

backfill mix  See backfill amendment.

backflow  The unwanted reverse flow of liquids in a piping system.

backflow connection  Any arrangement of pipes or plumbing devices that allows water to flow backward.

backflow preventer  In an irrigation system, a device installed between the point of connection and irrigation outlets that is designed to prevent the backflow of contaminated water into the potable water supply. These are usually only necessary on connections into potable sources. See atmospheric vacuum breaker, double check assembly, pressure vacuum breaker, or reduced principle vacuum breaker.

background plant  A tall plant (usually a shrub or tree) suggested for backdrops, assistance in enclosing a space, or for inclusion in mass plantings.

background planting  Plant massing at least to eye level that serves as a backdrop for a special feature, plant, or landscape element such as a statue, gazebo, etc.

backhoe  1. A tractor with a hydraulically operated arm and bucket capable of digging much like an arm and hand. Backhoes usually ride on rubber tires, whereas trackhoes ride on steel tracks. 2. The portion of a machine that is shaped like an arm with a joint and having a bucket to dig with. This reference is not to the entire machine, but only to the implement.
backing

backhoe

backing  1. Pieces of furring fit onto joists to provide a level surface for laying decking.
       2. Material for backfill in a retaining wall.
backing brick  Broken pieces of brick or low-quality brick used as fill behind face brick or other masonry.
back nut  A water-tight headed nut on a pipe or plumbing device.
back pressure  1. Increase of pressure in the downstream piping system exceeding the supply pressure at the point of consideration which would cause, or tend to cause, a reversal of the normal direction of flow. 2. Pressure in the opposite direction of intended flow within a sprinkler system.
backsaw  A saw with a metal strip along its back to prevent the blade from bending. These types of saws are often used in miter boxes.
backshore  The area of land between a beach berm and a distant landward slope.
backshore slope  The bank or slope landward of the shore that is naturally formed.
backsight  In surveying, viewing and/or measuring a previously established survey point.
back siphoning  In irrigation, a reversal of water flow (backflow) due to reduction in system pressure, which causes a negative pressure to exist in the water system.
backup  Overflow in a drain or piping system, due to being plugged.

back vent  A vent for a plumbing fixture located on the sewer side of a trap, protecting against back siphonage.
bactericide  An agent or compound used for killing bacteria.
bacteroid  Irregularly shaped bacteria that form in the nodules of legumes.
badigeon  Filler or patch material used in masonry or woodworks.
badminton  A game played with one or two players on a team by hitting a small, feathered object.
bagasse  A by-product from the manufacturing of sugar from sugar cane, which is somewhat acidic and has a high water-holding capacity. It is used both as an amendment to soil and as a mulch.
bag plug  An inflatable drain stopper that seals a pipe when inflated to seal a pipe.
bag or sack  An amount of Portland cement: in the United States, 87.5 lb; in Canada, 112 lb; and in the United Kingdom and in countries with metric system measurements, 50.8 kg.
bagworms  The larvae (caterpillars) of some kinds of moths with small individual tent-like bags. They are ¾ to 1 in long at full growth and may infest and devour foliage, enough to kill a tree. Control is by handpicking or insecticides.
baking soda  A household product comprised of sodium or potassium bicarbonate. It is sometimes mixed with horticultural oil for application to plants for fungal protection.
balance pipe  A pipe connected between two other pipes to average (equalize) the pressure in the two pipes.
balancing valve or balancing plug cock  A valve intended to control fluid flow in pipes, but not usually used to stop flow.

ballast  1. A sand and gravel mix used to make concrete. 2. A stable layer under concrete of gravel, road base, etc.

ball-check valve  A spring-operated backflow preventer in a pipe system that forces a ball against a seat to stop backflow, but allows the ball to be pushed from the seat for flow in the intended direction.

balled-and-burlapped or B&B  This term refers to plants ready for planting that have root balls wrapped in an enclosure of burlap. They traditionally are prepared by digging completely around the roots of the plant and underneath, then wrapping the root ball with burlap, and tying twine around the ball to contain it. Balls could be planted by merely untying the top and pulling the burlap off the top of the ball because the twine and burlap would decompose. More often now, the plants are machine dug with a wire basket that the burlap-covered ball fits into, or some are dug and wrapped in both burlap and chicken wire.

ball float  A floating piece that is used to operate a ball valve, which allows or prevents water to pass from a pipe supply line depending upon the elevation of the water. These are useful in sustaining the elevation of water in ponds.

ball peen hammer  A hammer with a head that has both a rounded pounding side and a flat pounding side.

ball-peen hammer

ball-penetration test  An ASTM test method of wet concrete in which a rounded metal weight is placed on the smooth level surface of wet concrete to measure the depth that it sinks.

ball test  A test of piping or drains where a ball is rolled down the pipe to make certain the pipes are clear and will slope to drain.

ball valve  A valve with a handle (arm, lever) only requiring a quarter turn to turn completely on or off. It has a hollow ball with a hole through it that can be turned so that the hole in the ball is in line with the pipes to allow full flow or it can be turned to put solid sides of the ball toward the pipes to prevent flow.
balsa

**balsa or corkwood** A lightweight wood often useful in building scale models of projects.

**baluster or banister** One of a number of short vertical members used to support a handrail.

**balustrade** A rail or rails and their usually vertical supports (balusters) as a system along a deck, porch balcony, raised patio, etc. They are used for people’s protection from falling, as a deterrent to access, an aesthetic treatment, etc.

**band** In design, a horizontal flat projection or change in texture or color along a wall.

**band clamp** A two-piece metal clamp used to hold riser pipes by bolting the two pieces of clamp together.

**banding** The placement of fertilizers on the soil in narrow bands, usually at measured distances from the row of seeds or plants. The fertilizer bands are then covered by soil but are not mixed.

**band saw** A power saw with a looped (endless) toothed steel belt.

**bank** A mass of soil rising above a lower level or ground.

**bank cubic yard** A cube of bank run material measuring three feet on all sides.

**bankfull discharge** The flow of a river when it is full to the top of its banks.

**bank material** Undisturbed, naturally in place, soil and/or rock.

**bank-run** Earth (gravel and/or soil) materials taken from natural deposits without sifting, screening, etc. (directly from a bank of earth).

**bank run gravel** Excavated material that is not screened and has generally a ¼ to 6 in diameter.

**bank yards** The amount of cubic yards of earth material in its original place.

**banner vane** A weather vane with a flat portion much like a banner.

**bar** 1. A long solid metal or wood product. 2. A steel reinforcing bar. 3. A unit of pressure equal to 14.5 psi, 1,000,000 dynes per centimeter, or approximately 1 atmosphere.

**barbate** A botanical term used in plant identification that means bearded with long, stiff hairs.

**barbed fittings** Pipe or tube fittings that are inserted into pipes or tubes and are held in place by the friction created by the barbs or clamps over the pipes into which they are inserted.

**barbed wire** Twisted wire with barbs or sharp points along its length.

**bar-be-que grill** A steel grate over a heat source used out-of-doors for cooking (esp. meat). They may be stationary, such as those made of masonry, or they may be mobile with wheels, such as many propane-heated grills.

**barbwire** See barbed wire.

**bare root** Plants harvested for transplanting with no appreciable soil attached. Deciduous
plant material are generally more likely to survive this type of transplanting. Plants in this condition usually need to be kept cool, damp, and out of direct sunlight. They are not generally storable for long periods of time. It is best done while plants are dormant.

**bar iron**  Iron, available in the form of bars, which can be beaten into shapes to form tools, hardware, and decorative iron work. See wrought iron.

**bark**  The protective, tough exterior of a woody plant’s stem, branches, and/or roots. Some plants have bark consisting only of phloem tissue, which grows and expands from the cambium layer outward, but in other plants their bark is also comprised of the phellogen (cork cambium), which grows and expands outside the phloem creating the outer bark.

**bark pocket or inbark or ingrown bark**  A small amount of bark surrounded (or nearly so) by wood within a tree or within a piece of the lumber it yields.

**barley straw**  The portion of the barley plant left after harvesting its grain. It is useful to bundle and place in the water of enclosed water features to control algae.

**barn**  A usually enclosed farm building used for protecting grain, hay, farm animals, farm equipment, etc. from the weather.

**barn-door hanger**  A horizontal track hanger on the outside of a barn that holds one or two large sliding doors.

**barn-door stay**  A small wheel that rolls in a horizontal track, guiding the sliding of usually large exterior barn doors.

**barred-and-braced gate**  A gate having one or more diagonal braces to reinforce the horizontal members.

**barred gate**  A gate with one or more horizontal timber members.

**barrel** 1. A container capable of holding 31½ gal of liquid or material. 2. An obsolete American weight measure of Portland cement amounting to 376 lbs. 3. A portion of a pipeline having a constant inside diameter and wall thickness.

**barrel arch**  An arch formed by a solid piece of material as opposed to many or several portions of a material.

**barrel fitting**  A short piece of threaded pipe, such as a nipple, for making pipe connections.

**barrens**  A plant community with significantly small coverage or stunted individuals that would otherwise grow to larger specimens under favorable conditions.

**barricade**  An item or assemblage of items preventing or deterring passage or access of vehicles, people, etc.

**barrier** 1. A term used to describe a plant that deters or prevents passage. 2. An item or items preventing access or passage.
barrier curb

barrier curb  A steep-faced curb intended to prevent encroachments.

barrier dune  A large mass of coastal sand dunes paralleling the shoreline.

barrow  1. Soil or rock material obtained from another portion of a site or from another piece of land. It is usually in its original makeup without screening or separation of material (soil and rock) sizes.  2. Abbreviation for wheelbarrow.

barrow run  A temporary placement of wood or other materials to facilitate the passage of wheelbarrows on a construction site.

barrow-pit  A hole or excavation in an embankment where material has been moved for use elsewhere.

bar scale  A linear bar placed on a drawing, picture, model, etc. for reference to the scale of items or spaces in the drawing, picture, model, etc. in relation to the size in existence or as planned, designed, or perceived. For most people not familiar with design drawings or cartography, bar scales are better understood than written scales. This is because the bar scale can be measured with a ruler or scale. Also, when a drawing or picture is enlarged, bar scales stay true, whereas written scales do not.

bar schedule  1. A tabulation of reinforcement iron bar used in reinforced concrete, such as in retaining walls, which indicates the number, size, and dimensions of each bar specified.  2. A schedule on paper depicting the progress of a job with bars to visually indicate the duration of various tasks from one date or week to another.

bar screen  A device made up of bars set at predetermined spaces for separating stone in various sizes and/or earth material from rock.

bar spacing  With regard to reinforcing bars, the distance from the longitudinal axis of one bar to the center of another bar's longitudinal axis.

bar strainer  A screening apparatus made up of a bar or many bars to prevent objects from entering a culvert or drain.

bar type grading  A network of iron assembled with metal bars in one direction with iron spacers between them, forming a grid pattern or a grate.

basal  1. Arising from the base of a stem such as where a fleshy portion of a leaf begins from the petiole (stem).  2. Growing at the crown of a plant.

basalt  An igneous rock of dark color used in paving.

base  1. In paving, the prepared layer beneath the paving made up of crushed stone, gravel, or combinations thereof with sand. This layer is placed to distribute paving loads over the base and improve the load-bearing capacity.  2. With regard to paint, the medium that is the main ingredient for the paint.  3. The lower portion of a column that is wider and/or thickened.  4. The lower portion of an item or structure.

baseball field  An outdoor field for the game of baseball (hardball) that starts at a point (home plate) and travels out in two base lines at right angles to one another 90 ft to bases and bisecting that angle. Pitcher's mound is 60 ft, 6 in away from home plate. The outfield fence is about 250 ft from home plate. These dimensions are for understanding of scale, comprehension of shape, etc. and are for planning purposes only. Contact the appropriate league for their exact layout and dimensions required with current information and different types of play fields.

base bid  An amount of money or trade items stipulated in return for services and materials offered, not including any alternate bids.

base coarse  1. The lowest coarse in a masonry wall.  2. The first layer placed in pavement construction.  3. A layer of material placed on
compacted subgrade for providing drainage, distributing weight loads, reducing the action of frost, etc.

**base coat** 1. A layer of liquid material applied to a wood surface before staining or otherwise finishing. 2. The first layer of paint applied to a surface (also called a prime coat).

**base elbow** A cast-iron pipe elbow with a flange for support.

**base flashing** A flashing at the point where a wall or vertical surface meets a roof. It is used to help prevent leakage of water through the roof at these critical areas.

**baseflow** The portion of stream flow attributed to groundwater. It is generally a more steady flow and often continues into or through droughts.

**base line** An established line (a line surveyed and staked or the edge of an object such as a building or road) from which measurements or surveys are taken.

**base map** 1. A map of an area showing the important natural and man-made features, as well as unseen existing elements such as right-of-ways and property lines. 2. A plan of proposed and/or existing features for a site, used as a beginning point for various other plans or maps of proposed and/or existing elements (lighting plan, planting plan, sprinkler plan, etc.) superimposed over it. Examples are city plans with a sewer, water plan, or drainage plan superimposed. Another example is a proposed plan for a building with electrical and plumbing superimposed as separate plans.

**base-plate** A metal sheet used to distribute a load that is not uniform over the area that is designed to carry the load more uniformly.

**base tee** A pipe tee with a flange supporting it.

**basic intake rate** In reference to soils and irrigation, the approximate percolation rate that can be expected in a soil before it reaches saturation. This approximate rate in inches per hour is as follows: clay, 0.10; silty clay, 0.15; clay loam, 0.20; loam, 0.35; sandy loam, 0.40; loamy sand, 0.50; sand, 0.60.

**basic services** For construction of a project, services, usually of a designer (landscape architect, engineer, architect, etc.), including schematic design, design development, construction documents, bidding advertisement and evaluations, negotiation, and contract administration.

**basic slag** A by-product of steel refining used as a phosphatic fertilizer, but highly alkaline and containing calcium. It is not for use on acid-loving plants or in alkaline soils. It contains 2 to 16% available phosphoric acid that is slowly released into soil.

**basifixed** A botanical term used in plant identification that describes something attached at the base. (Compare with dorsifixed.)

**basin** 1. A depressed area of land identified by higher areas surrounding it or nearly so. 2. Shallow, concave area meant for holding water or other liquids. 3. An area to which all surface water drainage gathers to a selected point in a natural or man-made drainage area.

**basin irrigation** Irrigation achieved by flooding areas of level land surrounded by dikes. Used interchangeably with level border irrigation, but basin irrigation often refers to smaller areas.

**basketball court** A hard surface with at least one basketball standard for playing the game of basketball. A full-size basketball court has a standard at each end and measures 84 ft long by 50 ft wide for high school, and 94 ft long with the same width for college.

**basketball standard** A pole, backboard, and hoop standing erect as designed and intended for use in the game of basketball.
basket weave

1. A checkerboard pattern made with bricks or rectangular pavers, usually laid three or four abreast and turned every three or four bricks to one side or the other. 2. A fence with thin horizontal boards that are attached to posts and extended from one side of a post to the other side of the next post. Each horizontal board alternates as to which side of the post it passes on.

basket weave patterns

basswood In construction terms, a light-colored wood from the American linden tree. It has low density and its fine texture is mostly used for trim and plywood.

bastard ashlar or bastard masonry 1. Ashlar stones roughly dressed at the quarry and not finished. 2. Masonry material in thin blocks that is square-hewn and placed to resemble ashlar.

bat 1. A brace made of a piece of wood. 2. A piece of insulation of a specific size usually utilized in areas between studs in walls or between rafters. 3. A portion of brick with one good end that has not been damaged.

batch A quantity of material mixed at one time.

batch box A container utilized for mixing concrete, mortar, plaster, or the like to insure proper portions by having space or spaces with the correct volume or volumes for those proportions.

batch plant A facility where the mixing of concrete or asphalt takes place.

batten 1. A narrow, horizontal strip of wood. 2. In roofing, a strip of wood used as a base for attaching tile shingles, wood shingles, etc.

batter A slant on a nearly vertical surface. This type of wall lays back slightly as it rises and is a common practice on boulder retaining walls to assure stability.

batterboard A device made up of boards set beyond the corners of a structure to be excavated, allowing one to pull strings from the boards to determine the exact location of a corner. These boards are two horizontal boards that are nailed at right angles to each other and staked to the ground.

battered wall A wall with a face having batter.

batt insulation A blanket-like thermal insulation that is flexible and used between studs or joists in frame construction. It usually comes precut in widths to fit industry standard spaces such as studs set on 16 in centers.

battlement The repetitive raising and lowering of the top edge of a wall with short spaces, originally designed for defense behind the wall.
by one throwing or shooting from the lowered space with wall protection on each side of the opening. The up and down repetition in the top of a wall or designs resembling that pattern is called a battlement design. See also crenelated.

bay 1. A group of regularly repeated special items defined by ribs, joists, or beams and their supports within a structure. 2. An alcove or recessed area defined by plants laid out in a design. 3. A parking bay of contiguous parking stalls in a single row. 4. A garland or crown of laurel representing excellence or victory. 5. A compartment or stall in a barn. 6. A portion of a larger body of water that projects into a land area with the land surrounding most of its perimeter.


bbl. Abbreviation for barrel.

BC soil Any soil with only a B and C horizon. The most frequent reason for loss of the A horizon is erosion.

bcy Abbreviation for bank cubic yards.

BE Abbreviation for bevel end.

beaked In botanical terms, ending in a long narrow tip.

beam 1. A ray of light or a group of nearly parallel rays of light. 2. A relatively large structural member placed in a structure to carry loads (usually of joists, or girders). These members are usually metal or wood and carry loads from other transfer members such as joists, girders, etc. 3. A long, heavy, wood member.

beam anchor A metal tie for anchoring beams to a wall or larger structural member.
bearing capacity

bearing capacity  1. The weight load per unit area that a particular area of ground can support safely without failure (movement). 2. The weight pressure that can be placed upon soil or rock without yield.

bearing plate A steel slab placed under columns, girders, or beams to distribute load from them to their supports.

bearing pressure The load on a bearing surface divided by the area in contact with its surface.

bearing strength The maximum load that a structural member can sustain divided by the bearing area.

bearing wall A wall designed to support vertical loads as well as its own weight. A structural wall or load-bearing wall.

bed  1. An area of soil covered by plants or prepared for planting. 2. A cultivated area of land.

bedding  1. The mortar bed spread to lay bricks in. 2. Any base prepared for paving. 3. Areas of ground prepared for annual flowers. 4. The growing medium used for annuals. 5. The method and/or materials used in backfilling pipes, conduits, structures, culverts, etc.

bedding mortar A mixture of sand and cement used in laying brick or paving stone.

bedding plant A plant (usually an herbaceous annual) suitable for mass plantings because of their colorful flowers or foliage for a decorative affect in landscaping. They are usually annuals or tropical plants grown for their outstanding aesthetic qualities in a short period of time. They are often changed from season to season.

bed joint  1. The horizontal mortar layer or bed on which masonry units are laid. 2. A crack in bedrock. 3. One of the joints that are radial in an arch made of individual units (bricks, stones, etc.).

bedrock In-place solid rock at the earth’s surface or underlying the soil layers. This rock is stable for the bearing of weight loads such as structures. Bedrock near the surface is a challenge to most landscape efforts and makes the growing of most plants more difficult because drainage, root space, and water-holding capacity are issues of concern.

bed shear stress The force of flowing water on the bed of a stream.

bed-type filter A filter made up of a porous medium through which water is forced to clean various sizes of suspended solids.

bee A flying insect much like wasps and hornets, except it has a mouth capable of sucking and/or chewing. They are useful in pollination.

beechwood In construction, a fine-grained, durable, strong hardwood often grown in Europe and North America. It is light colored or reddish-brown and is useful as flooring.

beetle  1. An insect usually having a hard pair of wings covering their flying wings that open in flight. There are 250,000 species, many of which are destructive to plants by feeding on them or transmitting diseases. 2. A hammer of mallet for driving stones into pavement, etc.

begging A hut covered with mud or turf.

behavioral connectivity In landscape ecology, the measure of the degree to which a landscape element is connected for a process such as the movements of deer, or frogs, or water through a space from one area to another.

belfry  1. A tower with a bell in it. 2. The supporting framework in a bell tower.

Belgian block curb A type of paving stone cut in a truncated, pyramid shape, laid with the base of the pyramid down.

Belgian fence espalier A pattern of espaliered plants forming a Y in its branching pat-
tern. Usually several plants are placed close enough to cross branches in forming a pattern.

![Belgian fence espalier](image)

**bell wire** A small diameter wire covered with insulating material capable of only carrying 30 volts or less.

**bell-and-spigot joint or bell-and-socket joint** A connection between two pieces of pipe, one having a flared end sealed with caulking (sometimes using oakum and lead for cast-iron pipes) or a compressible ring or gasket.

**bell or bell end** The flared end of a pipe made large enough to accept the end of another pipe of the same size so as to form a joint. It may also be called a hub.

**bellows expansion joint** This is a joint formed with flexible metal bellows capable of compressing or stretching to compensate for linear contraction or expansion due to changes in temperature throughout the run of the piping.

**bell tower** A structure that supports one or several bells usually placed higher than surrounding structures, if any.

![bell tower](image)

**benched borders** See border irrigation.

**benching** 1. Concrete placed, as a safeguard against sliding, on unstable slopes, or slopes capable of being unstable. 2. Concrete placed

![bench](image)
bench mark

along pipes to prevent them from sliding on slopes or in unstable conditions.

bench mark  In surveying, a known reference, or permanent object (if surveyed in, usually a steel marker placed in concrete) having its elevation and/or exact location verified and usable as a point of reference. This is a point from which other areas can be surveyed for elevation and/or location.

bench sander  A power sanding machine, usually mounted on a stand or bench, used to smooth objects held against it with a rotating abrasive disk or belt.

bench terrace  A flat area cut or filled on a hillside.

bench vise  A vise mounted on a bench, truck bumper, or other heavy object to allow work of force on material held in the vise.

bending moment  A more accurate and descriptive term for the more succinct expression moment. The point at which bending is produced in a beam or other structural member.

bending strength  The ability of a structural member to bend without breaking.

beneficial impact  See positive environmental impact.

benefits with regard to employment  Benefits are those items not part of an employee's pay, which benefit an employee such as: sick leave, vacation, holiday, life insurance, pension plans, worker's compensation, disability insurance, etc.

bentomat  Waterproof material used to line ponds or planters that contain bentonite.

bentonite  1. Any clay that can prevent the penetration of water and may be used as a liner for ponds, or other man-made water bodies. 2. A powder formulated from fossilized volcanic ash that is often mixed with water and added to clay to make a water-resistant gel. 3. A clay characterized by high absorption commonly swelling to several times its dry volume when saturated with liquid.

berm  1. A mound or wall of earth, gravel, sand, or rocks either naturally occurring or constructed in a landscape useful for screening, for aesthetic purposes, to protect (deflect wind, sound, etc.), and/or to allow planting above a high water table. 2. A bank of earth piled against a wall. This is often used against a house to help stabilize its temperature. 3. A shelf or terrace built into an embankment or slope, which breaks the continuity of the length of the slope or embankment.

Bermuda grass  A fine textured perennial grass used in warm climates as a lawn. It may also be thought of as a weed as it is difficult to eradicate. It spreads by rhizomes and by seed.

berry  1. Fleshy or pulpy fruit with one or more seeds, and not having stone seeds as in drupes. 2. Edible fruits referred to as berries, but botanically are drupes or conglomerates of drupes, such as blueberries, blackberries, loganberries, mulberries, raspberries, strawberries, etc.

best efficiency point  With reference to pumps, the point on a pump performance curve with the highest efficiency for the pump to run. The highest efficiency point on the curve is also the best hydraulic operating point for the pump.

best management practice (BMP)  A structural or nonstructural management-based practice used singularly or in combination to reduce nonpoint source inputs to receiving waters in order to achieve water quality protection goals. These activities, prohibitions, practices, procedures, programs, or other measures are designed to prevent or reduce the discharge
of pollutants directly or indirectly into natural waters. They are intended to reduce or avoid adverse impacts of development on the site's adjoining land, water, waterways, and water bodies. They are designed to control soil loss and reduce water-quality degradation caused by nutrients, animal waste, toxins, and sediment and should minimize adverse impacts to surface water and groundwater flow, circulation patterns, and to the chemical, physical, and biological characteristics of wetlands.

**bevel**  A chamfer; an angle between two surfaces that is not a right angle; often a 45° angle.

**bf**  Abbreviation for board feet.

**bg. cem.**  Abbreviation for bag of cement.

**B horizon**  The soil horizon found immediately below the A horizon. It is often referred to as part of the subsoil (see C horizon), as it contains little organic matter, and commonly has a high clay content. It has a darker color than the C horizon because clays, organic colloids, and/or leachable material from the A horizon are carried to it via water percolation. This layer of soil may be further divided into subhorizons of B1, B2, B3, etc.

**bhp**  Abbreviation for break horse power.

**B.I.**  Abbreviation for black iron.

**bib or bibcock**  A water faucet that has its outlet bent downward from the valve.

**bibcock**  A water outlet valve operated by turning a handle.

**bicolor**  With reference to plants, having two distinctly different colors, usually in the fruit or flower.

**bid**  A proposal made in exchange for completion of work or for an item. Most proposals involve a stipulated sum of money or trade items.

**bid bond**  A bond secured by a bidder guaranteeing that the bidder will accept the project if offered by the owner, and/or that the bidder will complete the project for the stipulated bid amount.

**bidding documents**  Documents given at the time of bidding including such items as instructions to bidders, a bid form, contract documents proposed, and/or any addendum issued.

**bidentate**  In botanical terms, two-toothed.

**bid form**  A form often provided to bidders to be filled out and delivered, as a bid.

**bid opening**  1. A time of opening all bids submitted. With large projects the time of opening bids is usually specified in the invitation to bid. The opening and reading and/or listing of bids submitted that conform to prescribed procedures.

**bid price**  The amount in monetary value or trade that a bidder requests as payment for accomplishing work.

**bid security**  A certified check, a deposited amount of cash, a money order, or a bid bond submitted with a bid guaranteeing the owner that the bidder, if awarded the contract, will complete the work in accordance with the bid documents for the bid price (amount requested).

**bid shopping**  Requesting bids from subcontractors or others after the date all bids were accepted and/or negotiating a price lower than the lowest bid received on time for materials and/or work.

**bid time**  The time and date determined by the owner and/or agent of the owner (usually the designer) for receipt of bids.

**biennial**  A plant with a normal life cycle of two years. When grown from seed, these plants typically do not flower the first year, but in the second year they flower, set seed, and die.
bifid

bifid In plant identification and descriptions, more or less deeply cleft from the tip into two usually equal parts.

bifurcate In botanical terms, twice-forked.

bifurcation Dividing into branches or parts.

bigeneric hybrid A hybrid plant created by crossing parents from two different genera. See also intergeneric hybrid.

bike path See bikeway.

bike route See bikeway.

bikeway A trail, path, or marked area along a street or travel way, provided for the use of bicyclists.

bilabiate In botanical terms, labiate or having two lips as on the corolla of a mint.

bill of materials The compilation of materials needed to accomplish a particular work.

bill of quantities A list of the quantities of items needed to complete a particular work.

binder coarse 1. A masonry portion of a wall used to bind an inner and an outer wall together. 2. An asphaltic concrete paving course between two other courses (the base and the surfacing course) made up of aggregate and bituminous material.

binder soil A reference to soil of good binding ability made up primarily of fine particles of clay, silt, or even fine sand, and also having colloids (extremely small particles). This type of soil is easily compacted and useful in construction, but it is not conducive or favorable to plant growth and root extension.

bindweed A perennial weed (also known as morning glory) that is extremely difficult to eradicate. Seeds last for years and can grow from any portion of the root left in the soil. It is reported that roots can extend as deep as 20 ft. Breaking or attempting to pull the plant is a lot like mowing a lawn; it will continually grow back. The best way to eradicate it is to be persistent and consistent with weed sprays. It is best to use a spray that will kill roots. This is most effective in the fall when the plant is storing food from the leaves into the roots. The author has found that using two combined weed sprays is most effective.

binomial With reference to a scientific name (botanical name), this means giving two names identifying a plant, usually the genus and species names. See also monomial and trinomial.

binomial nomenclature The naming of plants by the first name indicating the genus (its first letter capitalized), and the second name indicating species (lower case). Any further naming of variety, cultivar, etc. is optional. This system of naming and classifying plants (and animals) was developed by the Swiss botanist and naturalist, Carl von Linné. See also botanical name.

bioassay The use of living organisms for testing toxicity of wastewater.

bioavailability With regard to landscape and plant nursery work, the amount of substance readily available to plants as a nutrient or toxin.

biodegradable Material that can readily be decomposed (usually in the soil) by microorganisms.

biodiversity A reference to the number of various life forms on earth, on a continent, in a country, in a state, on a site, or other arbitrarily defined area, and usually referring to the number of species. See also biological diversity.

biodynamic gardening A movement taking on this name to promote practices much like those of organic gardening that does not use pes-
ticides, or at least those that will not leave residue, and improving soils through organic means, etc. It appears some of the substances recommended by the movement cannot be supported.

biofilter A filter in a water feature or water treatment design that uses biological means (often bacteria) to remove contaminants.

biogeographical A reference to the geographical distribution of a living organism.

biogeography The portion of biological science that studies the geographical distribution of plants and animals.

biological diversity The variety of life of any kind, including microscopic life such as viruses, bacteria, and including all plants, amphibians, aquatic life, animals, and humans. Three levels of diversity are considered: (1) within an ecosystem (no earthly ecosystem has definite boundaries fully contained); (2) diversity of species; and, (3) genetic diversity that occurs within a species.

biological oxygen demand Oxygen requirements of aquatic organisms that deprive fish or other aquatic animals of necessary oxygen within a water body.

biological pest control The use of plants, organic materials, naturally occurring chemicals, and/or beneficial insects to control pests and diseases in an area or on plants.

biomass 1. Living matter (living tissues of plants, animals, bacteria, etc.) present in an area. 2. Living matter capable of being converted into usable energy through biological or chemical processes. 3. The weight of organic material (living matter or matter produced by living things) within an area and sometimes a specific surface area (usually 1 sq m).

biomimicry Mimicking naturally occurring designs.

biophilia An appreciation for, or love of, life and the living world.

biosphere 1. The planet earth with all its living organisms and environments. 2. In broad terms, a reference for all living organisms in combination with their environment. 3. In landscape ecological terms, living organisms and their environment with reference to a large area such as a landscape, region, continent, or more often, the earth.

biotechnical stabilization The conjunctive use of both live vegetation and a retaining structure. This also includes grass or ground covers planted in a mesh or mechanical system.

biotic 1. Living things. 2. Related to life.

biotope The area needed for a particular conglomeration of plants and animals to live. It may be an area larger or smaller than an ecotope.

bipinate or bipinnately compound In botanical terms, double or twice pinnate with the primary pinnate divisions once again being pinnate. (Compare with simple, pinnate, palmate, trifoliate.)
bipinnatifid  Botanically, being twice pinnately compound.

bipinnatisect  In botanical terms, a three times' divided leaf-blade whose three parts are again divided several times.

birch  In construction, a lumber of high density, moderately strong, yellowish-white, sometimes brown, that is mostly used for flooring veneers and wood products produced on a lathe.

birdbath  1. In landscape ornamentation, usually a raised basin capable of holding a small amount of water, but enough water that a bird can bathe itself. They are commonly made of iron, stone, marble, or plastic and may be quite decorative. 2. A shallow puddle of water at a low spot on pavements.

bird feeder  A container used to hold seeds or other food intended for consumption by birds.

birdhouse  Any artificial nesting site for birds.

bit  A small, steel shaft with spiral cuts in it, which when placed in a drill or brace can be used as a tool to bore or cut a hole when it is rotated.

bit. or bitum.  Abbreviation for bituminous.

bit-gauge or bit-stop  A metal device temporarily attached to a drill, preventing a bit from drilling too deeply.

bitumen  A substance derived from coal or petroleum such as coal, tar, pitch, or asphalt that is usually dissolved in a solvent or heated to a liquid state before application.

bituminized fiber pipe  A pipe made of cellulose fiber and coal tar with an advantage of being lightweight.

bituminous cement  A black, hydrocarbon material used in sealing flat roofs and also between joints or cracks in concrete or asphalt paving.

bituminous coating  An asphalt or tar material placed over a finished pavement for a more protected surface.

bk.  Abbreviation for backed.

BL  Abbreviation for building line.

black spot  A general term for fungal diseases causing black splotches on plants. See leaf spot.

blacktop  A mixture of asphalt and aggregate used as paving material over a compacted base. Usually placed and compacted while hot. For placement without heat, see cold mix.

blade  1. In botanical terms, the expanded, flat, thin portion of a leaf, not including its petiole. It
is often veined. In grasses, it is long and narrow. 2. The cutting portion of a knife. 3. The flat portion of a trowel used for tooling or smoothing a surface. 4. A main rafter member of a roof. 5. A broad, slightly cupped, metal plate on the front of a tractor that pushes earthen material and can also be used to rip unconsolidated rock.

**Blain test**  A test used for determining the fineness of cement.

**blanch**  To make white or take the color out by excluding light.

**blanching**  The practice of tying leaves over the head or leaves of a plant to produce a lighter color or milder flavor (as with cauliflower).

**Blaney-Criddle method**  An air temperature method to estimate crop evapotranspiration.

**blanket insulation**  A fibrous glass material with or without facings used as thermal insulation or sound insulation.

**blasting**  The use of explosives, generally for fracturing and breaking bedrock.

**bldg.**  Abbreviation for building.

**bleaching**  A term used to reference the process of applying a liquid to something to cause it to lose color or become whiter. It is most often used in construction with reference to wood and is brought on naturally without the use of chemicals or water through extended exposure to sunlight. Water often aids naturally to the bleaching of wood and is evident where sprinkler heads overshoot onto siding, fences, or decks. If a bleach is to be applied to wood treated with a preservative, it should not be applied until at least 60 days after the preservative, and even then the bleach may not be as effective as desired due to discoloration.

**bleed**  In plants, the loss of sap, usually at wound.

**bleede**  A small drain valve used to allow fluid to drain from radiators, pipes, or tanks.

**bleeder pipe**  A pipe (usually made of clay) that carries water from a drainage tile to a storm sewer.

**bleeding**  1. The flow of water within, and/or the emergence of water on the surface of, newly placed concrete or mortar caused by the settlement of solid materials or sometimes brought about by overworking the material. 2. The appearance of a color pigment from the subsurface through the finished paint coat. 3. The loss of any or all electrical current in an underground wire due to damage to its coating.

**bleed valve**  On an automatic valve that is normally closed, a small device on the valve which if turned enough will allow a bit of water to escape, which triggers the valve to open, allowing water to flow through the valve into the downstream piping. Its name comes from the small amount of water that escapes (bleeds) through the bleed valve to outside the water system while it is in operation. This is useful on an automatic sprinkler valve as it allows one to open the valve and operate sprinklers without use of the automatic controller. This option is useful when testing the valve for operation because of a lack of response from sprinkler controller operation, or when needing to turn on sprinklers without accessing the sprinkler controller.

**blemish**  A minor appearance defect not affecting durability, function, or strength in a material such as wood, concrete, stucco, marble, steel, etc.

**blight**  1. An indiscriminate term for many diseases of plants, but usually associated with a fungal disease causing plants to wilt or wither. 2. A plant disease causing the general and rapid destruction of living tissue (stems, flowers, leaves, etc.).
blind

blind  1. Descriptive of a plant that fails to produce flowers or fruit.  2. A term describing a condition of bulbs or shoots that fail to produce flowers. This can be caused by excessive heat, disease, dry soil, or by forcing too early.  3. A condition when a bud stops developing. This happens to some tree species' terminal buds in transplanting.

blind drain  A drain that is not connected to a drainage system.

blind flange  A flange that closes the end of a pipe.

blinding  1. The compaction of soil above drain tile to reduce the likelihood of soil moving into the tile.  2. Completely covering piping with earth or other material.  3. The placement or sprinkling of stone chips, sand, fine gravel, etc. on freshly placed asphaltic concrete or a freshly tarred road to provide a more suitable surface.

blind joint  A joint that is not visible after completion of a project.

blind nailing  1. Placing nails in such a way that their heads are not visible on the face of the work.  2. Placing nails on a roof so as not to expose them to the weather.

blind nipple  A short piece of pipe having a cap on one end.

blk.  Abbreviation for block.

block  1. A masonry unit commonly referred to as a concrete block.  2. In stonework, a large piece of stone, usually squared, that is taken from the quarry to another site for sawing or further work.  3. An area within a community, town, etc. that is completely surrounded by streets, or the length from the point of one street intersection to the point of the next street intersection.

block and tackle  A set of pulleys in a device that usually has a hook for attachment and allows chains or ropes to be drawn through them for use in raising or shifting heavy loads.

block bridging  Short portions of boards fixed between joists to stiffen and strengthen them.

blocking  Pieces of wood used in shimming, securing, joining, or reinforcing other wood members within a structure.

blocking chisel  A wide, broad chisel used in masonry work made in various thicknesses, shapes, etc.
block insulation  A rigid or semi-rigid slab of material used for thermal protection.

block plane  A small, wood, planing device useful in cleaning up miters and end grains.

blood meal  An organic fertilizer made of dried animal blood (usually cattle) with an acid reaction and an NPK ratio of approximately 15-1.3-0.7. Nitrogen ranges from 12 to 15%, with 15% most common.

bloom  1. An open or showy flower. 2. The flower of any plant. 3. A whitish or bluish-white powdery, glaucous, usually waxy coating on some fruits such as grapes and plums, and on the stems or leaves of succulents or cacti, etc. 4. The action of a plant producing, displaying, and/or opening flowers.

bloomy  A descriptive botanical term referring to a plant part that has a powder-like, waxy deposit on its surface.

blossom  See bloom (1), (2), (4).

blotch  A disease caused by fungi. See also blight.

bloom count  1. In soil boring, the number of blows required to force a sample spoon 6 or 12 in into the soil. 2. The number of strikes or blows necessary to drive an object into a soil.

blue mottling  A bluish discoloring of soil indicating that anaerobic conditions have been present.

blueprint  1. A reproduction of a drawing made by contact printing where lines are defined on light-sensitive paper, and usually developed with ammonia fumes. The older blueprints were negatives with white lines and the remainder of the drawing being blue. Later blueprints were white with the lines being blue. 2. Reproductions of design drawings or working drawings used for communicating construction intent.

bm.  Abbreviation for beam.

B/M  Abbreviation for bill of materials, which is also called a quantity survey.

board  1. A reference to any piece of lumber with the exception of laminated wood. 2. A piece of lumber from 4 to 12 in wide and less than 2 in thick.

board fence  1. Any fence made with lumber. 2. A fence constructed with horizontal lumber attached to square posts.

board foot  1. A reference to any piece of lumber with the exception of laminated wood. 2. A piece of lumber from 4 to 12 in wide and less than 2 in thick.

board meter  A unit measurement of the amount of wood in a piece of lumber equal to the volume of an area 25 mm (2.5 cm) thick and 1 sq m.

boardwalk  A walkway made of boards often used along shopping areas, at the edges of beaches, or in sensitive, environmental areas frequented by tourists.

bob  See plumb bob.

BOCA  Reference to the National Building Code (uniform building code) in the United States. This is prepared by the Building Officials and Code Administrators International whose address is 4051 West Flossmoor Rd., Country Club Hills, IL 60478.

BOD or biochemical oxygen demand  The oxygen used during degradation of organic and inorganic materials in water.

body  The outside enclosure of a sprinkler device such as a sprinkler valve or sprinkler head without the inner working parts.

b of b  Abbreviation for back of board.

bog  1. A wet ground area that is generally soft, having soil mainly made up of decaying organic...
bog garden

material. 2. A temperate climate wetland usually exhibiting an acidic pH, and characterized by the presence of mosses, a diverse plant pallet, and an accumulation of peat.

bog garden  Land where the soil is permanently damp.

bog plant  A plant that will thrive in wet or saturated soil, but will not survive submerged conditions. If there is constant standing water, they should be referred to as marginal plants.

boil  A wet portion of material in an excavation.

bole  The portion of a tree stem (trunk) from the ground to the first branch.

bollard  A low post or many posts together set in a line to prevent access of vehicles to an area or to prevent vehicles from damaging a surface or structure. They may be made of stone, concrete, wood, marble, or steel pipes, and may be filled with concrete, etc. They are often decorative in appearance.

bolster 1. A horizontal, wood piece or large timber on top of a column or pillar providing an area for dispersing loads from above. It is usually decorative. 2. In masonry work, a blocking chisel.

bolster chisel  A steel chisel with a wide blade for cutting brick, pavers, or blocks. It is used with a club hammer to strike it.

bolt 1. The premature production of seed. 2. A metal shaft with a head and threads along a portion of the other end or all of the shaft. The head of the bolt is shaped to accept some type of tool to hold it in place, or it is shaped to be held firmly in place by the material it is placed in so that a device or nut may be turned on its threads to hold an item or items firmly in place or together. 3. A fairly short section cut from a tree trunk ready for sawing into lumber. 4. A roll of paper, etc. 5. A phenomenon in annuals or vegetables when they grow quickly to the flowering stage at the expense of good overall development. This is caused by hot weather, planting late in the season, excessive fertilization, etc. It is especially detrimental to crops that flower before obtaining the desired size or producing the desired crop.

bolt head  The enlarged end of a bolt, usually held in place with a tool while a nut or object is tightened on the other end to hold materials together.

BOM  Abbreviation for bill of materials.

bona fide bid  A bid that meets the conditions of the bidding requirements and is signed by an authorized person representing the bidding party.

bond 1. In construction, a financial guarantee from an insurer that assures that the work required by the bid will be accomplished. 2. Masonry units laid in a wall in a pattern that provides the wall with strength and stability. 3. The union of materials.

bond beam  In block walls, a continuous opening between blocks where steel is placed and secured with masonry grout. This becomes a structural element to provide stability to the block wall.

bond coat  A primer coat to assure adhesion on a surface of another material, especially paint on a surface.
bond timber  A timber built into a brick wall or a stone wall, usually in a horizontal position for the purpose of giving it strength.

bonding capacity  The amount of monetary exposure a bonding company will extend. This is usually based on a contractor’s prior performance and capabilities.

bonding layer  A layer of mortar laid on a masonry or concrete surface for bonding with another layer of masonry.

bone ash  Residue of calcined bones used in making pottery, glass, and as a fertilizer. It is alkaline and has an NPK of 0-35-0.

bonemeal  An organic fertilizer made from ground animal bones being slightly alkaline and having an NPK ratio of about 4-21-0.2. Steamed bonemeal is not as long-lasting as bonemeal and has an NPK of 2.5-24-0.

bonsai  A practice started in Japan of growing woody plants in a small container to keep them miniature and create a miniature landscape or tree. This requires meticulous pruning of branches and roots to create a fine specimen with a gnarled old look.

bonus and penalty clause  The portion of a contract that establishes an extra amount of money to be awarded for completion of a project prior to the agreed day of completion or a penalty for completion after the agreed upon date.

booster pump  A pump that increases the flow and/or pressure in a piping system over that which it normally maintains or produces.

boot  A metal flange around a pipe that passes through a roof, assisting in preventing leakage at the pipe penetration in the roof.

border  1. An edge or boundary of a planting area or paving. 2. Plants delineating an edge.

border dike  Earth ridge built to guide or hold irrigation or recharge water in a field.

border irrigation  The practice of irrigating by flooding strips of land, rectangular in shape, cross-leveled, and bordered by dikes. Water is applied at a rate sufficient to move down the strip in a uniform sheet. Border strips with no down-field slope are referred to as level border systems. Border systems constructed on terraces are commonly known as benched borders.

bore  1. Larvae of insects that tunnel and eat into stems and trunks, causing extensive damage or death of the plant. 2. The action of drilling or making holes. 3. The diameter of the inside of a pipe or any fitting thereon.

boreal  A reference to the northern biogeographical region.

boreal forest  Arctic conifer forests dominated by fir spruce, and tamarack.

borer  An insect that bores into woody plants as a larva or as an adult.

boring  1. The action of making a hole, usually by turning an instrument or using a drill. 2. Auguring, usually horizontally underground, by rotating a bit to extend a pipe or such from one point to another.

boron  A micronutrient in soil necessary for most plants’ optimum health and growth. In areas of high pH, this nutrient may be lacking. It plays a role in calcium utilization and without it death may occur in the growing portions of plants.

borrow  Fill material required for construction and obtained from other locations.

borrow pit  An area from which soil or other unconsolidated materials are removed to be used, without further processing, as fill for activities such as landscaping, utility backfill, build-
bosk

ing construction and maintenance, or highway construction and maintenance.

**bosk, bosque** The heads of trees or large plants intertwined into a mass, thicket, grove, etc.

**boss** 1. A botanical term meaning a tight, rounded cluster, usually referring to stamens. 2. In an employment setting, one who directs another’s work. 3. With regard to pipe systems, a protuberance on a fitting or pipe for strength, for fastening it to objects, to assist in alignment, etc.

**bossing** Soft sheet metal shaped to a three-dimensional surface to which it is applied.

**botanical garden** A public or private facility, park, or open space landscape with a variety of plant material on display for interest, observation, study, scientific research, and/or demonstration of the cultivation of flowers, fruits, vegetables, or ornamental plants. Ornamental botanical gardens usually seek to eventually display mature specimens and/or rare species or varieties.

**botanical name** The Latin name (scientific name) of a plant usually composed of genus, species, and sometimes, variety, cultivar, or strain. A plant may have several common names, but a plant may only have one botanical name. Plants requested by botanical name are more likely to be the plant desired. See plant classification and taxon.

**botany** The branch of biology concerned with the study of plants.

**bottle brick** Hollow brick shaped so it can be interconnected with similar bricks and possibly laid with steel reinforcement.

**bottom chord** A lower horizontal member of a truss.

**bottomland** Floodplain areas of lowlands. They may be wetlands and are often dominated by wetland tree species.

**bough** A branch of a tree, and especially main branches, and/or evergreen branches.

**boulder** 1. A rock larger than 25 cm or 10 in in a dimension used in walls, foundations, or mortar. 2. A single large rock native in a landscape or placed for enhancement in landscape construction.

**boulevard** A wide, tree-lined street. Early French boulevards were intended as promenades and not for heavy traffic as in recent years. The heavy-traffic, wide boulevards became a feature of city planning not only in France, but also in the United States where the term has come to be associated with a wide main thoroughfare.

**boundary** 1. A separating line that establishes or indicates a limit to an area or an extent. 2. A property line.

**boundary survey** A diagram that will mathematically close based on compass bearings, dis-
tances, and angles, usually prepared by a licensed land surveyor, and referenced to a bench mark or section corner, etc.

**bow**  With regard to lumber, a board with a curve in its length.

**bow compass**  A device for drawing arcs or circles made up of a bow with a pencil or a drawing device on one end, and a point on the other end placed at the center of the arc.

**bower**  In landscape gardening, usually describes a sheltered area or open structure within a garden. It can be a shelter of tree **boughs** or vines entangled together.

**bowling green**  A highly maintained portion of lawn that originated with the game of lawn bowling.

**bow saw**  A saw with a tubular frame roughly in the shape of a C holding a replaceable blade connected at each end of the frame.

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**box**  See **boxed plant**.

**box beam**  A hollow beam.

**box culvert**  A culvert of reinforced concrete with a rectangular or square cross-section cast in place or made of precast sections.

**boxed plant**  A plant (usually a tree) grown in a wooden box. Wooden boxes are used on large plant material where other containers would be difficult to remove without disturbing the roots and endangering the tree in planting. The box is comprised of several boards on each of four sides and the bottom. The box is usually tapered with the top being wider. This allows the box to be suspended with a piece of equipment and chains or straps while the bottom boards are removed. The plant will not fall out if established because of the tapered box and the consolidation of the roots and growing medium. The sides of the box may be removed in the planting pit without the established root ball falling apart if the boards are removed as the planting pit is backfilled.

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**boxed plant**

**box nail**  A nail with a wide, thin, flat-top head and slender, pointed shank for general construction purposes, especially for woodwork and thin
materials. It is similar to a common nail except that its shank is not as thick as a common nail's shank.

box section  Referring to concrete pipe that has a rectangular cross-section.

box stall  An individual compartment in a barn or stable meant for an animal.

boxwood  In construction, dense, hard, fine-grained, white or yellow wood often used on a lathe for producing wood products or also for inlay.

box wrench  A wrench with two useful ends usually having a closed socket and an opened socket that fits nuts and bolts and is used to tighten them.

brace  1. A metal or wood member used to support a portion of a structure or a frame temporarily or permanently. 2. A drilling tool with a handle crank and chuck that receives a bit so that it may be rotated to drill holes.

braced excavation  An area where earth has been removed and the perimeter banks are retained by wood, steel, or concrete sheets.

bracing  Elements of support. See brace.

brackish  1. A term used to describe saline water. 2. A term less correctly used to describe stale or stagnant waters such as in swamps, etc. 3. Anything salty, including soil.

brackish water  Surface or ground waters having a salt content greater than 0.5 parts per thousand.

bracts  Modified, reduced leaves just below a flower or cluster of flowers. Some bracts are not green and can be quite colorful such as on poinsettia, bougainvillea, or flowering dogwood trees.

brad  A small nail used for finishing with a head nearly the same width as its sides.

braided wire  Electrical conducting wire made of smaller wires braided or twisted together.

brake horsepower or Bhp  The horsepower actually needed for a pump to provide the required pressure and flow for a particular need. It may be found by multiplying the total dynamic head by the gallons per minute needed, and dividing it by the product of 3960 multiplied by the efficiency of the pump (taken from a pump performance curve provided by the manufacturer).

bramble  Shrubs that are thorny or prickly and often bear edible fruit (blackberries, raspberries, etc.).

branch  1. A natural division of a plant stem. 2. In plumbing, a pipe that starts or ends at a main, a riser, or a stack.

branch collar  A slightly swelled, sometimes wrinkled, area at the base of a branch where it meets the trunk. Cells in this area form the tree's defensive boundary where it attempts to prevent spread of damage by insects or disease. These cells will form the wound wood that covers and protects the area if a branch was removed. Branches should not be removed by cutting off the protective collar flush with the trunk. Cuts should be made next to it regardless of the size of branch being pruned.

branch fitting  A pipe fitting used to connect a branch pipe to a main pipe.

branch line  In irrigation pipe systems, this is any pipe that diverges or branches off from another pipe in the direction of water flow from a valve through the pipes.
brashy Wood that is weak and brittle.

brass A copper alloy having zinc as its principal element.

brass pipe A tubular metal manufactured from an alloy of 85% copper and 15% zinc.

braze To join pieces of metal with metal alloy of nonferrous metal (solder) that melts at a temperature above 800F and provides a hardened connection.

BRC Abbreviation for bronze.

break A term sometimes used to describe a mutant plant.

breaker 1. A machine that crushes rocks. 2. Breaker switch.

breaker box 1. A metal enclosure (box) housing breaker switches. It also often houses a main electrical switch that will turn off all electricity.

breaker switch A switch in an electrical system that controls electricity flowing to outlets, lights, and/or electrical devices, and flips to the off position when there is a short in the line. This is a safety feature to assist in avoiding fire and/or shock.

break horsepower The mechanical power supplied by an engine or motor determined by a friction break or dynamometer applied to the shaft or flywheel.

breaking ground The start of excavation work that begins a construction project.

breakwater 1. An artificial earthen (soil, rock, concrete, rubble, boulders) barrier in a water body, extending above the water surface and perpendicular to the shoreline. It is generally used to change the natural littoral drift, to protect inlet entrances from clogging with excess sediment, or to protect a harbor area from waves created by boats, winds, or water currents. 2. A overing of a shoreline area with heavy rock, boulders, concrete pieces, etc. to prevent erosion of the shoreline.

breast drill A hand-operated drill with an end that can be braced against one's chest for additional force.

breeching fitting A symmetrical Y-shaped pipe fitting used to unite two parallel pipes.

breezeway A covered passageway connecting two spaces.
Abbreviation utilized on drawings for bearing.

A rectangular masonry unit made of clay treated in a kiln.

A metal strip used when facing a wall with brick to anchor the brick to a wall by having the strips attached to the back wall and placing the other portion of each strip in the mortar of the brick wall laid in front of it.

The laying of brick where no mortar shows on the face as they are laid touching one another and then mortared from behind.

The surface of a brick intended to be exposed on the front of a brick wall.

A brick laid on its narrowest side in a wall.

A metal, diamond-shaped blade with an offset handle used for spreading mortar. It has a narrow end called a point and a wide end called a heel.

A joint where a piece of lumber is hollowed or shaped to accept the end of another piece of lumber that has been hollowed or shaped.

A path constructed and intended for equestrian use. These paths are usually barricaded if they intersect roads to prevent vehicles from entering where horses are being ridden. They are usually wide enough for two horses to pass one another.

An elevated structure connecting two elevated points.

A notched board supporting treads and risers of a staircase.

The slab or other surface forming the travel surface of a bridge.

1. Installing braces between joists to help strengthen them and better distribute loads from above.

2. Braces between joists.

A plant or mass of plants that are thorny or prickly.

In botanical terms, a stiff, sharp hair or any very slender body of similar appearance.

A game played with mallets, different colored balls, and hoops for passing balls through on a lawn. The size is 84 ft by 105 ft. See also lawn croquet.

A publication by the British Standards Institution that itemizes grades, sizes, qualities, and other specifications of materials.

An organization in Great Britain that establishes and publishes standards for specifications in that country.

The amount of heat necessary to change the temperature of 1 lb of water upward 1°.

Abbreviation for brick.

A type of ax having a broad blade used in roughly shaping timbers.

A method of application by scattering or dispersing a material such as seed, fertilizer, etc. over the ground. This can be done by hand, by a hand-cranked seed broadcaster, or by a tractor-drawn broadcaster. Mechanical broadcasters help assure evenness of application.

Plants that do not have needlelike or scale-like foliage.
broadly spreading  A term often used to describe tree crowns that are widely vase shaped with a narrow bottom and a wide top. (Compare with round, columnar, fastigate, oval, weeping, upright spreading, pyramidal.)

broadly spreading tree form

broad stone  A stone produced for construction purposes having edges with more or less right angles, making it easier to stack. It comes in a variety of sizes.

broken joints  Staggered, vertical, masonry joints where masonry units are not placed directly above one another. This pattern divides for a stronger wall as units are not placed directly above one another lining up joints.

broken-pitch roof  A roof with more than one pitch on either side of its ridge as with many barn roofs.

bronze  A mixture of copper and tin.

broom  1. To lightly brush a concrete surface in its early cure stage, giving it a rougher texture. 2. To make certain a roofing layer has bonded to the bitumen underneath it by pressing over its entire surface. 3. The widening or spreading of the top of a post or pile pounded into the ground.

broom finish  To lightly brush a concrete surface in its early cure stage, giving it a rougher texture that is more skid or slip resistant.

brownfield  An abandoned, idled, or underused industrial or commercial facility where expansion or redevelopment is complicated by real or perceived environmental contamination.

brown rot  A powdery, brown residue after a certain type of fungus destroys wood.

brownstone  A sandstone used extensively in the eighteenth century in the United States that is dark brown or reddish.

BRS  Abbreviation for brass.

Br Std  Abbreviation for British Standard.

BRU  Abbreviation for brick.

brush  A tool with bristles held tightly together, used for painting or cleaning.

brushed surface  A concrete surface stroked with a brush to give it a rough or textured look as in a broom finish.

BS  1. Abbreviation for both sides. 2. Abbreviation for British Standard.


BSMT  Abbreviation for basement.

BTB  Abbreviation for bituminous treated base.

Btu, BTU  Abbreviation for British thermal unit.

BTUH  Abbreviation for BTU per hour.

bubble level  A closed glass tube filled with liquid except for a small space where a bubble is formed and can be centered in the tube to determine horizontal or vertical lines or planes, as well as to determine direction of slope in paving surfaces or pipes to assure drainage.

bubbler  An irrigation head that allows water to flow or bubble from it freely (not in a spray or drip) over a small area.
buck

A sawhorse.

bucket A portion of a tractor that digs or carries materials and is shaped for containment, somewhat like a scoop.

bucket-wheel excavator This is an excavating machine that moves under its own power, digs with a rotating wheel, and dumps earth onto a conveyer belt.

buckle Distortion, movement, or breaking of a wood or steel member or sheet.

buck scraper An earth scraping machine which fills with earth as it is moved, and then it is raised on each side (on runners) to release the load.

bud 1. Flower buds that develop into blossoms. 2. Leaf buds or growth buds that are at the ends or sides of stems and develop into leaves. 3. To propagate by budding.

budding 1. In gardening, a method of propagation by transplanting a bud to another plant by cutting a T-shaped slit in a stem of a plant, and removing a bud with a bit of wood from another plant to place it in the T-shaped cut. It is then bound in place. 2. In reference to plants in general, a plant’s buds swelling in the spring before leaves emerge.

bud union The enlarged knob just above the soil where top growth joins the rootstock.

budworms and budmoths Young caterpillars that feed on or in plant buds.

buffer 1. A strip of land, compatible land uses, fence, or a border of trees, etc., between one use and another that somewhat mitigates negative impacts between uses. 2. A visual screen. 3. A strip of land with natural or planted vegetation intended to separate or at least partially obstruct the view of two adjacent land uses or properties from one another. 4. A device that blocks scat-tering of rock when blasting. 5. The zone around the edge of a water body where disturbances and uses are limited to protect the water body from contamination or degradation.

buffering The resistance of a substance to an abrupt change in pH (acidity or alkalinity).

buffer strip In land use, the portion of a lot or a land area used to visually separate one use from another by way of vegetation, screening, and/or distance; to shield or obstruct such negative impacts as noise, illumination, poor aesthetics, or other incompatibilities or nuisances.

buffer zone An area of land separating two distinct land uses that is zoned, set aside, or required to provide softening or mitigation to the effects of one land use toward the other.

builder A company or individual responsible for construction.

builder's level A long straight piece of wood or metal alloy with bubble levels set within its frame.

Builder’s Risk Insurance Insurance for coverage of construction work.

building code A construction document usually referred to after adoption by a government agency. It describes and identifies materials, methods, and/or procedures for building and/or construction practices.

building footprint The shape included within the surrounding exterior walls of a building as they are traced upon the ground.

building inspector An individual authorized by a government agency to inspect construction work making certain it conforms to applicable codes, regulations, and/or drawings approved by the jurisdiction.

building official An individual charged by a governing agency with administration and enforcement of building codes and rules. Also,
one duly authorized by such an individual to be a representative.

**building paper** An inexpensive paper, usually asphalt covered, which affords some thermal insulation, a little weather protection, and a vapor barrier.

**building permit** A written document authorizing construction that is given by an official having jurisdiction over the area built upon.

**building regulations** A term sometimes used for building code.

**built environment** 1. The elements of the environment that are generally built or made by people rather than natural processes. 2. The whole of the human physical surroundings and conditions that have been constructed.

**built-up beam** A beam of wood or metal made of individual units bound, bolted, welded, or fastened together in some fashion forming a larger, stronger, structural member.

**built-up roofing** Roofing made of layers of roofing felts, asphalt, and/or cold tar pitch surfaced with either a layer of asphalt with gravel or cold tar pitch with gravel.

**bulb** With regard to plant material, a swollen or thickened storage organ just beneath the soil surface, which in season produces leaves, roots, stems, and flowers. It encompasses true bulbs, rhizomes, tuberous roots, tubers, and corms.

**bulbil** Small bulbs formed along stems in axils of leaves and flowers. Bulbils may be planted to form new plants.

**bulblet** Often called an offset. New bulbs are formed from lateral buds on the basal plate. These smaller bulbs can be separated and planted.

**bulbous** Growing bulbs or growing from a bulb.

**bulk** Material provided loose, and not in bags, boxes, or other containers. It is usually loaded for hauling with shovels or tractors.

**bulk density** A numerical reference to the measurement of whether a soil is friable or compacted. It is the weight of a unit volume of oven-dry soil, including the pore and solid volumes. A topsoil with a bulk density of about 1.33 Mg/m³ is considered the preferred density for a favorable rooting medium. Soil density exceeding about 1.6 Mg/m³ is considered unfavorable or greatly inhibiting to root penetration. See also soil compaction and compact.

**bulkhead** 1. A structure including riprap or sheet piling, constructed to separate land and water and establish a permanent shoreline that will not erode. 2. A structure or partition placed on a bank, a steep slope, or bluff to retain or prevent sliding of the land.

**bullate** In botanical identification and descriptions, covered with rounded projections resembling unbroken blisters.

**bulldozer** A heavy tractor moving on tracks with a horizontal curved blade useful in clearing land, road building, stripping soil, etc.

**bull float** A long-handled tool (4 to 16 ft, 1 to 5 m) with a wide (+/- 42 to 60 in, 100 to 150 cm) trowel-like head (+/- 8 in, 20 cm) made of wood, aluminum, or magnesium used in finishing concrete. Its handle usually has sections that can be added for reaching distant portions of new wet concrete pavements to smooth and
even the surface. Most have the capability of interchanging the trowel head for different smoothnesses or finishes.

**bullhead tee** In reference to pipes, a tee fitting that has smaller openings in line with each other and a larger opening to the side or the tee.

**bullnose** In concrete work, the rounding of an edge or sharp angle in a surface of wet concrete, or a reference to the finished look of such rounding.

**bull-nose block** A masonry unit or block having at least one rounded corner.

**bulwark** A solid structure built for defense or protection as with a sea wall or breakwater.

**bunch grass or bunching grasses** A grass that grows in tufts and is often called a bunch grass because it grows in separate bunches rather than in a mass or sod. These grasses can appear as sod if planted close enough together.

**bund** A long, narrow wall or embankment along a body of water.

**burl** Dome-shaped swellings on the trunks of some trees growing to as much as 2 ft in diameter.

**burlap** A rough, woven fabric of hemp, jute, or such (sometimes flax), used for containing the balls of trees, for retaining water in curing concrete, for reinforcement in plaster, etc.

**burnish** To polish and increase the glossiness of a surface.

**burr** In piping, a piece of pipe or sliver of pipe left after cutting or threading still slightly attached to the pipe cut.

**burst pressure** A reference to the maximum pressure a valve can sustain without rupturing.

**bursting strength** With regard to pipe and fittings, this is the point at which there is enough internal pressure to finally cause the pipe and/or its fittings to come apart, crack, or disintegrate.

**bush** A low shrub with many stems instead of a single stem.

**bush fruits** All shrubs with fruits fit for human consumption.

**bush hammer** A hammer having pointed shapes on its face for dressing stone or concrete. It is either used by hand or it may be power driven.

**bushing** In piping, a fitting that facilitates joining a smaller pipe to a larger pipe.

**butt-end treatment** The treatment of one end of a post or timber to assist in preserving it underground. Various preservatives may be used.

**butterfly** Adult insects with large, usually colored, wings. They are similar to moths, but have wings closed when at rest, antennae with knobs at the end, and fly in the day. Some varieties are useful for transferring pollen as they sip nectar. The larvae of a few varieties are destructive to plants.

**butterfly garden** A garden that provides plants that are attractive to butterflies and/or their larvae.

**butterfly hinge** A decorative hinge having somewhat the shape or appearance of a butterfly.

**butterfly valve** A valve with a disc hinged in the center of its opening, which controls the flow of fluids through the valve.

**buttering** In masonry, the spreading of mortar on a masonry unit.

**butt fusion** A method in piping of joining two plastic pipes together by heating their ends to a molten state and then pressing them together to form a bond.

**butt hinge** A hinge that has two rectilinear shapes with one on either side of its center shaft.
**butt joint**  A joint where two members are at right angles, flat, and square in their area of contact.

**buttress**  The lower conical portion of some trees growing in response to flooded conditions. They may include distinct ridges that broaden and anchor the base of the tree. Some species typical of this phenomenon are cypress, black gum, and wetland oak.

**butt splice**  A **butt joint** where the joint is strengthened or held in place by boards secured usually on two sides of the butt joint.

**butyl**  A thick, strong, durable, rubber liner often used as a waterproof liner.

**bypass**  In piping, an optional water route through an extra pipe, diverting water and again delivering the water to where it connects downstream and thus allowing the passage of a portion of the pipe that normally facilitates flow.

**bypass pruner**  A tool for pruning plants that has two handles and two blades that pivot on a pin, allowing one blade to pass by a curved, shaped blade to make a cut. These pruners are popular.

**bypass valve**  A valve used to control flow through a bypass.

**BV**  Abbreviation for **butterfly valve**.
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C

Abbreviation for Celsius (centigrade).

cabana An open structure or tent near a swimming pool, beach, etc.

cabinet file A hand file that is rounded on one side and flat on the other side.

cable 1. Electrical conductors insulated from one another in a group. 2. An electrical conductor made up of smaller diameter wires twisted together. 3. A heavy rope or wire.

cablegation A method of surface irrigation that utilizes gated pipe to transmit and distribute water to furrows or border strips. A plug moving at a controlled rate through the pipe causes irrigation to progress along the field and causes flow rates from any one gate to decrease continuously from a maximum rate to zero.

cable grip A tool connected to the end of a cable to facilitate pulling the cable underground with a machine or through a conduit.

cable-pulling compound A material used to reduce friction on a cable when being pulled through a conduit.

cable vault An underground, enclosed space (usually a concrete, fiberglass, or plastic box) into which cables are spliced together.

Cactus and Succulent Society of America (CSSA) A society dedicated to educating people regarding cacti and succulent plants, as well as to protecting and preserving these plant types.

CAD Abbreviation for computer-aided drafting.

caducous, caduceus, caduceous In botanical terms, used to describe portions that fall off early or before their usual time.

cairn A heap or pile of stones placed as a landmark or memorial.

caisson 1. A watertight chamber for working on structures below a surrounding water level. 2. A cylindrical concrete foundation penetrating through unstable soil and resting on rock or stable soil. 3. An augured or drilled piling.

calcaneous Soil containing calcium carbonate. It is alkaline in reaction.

calcicole A plant that thrives in alkaline soils.

calcifuge A plant that does not grow in calcareous (lime, alkaline) soils.

calcined clay A baked montmorillonite clay that does not shrink or swell when wetted or dried. It is sometimes added to a soil mix for plants to improve the air-water relationship.

calcite A mineral form of calcium carbonate used in Portland cement manufacturing. It is also a constituent of limestone and marble.

calcium carbonate A naturally occurring compound usually found as calcite and aragonite, in bones, plant ashes, etc. It is used in making lime and Portland cement.

calcium chloride A product sprayed on dirt roads that holds dust down, but has a harmful effect on vegetation. Runoff from roads treated with this product should be directed away from vegetation.
calcium cyanamide

calcium cyanamide  See cyanam.
calcium magnesium carbonate  See dolomite.
calcium magnesium phosphate  See calcium-magnesium phosphate.
calcium metaphosphate  A phosphatic (53%) fertilizer that is nearly neutral in pH.
calcium nitrate  A nitrogen fertilizer with 34% nitrogen (34-0-0). See nitrate of lime.
calcium sulfate  See gypsum.
caliber  The internal diameter of a pipe.
caliche  A type of hardpan condition usually in desert areas. It is a deposit of calcium carbonate (lime) that “cements” soil particles together beneath the soil surface and does not allow hand digging, root penetration, or water percolation.
caliper  1. In horticultural practice, an instrument with two legs, pivoting at one end, and allowing a measurement of the diameter of a plant’s stem (trunk) or branches between the other two ends. 2. A measurement of the diameter of a plant’s trunk or stem. This is primarily used in reference to trees. For trees less than 4 inches in diameter, the measurement is usually taken at 6 inches above ground level. For trees greater than 4 inches in diameter, up to and including 12 inches, the caliper measurement is usually taken at 12 inches above the ground level. For trees greater than 12 inches in diameter, the trunk is usually measured at breast height (diameter at breast height or DBH), which is 4½ ft above the ground. Typically, existing larger caliper trees are measured at breast height.
callus  A mass of cells that develops from and around wounded plant tissues.
calorie  The amount of heat necessary to raise the temperature of one gram of water one degree Celsius (centigrade).

calyx  The outer, usually green, enclosure (sepals) that surrounds a flower bud.
camber  1. A slight upward curvature in a beam or truss to improve appearance or prevent sag by compensating for loads placed upon it. 2. A slight rise in curvature of a surface to accommodate water drainage of the surface (runoff).
camber beam  A beam curved slightly upward near its center.
cambium  On dicotyledonous trees and shrubs (including all woody plants) this is the layer between the bark and the underlying tissue (sapwood) upon which they are dependant for growth of new wood by cell division. This is also where a plant forms its bark. This layer extends from the base to the plant tips. See also xylem and phloem.
campanile  A free-standing bell tower.
campanulate  In botanical terms, a bell-shaped or cup-shaped flower with a broad base.
campanulated  Having a bell shape.
Canadian Standards Association  An organization that tests and publishes standards for the construction industry in Canada.
caliculate  A botanical term indicating that a plant part has parallel grooves or channels.
candela  See candle.
candelabra  A pattern (form) of an espaliered plant that resembles a candelabra with branches generally forking horizontally and turning upward.

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candelabra espalier

candle or cd  In lighting design, a luminous intensity. The description or standard for this intensity is one-sixteenth the luminous intensity of 1 sq cm of a black body surface at the solidification temperature of platinum. A light source of 1 candle (candela) emits 12.57 lumens.
candela  See candle.
candlepower  Luminous intensity of a source producing light expressed in candelas.
cane  The woody stem of a plant that only lives for two or three years (e.g., raspberries).
cane bolt  A cane-shaped metal bolt that is attached to a door or gate. It can be turned and pushed down so that the bottom portion of its shaft slides into a hole in a pavement to prevent the door from moving. These are often used in barns, stables, and warehouses.
canescence  This refers to a fine, close gray or pale pubescence on a plant or a plant part. (Compare with argenteous, cinerous.)
canker  A localized, diseased area mostly on woody plants where tissue has died due to the effects of fungi or bacteria, visible as lesions on trunks, branches, and other plant parts. These areas shrink, die, and crack, exposing tissue underneath. As they interfere with water uptake, the foliage often dies as do ends of twigs. Preventing cankers is best achieved by adequate water, fertilizer, and avoidance of injury. Prune cankers out while being careful not to spread the disease with pruning equipment.
cankerworm  Larvae of various insects, but especially of small moths, that defoliate trees and shrubs. They are often noticeable when lowering themselves by small threads.
canopy  A covered shelter for protection from sun, rain, snow, tree-litter, etc., that generally projects over a sidewalk, driveway, entry, window, or similar area. It may be wholly supported by columns, poles, or braces extending from the ground.
cantilever  1. Anything in design extended beyond its support. 2. In framing and decking, a structural member that extends horizontally beyond its last vertical support.
cantilever wall  A reinforced concrete retaining wall with a footing extending underneath the slope to be retained, thus resisting overturning by the weight on this cantilever footing.
canvas  A closely woven material made of hemp, flax, or cotton.
cap

1. A fitting or device used to close the end of a pipe. 2. A top portion of a retaining wall, pillar, column, etc., different from the rest of the wall in its material, thickness, dimensions, etc.

capillary action The force resulting from water surface tension as well as attraction of soil particles to water molecules. This force, when combined with osmotic pressure from roots, causes water in the pores of soil to move. In clay soils, capillary force is higher and may move water as much as 30 ft vertically.

capillary capacity The amount of water still held in the soil when the excess water that can be drained by gravity has drained out. See field capacity.

capillary fringe The zone immediately adjacent to and above the water table in which all or some of the smaller gaps between soil particles are filled with water having less than atmospheric pressure. In this area, water is drawn up from the water table by capillary action. The smaller spaces in soil hold onto water tighter and draw it up higher than the larger pores. In general, soils having smaller spaces between particles draw water higher along the fringe of the water table.

capillary movement In soils, the movement of water due to unequal tensions of water developed under different degrees of curvature of the surface film of the water. As a root hair absorbs moisture from around two soil particles, the film curvature around those particles curves and the tension draws moisture from around other particles toward that point, causing the movement of water in the soil. This movement is very slow. A plant will usually wilt before an appreciable quantity of water can move within reach of its roots from any great distance.

capillary water In association with soil, water that is retained in the pores of soil and not drained under the force of gravity. Capillary action holds water in the soil above the water table. This water is held in the capillary or small pores of the soil, usually with soil water pressure (tension) greater than \( \frac{1}{3} \) bar. Capillary water may move in any direction.

capital The uppermost portion or member of a column or pilaster that is meant to distribute, accept, and bear the weight of the structure above it. It is the wider and often decorative portion at the top of a column.

capitate In plant identification and description, this means head-like, formed into a head, or abruptly enlarged and making a head.

cap screw A threaded screw with a chamfered point driven into a hole and then tightened into it (without a nut).

capsule 1. A seed case that splits open to release seeds when it is dry. 2. In botanical terms, a dry dehiscent fruit made up of more than one carpel.
carbonaceous  Containing organic matter.
carbon-arc welding  A weld caused by an arc between a carbon electrode and a metal piece.
carbon disulfide  Also called carbon bisulfide, a dangerous soil fumigant. Upon exposure to the atmosphere, it evaporates into a poisonous, explosive gas that is heavier than air and damages plants.
carbon:nitrogen ratio, carbon to nitrogen ratio  The ratio (proportion) of carbon to nitrogen by weight in organic matter or soil. As the carbon (undecomposed organic matter) amount (first number) increases, the nitrogen used for decomposition increases, becoming unavailable to plants as it is robbed for the decomposition process. The A horizon in a soil usually stabilizes with a ratio of about 10:1 through 12:1. Forest litter with less decomposition may be 20:1, and other organic substances may be much higher (i.e., sawdust that is not decomposed). The higher the carbon in the ratio, the more nitrogen will be stolen from the soil to break down the material. Nitrogen stolen from the soil for decomposition often has a detrimental effect on plant growth. See nitrogen deficiency.
carbon steel  Steel having a various amount of alloy elements.
cardinal temperature  The minimal temperature at which growth occurs.
carotene  See xanthophylls.
carpel  The fertile portion (megasporophyll) of an angiosperm flower, which bears the ovules. One or more carpels join to compose a pistil.
carpel indehiscent  In botanical terms, remaining closed at maturity.
carpenter's level  A straight metal or wood bar used to determine horizontal or vertical lines for being true by use of a bubble in glass.
carpenter's square  A flat, steel, L-shaped tool with measurements (inches, centimeters) marked along its edge, used to mark perpendicular lines or check corners for being perpendicular (square) to each other.
carriage bolt  A metal bolt with a flattened end threaded for accepting a nut with like threads; the other end has a wide, rounded top that is flat underneath and has no indents on its top surface for accepting a screwdriver, and no flat sides to accept a wrench for stopping it from turning when the nut is tightened. Instead, it has a square shoulder portion just under the rounded head's flat bottom that holds the bolt by being secured in a similarly sized square hole in the piece it is bolted to. Threads on the shank may extend the entire length or for only a portion of its length. It is useful to bind items together or secure items in place.
cartilaginous  In plant identification and description, tough and firm, but somewhat flexible, like cartilage.
caryopsis  A small indehiscent one-seeded fruit with the seed fused to its surroundings (i.e., wheat, rye, corn).
casebearer  Moths and larvae that feed on leaves, flowers, seeds, etc. and have portable tubes or pouches in which they live or hibernate.
case-hardened

Steel or iron that has been hardened on the outside.

case-hardening  1. In metal, a way of increasing durability and strength of steel or iron (see case-hardened).  2. In timber, when drying and seasoning lumber if the outer layers dry too quickly this causes stress between them and the inner layers.

casing  1. The exposed molding, framing, or trim around a door or a window.  2. A portion of pipe used to line a hole.  3. The housing that encases the impeller of a pump.

casing nail  A small, slender nail with a slightly flared head that is not much larger than the nail shaft. It is often used in finished-surface woodwork. It is usually not desirable to allow a nail head to show on the finished material it is attaching. It can be driven into the material with a punch or the force of a mechanical nail gun, and covered with similar material to that which it is nailed so that its location is unnoticeable.

cast-in-place concrete  Concrete poured on-site. It is designed to stay in the location where it is poured and finished. It is not brought in as precast concrete.

cast-iron  An iron alloy with high carbon content (keeping it from being classified as steel) formed into shapes by pouring it into molds at high temperature in a molten state. It has a high compressive strength, but low tensile strength.

cast-iron pipe (CIP)  A thick wall metal pipe mostly used on large water service lines. It is available in various wall thicknesses and pressure ratings.

castor pomace  The dried pulpy residue of castor beans after extraction of oil. It is an acidic fertilizer with an NPK of 5 to 6, 1½ to 2, ½ to 1.

catch basin  A container for surface drainage waters in which sediment settles out before water is drained out.

catch can  See catchment.

catch can grid  A defined pattern of cans or containers for catching water dispersed by sprinklers where the cans are spaced on 1–2 ft intervals. This is a method used by manufacturers, irrigation auditors, and testing facilities to obtain accurate sprinkler profiles.

catchment  In irrigation auditing, a container that is set out to catch irrigation water as it falls from the spray of sprinklers. These containers are used to measure the water distribution of sprinklers. They are set out in a uniform pattern, the sprinklers are operated for a specific period of time, and the water they catch is measured for determining distribution uniformity, efficiency, and precipitation rates.

caterpillar  An elongated, smooth, or hairy, wormlike larva usually of a butterfly or moth. They can be quite destructive as they chew and consume leaves and other plant parts.

cathodic corrosion  Decomposition and destruction of metals caused by the electromechanical action of electrolysis. This occurs when two dissimilar metals (i.e., a galvanized fitting and a brass or copper fitting for pipes) are in contact with one another in the presence of water or another conductor. Dissimilar metals in a piping system should be separated by an insulator pipe or fitting, such as one made from plastic.

cathodic protection  A way of defending or saving ferrous metals (containing iron) from galvanic corrosion when they are covered with moist soil or are under water. One method is to attach to the metal fittings or pipes to another piece of metal that is more electronegative to divert the electrolysis.
cation  A positively charged ion which during electrolysis is attracted toward the cathode. Sodium, potassium, calcium, and magnesium are the most common cations in waters and soils.

cation exchange capacity  The measure of the positively charged ions in a soil matrix.

catkin  In botanical terms, an ament, or something closely crowded with bracts. They look like drooping caterpillars.

cat's-eye  A knot in a piece of lumber smaller than 1/4 in (0.6 cm).

cattle manure  See cow manure.

catwalk  A narrow pathway affording access to areas otherwise difficult to reach. They may be used in areas such as highly sensitive environmental sites, areas above excavations, or access to lights or signs high off the ground.

caudate  In botanical terms, having a tail or tail-like appendage.

caudex  1. The woody or persistent base of a perennial plant. 2. The stem of a palm tree or a tree fern.

cauliflorous  In botanical terms, a production of flowers or fruit directly out of old wood portions of a plant.

cauline  A botanical term meaning on the stem or pertaining to the stem. Cauline leaves are attached to the stem above the ground in contrast to basal leaves, which originate at ground level.

caulk  Material used to fill joints or cracks in or between construction materials.

caulking gun  A tool used for applying caulk, usually allowing the caulk to be extruded under pressure by pumping a small handle with one hand. These guns are also available with extrusion being supplied by forced air (pneumatically).

cavitation  With regard to piping systems or pumps, the forming and collapse of air (vapor) bubbles through pressure changes in the water system or pump. This occurs when the pressure on a liquid falls momentarily below the vapor pressure for that liquid, causing a change from liquid to vapor, and then a pressure increase causes another change and the gas becomes a liquid again. This phenomenon can also occur in suction lines of pumps. See also vapor pressure.

cavity wall  A masonry wall of two withes having a separation of air between them. The walls are usually connected by metal ties extended between the two withes.

cavity wall tie  A corrosion-resistant piece extending between two masonry walls tying them together as in a cavity wall or hollow wall.

C/B ratio  This abbreviation refers to the saturation coefficient for brick, which is the ratio of the percent absorption of a brick submerged in cold water for 24 hours to the absorption of a brick submersed in boiling water over a 5-hour period. The 24-hour cold water test is divided by the 5-hour boiling test. This is a strength value, which assists in measuring the durability of masonry units, which can also be measured by conducting freeze/thaw tests. This is of prime importance in landscape work as brick in the landscape is exposed on one or both sides to weather in nearly all cases. It is more important in areas of annual temperatures below freezing.
CCA

CCA  Abbreviation for chromated copper arsename.

ccf  Abbreviation for hundred cubic feet.

C-clamp  A C-shaped steel clamp where a threaded piece is screwed through one threaded female end of the C and extended to the other end of the C where it can be tightened against objects. This type of clamp is used to hold materials temporarily while being worked on.

CCW  Abbreviation sometimes used for counterclockwise.

CD, cd  1. Abbreviation for candle or candela. 2. Abbreviation for grade of plywood face and back.

CDX  Abbreviation for a plywood grade of C&D with exterior glue.

CEC (cation exchange capacity) The ability of a soil to bind positively charged ions.

cedar  A softwood often used in outdoor applications because it is resistant to decay.

cedar-apple rust  A fungus (Gynosporangium) that damages crabapple, hawthorn, mountain ash, red cedar, quince, and upright junipers. It alternates living on pome fruit-bearing trees one year and juniper cedar trees the next year. It causes swelling and gall on juniper-cedar and yellow or orange spots on apples or leaves. Resistant apple varieties include Freedom, Liberty, and Priscilla; varieties of resistant junipers are Chinese and Savin. It is wise to remove alternate hosts from the immediate growing area.

celing hook  A hook with screw-like threads on one end designed to screw it into a wall, ceiling, wood, etc.

CELA  Abbreviation for Council of Educators in Landscape Architecture.

cell  A room below grade or a portion of a building having more than half its height below grade.

cell pack or cell tray  A modularized set of small square or rectangular planting containers fitting into a flat. They usually contain 96, 72, 48, 36, or 24 cells per flat.

cellular construction  Concrete walls constructed with portions of their interior having voids.

cellular grid  A method of retaining soil with a lattice-like array of structural members made of concrete, timbers, or polymeric web. These grids allow for the establishment of vegetation that becomes the main stabilizing element for retention.

cellulose  A material of plant structures that is the main component of dried woods, flax, hemp, jute, etc. This type of material is often used as the mulch component in hydromulch.

Celsius, C  Same as centigrade.

cem.  Abbreviation for cement.

cement  A fine gray powder of calcined limestone and clay for mixing with sand, gravel, or other elements to make concrete or mortar.

cementation  The process of cementing.

cement block  An incorrect term for concrete block.

cement brick  Brick fabricated from the mixture of cement and sand. It is not usually used on the face of walls or exposed to acid or alkaline conditions.

cement-coded nail  Nails coated with cement. The dried, rough coating makes them stay in place better when pounded into wood.

cement mixer  An apparatus for mixing concrete by a drum that mixes the materials by turn-
ing, which agitates the materials and mixes them thoroughly. See concrete mixer.

cement mortar  See mortar.

CEM. MORT.  Abbreviation sometimes used for cement mortar.

center bit  A bit used for boring holes. It has a center piece on the end of the bit with threads or a sharp point to hold the bit in place once it starts to drill. It may also have projections at the outside edge of the bit to mark its circumference as it is applied to material to begin boring.

centering  The materials used under an arch to support it while it is being built.

center island  A parking island located between bays of parking and usually running the length of the parking bay.

centerline  A line measured or marked on-site or drawn, representing the center of an object such as a road, pipeline, structural member, etc. It is usually indicated on drawings with a dashed line having a long dash and one dot or short dash. It may be labeled with a symbol of a small “c” and a capital letter “L” superimposed over the “c.”

center punch  Hand tool consisting of a short piece of metal rod with a point at one end, usually being case-hardened and useful in marking where a hole is to be drilled. When struck with a hammer from the opposite end of the point the mark made will usually indent enough for a drill bit to stay in place to begin drilling.

center-to-center  Usually in reference to a distance between the middle point or line of two items of the same type (i.e., plants, joists, posts, paths, etc.).

centi  A prefix indicating 100.

centigrade or Celsius or C  A scale for measurement of temperature where 0° is the freezing point of water and 100° is the temperature at the boiling point of water. To convert centigrade (Celsius) to Fahrenheit, multiply the centigrade temperature by 9, divide by 5, and then add 32 to the result.

centimeter (cm)  The metric measurement of \( \frac{1}{100} \text{m} \) (0.01 m), or \( \frac{39}{100} \text{in} \) (0.39 in).

centipede  A long, segmented, many-legged insect. The garden variety is about \( \frac{1}{2} \) inch long, but other varieties are over an inch long.

central  A spine of a cactus where the spines originate from an aerole’s center instead of its periphery as they do in a radial.

central leader  1. The main, central stem of a tree from which branches grow. 2. The upper portion of a tree's or shrub's center stem or leader, which is dominant in growth and often extends above other branches and foliage.

central-mixed concrete  Concrete mixed completely off-site or a significant distance away and transported to the point of placement.

centrifugal pump  A pump having pumping action created by fluid passing through a high-speed, rotating impeller that builds pressure by centrifugal force caused by fluid being forced outward as it exits the center of the impeller with velocity and pressure. Water is directed by its casing. It produces a smooth, steady flow and is useful in pumping water and sewage with some solids such as gravel, sand, leaves. Types of centrifugal pumps include the closed-coupled valute pump, the valute with flexible coupling pump, the horizontal split case pump, and the vertical turbine pump.

cephalium  In botanical terms, a woolly cap, usually at the apex of cacti.

cercinate vernation  The simultaneous unwinding and growing of fern leaves.
cerogenous

A botanical term, wax producing.

certificate of insurance A certification obtained as evidence to an owner, general contractor, etc. that a provider of construction services is covered by a particular type of insurance for a particular maximum amount.

certificate of occupancy A certificate granted by a government jurisdiction for occupancy of a facility and use of it as approved in design, completed in construction, and verified by the government agency.

certificate of payment A written document approving payment for work completed and materials provided.

certificate of substantial completion A verification by a designer or owner that a project is complete except for punch list items. At this point, a time of final payment and maintenance duration is usually established.

Certified Irrigation Contractor (CIC) An irrigation professional who has been tested and certified by IA (Irrigation Association) and whose principal business is to install, repair, and maintain irrigation systems.

Certified Irrigation Designer (CID) The IA (Irrigation Association) Certified Irrigation Designer produces professional irrigation designs by writing specifications and drawing designs for the construction of irrigation projects.

Certified Landscape Irrigation Auditor (CLIA) An irrigation professional who is certified by the IA (Irrigation Association) to be involved in the analysis of landscape irrigation water use. Auditors collect site data, make maintenance recommendations, and perform water audits. Through their analytical work at the site, these irrigation professionals develop monthly irrigation base schedules.

Certified Landscape Irrigation Manager (CLIM) An irrigation professional who is certified by the IA (Irrigation Association) as an irrigation professional familiar with all areas of turf irrigation design and construction management. They must be certified as CICs, CIDs (all specialty areas), and CLIA.s. Certified Landscape Irrigation Managers have extensive experience in design, construction, construction management, and auditing of irrigation systems.

cespitose A botanical term, growing in dense, low tufts.

cesspool or leaching cesspool or pervious cesspool An excavation in the ground that is covered and lined for receiving domestic sewer discharge, surface waters, storm system water, or drainage system waters and is designed to retain organic matter or solid materials while allowing the water or liquids to seep through the side and bottom surfaces. The bottom of the enclosure is either open to earth or a gravel layer, or has holes to allow the escape of liquids from the bottom of the cesspool.

cf 1. Abbreviation for cubic foot, or cubic feet. A cubic foot is a volume that measures 1 ft long (12 inches) along all edges and is comprised of 144 s.i. 2. Abbreviation for 100 ft.

cfm Abbreviation for cubic feet per minute.

chaff In botanical terms, small scales or bracts on the receptacle of compositaceae; the glumes of grasses, etc.

chaffy In botanical terms, furnished with chaff; of the texture of chaff.

chain 1. A measuring instrument used in surveying made up of 100 links. In the United States, the links are 1 ft long. 2. A unit of measurement equal to 66 ft (20 m). 3. A length of interlocking metal links. Large chains are used
with tractors for lifting, with block and tackle, on trencher booms with teeth to dig, or for holding equipment while in transport, etc. Smaller chains are used on chain saws or between pulleys in transferring force from an engine, etc.

**chain-link fence** A fence made of heavy, interwoven, steel wire to make a fabric that is usually galvanized for durability. This mesh is stretched between posts to provide a barrier fence. It can be made more aesthetically pleasing by coating with plastic vinyl, etc., in colors such as brown, green, or black, and by sliding colored slats through the fabric.

**chain saw** A handheld, power cutting tool with a rotating chain and embedded teeth that cut through wood.

**chain trencher** A machine used for digging trenches, with a rotating continuous metal chain outfitted with teeth blades that dig.

**chalk** 1. An alkaline soil composed of decomposing and fossilized shells. It is whitish, grayish, or yellowish in color. 2. Used in a pull-string (chalk line) to mark materials for cutting or for placement. 3. A calcareous, light-colored limestone that is soft.

**chalk line** A string covered with chalk stretched tightly over a surface, pulled and then let go at the center to snap a line on the surface marked with the chalk. This line is often used for cutting or marking a place of attachment.

**chamfer** A symmetrical beveled cut or beveled edge. It is usually on a right-angled edge and is a 45° angle surface to the other main surfaces.

**champaign** A term used mostly by the French to describe a large, open, fairly flat countryside.

**change order** A document showing change in the work or cost of a contract.

**channel** The deeper portion of a water flow way that has faster current, water flow, and pressure.

**channel bar** See channel iron.

**channel block** A hollow masonry unit with openings to accept a continuous steel reinforcement and grout.

**channeled** In botanical terms, hollowed out like a gutter, or marked with one or more deep, longitudinal grooves.

**channel iron** A metal rod with a U-shaped cross section.

**channelization** The creation of a channel or channels producing faster water flow, a reduction in hydraulic residence time, and less contact between the water and solid surfaces under the water body.

**charcoal** A partially burned wood piece that absorbs gases filling pore spaces from decaying matter and keeps soil sweet smelling. It is useful in containers, pots, or confined planters.

**charette** A concentrated design effort in an academic atmosphere to complete a project within a time limit.

**chartaceous** In plant identification and description, papery in texture.

**chase** A groove or recess in a wall provided for piping or other utilities.

**check** A small crack in wood that has been dried too quickly or steel that has been cooled too quickly. Checks in wood run parallel to the grain and across growth rings.

**check valve** A valve that automatically permits liquid to flow in just one direction. May be used to prevent water in the landscape from entering the city water main where it would
contaminate the water supply. They are also useful in preventing pumps from losing their prime when the pump is turned off.

**chelate**  An organic substance holding micronutrients in a form available for absorption by plants. These are fertilizers with an extra metal ion, making the fertilizer available to plants. They are also known as metal-organic complex fertilizers. Iron chelate is used in alkaline soils to overcome chlorosis as it makes iron available to the plant. Chelate micronutrients such as iron or zinc may be prevalent in the soil but unavailable to plants because they are locked as insoluble compounds. When a chelating agent is added, the nutrient elements are made available to plants.

**chemical fertilizer**  See inorganic fertilizer.

**chemigation**  Application of chemicals or fertilizers to plants through an irrigation system by mixing them with irrigation water.

**cherry wood**  A rich, red-brown wood, which when finished takes on a high luster and is a fairly high density.

**chestnut wood**  A medium-hard wood that has a coarse grain and is useful in ornamental woodwork.

**chicken manure**  See poultry manure.

**chinch bugs**  A small, black and white, soft-bodied bug that is longer than wide and destructive to grasses and grains. The young are red or yellow, marked with brown, and suck plant juices. They are fond of sunny, warm areas.

**chink**  A crack in a wall.

**chinking**  Material placed between logs in a log wall.

**chipper**  A motorized machine that chips and grinds branches, stems, and woody material into various sizes. This chipped material is often used as mulch in planting beds to prevent excessive evaporation from the soil, discourage weed growth, and provide a finished appearance.

**chisel**  A hardened steel rod with a flat end and a flat nose making a stout metal blade used in shaping wood, stone, and metal when pounded with a hammer.

**chisel pattern**  A pattern of shingles on a roof in which the bottom edges are clipped on an angle.

**chlorine**  A micronutrient necessary in plant growth that is very seldom lacking in soil. It is a regulator of osmotic pressure necessary in evapotranspiration.

**chlorophyll**  A green, organic compound produced by plants in photosynthesis and is the receptor for photosynthesis.

**chloroplast**  Granules of chlorophyll protoplasm within plant cells. They are green, and through photosynthesis manufacture carbohydrates (starches and carbohydrates) for the plant.

**chlorosis**  A condition in plants caused by a deficiency in iron, or sometimes zinc, evidenced when newer leaves turn yellow. Some refer to chlorosis as any condition where there is lack of green caused by malnutrition or disease. It is most often used in reference to a plant’s inability to take up iron from the soil. In its mild form, yellow areas can be seen between the veins of the leaves, which remain dark green. In severe or prolonged cases, the entire leaf will turn yellow, usually with the exception of the veins. In most soils where chlorosis occurs, there is usually enough iron in the soil, but the presence of another substance, such as lime, makes the iron unavailable to plant roots. Iron sulfate or iron chelate can be applied to
the soil to overcome this condition. Iron can also be provided to the plant by spraying leaves with foliar sprays.

**chord** 1. The distance between two points on an arc or curve. 2. The distance from one side of an arch in a structure to the other side. 3. A significant member of a truss extending along its upper or lower edge that resists bending and is attached to other members.

**C horizon** An infertile mineral layer of the soil below the solum (A and B horizons) in an ideal soil profile extending to the bedrock (R horizon) and often referred to as the subsoil. It is weathered rock disintegrating into sand and clay particles. It may be further divided into subhorizons of C1, C2, etc.

**choropleth map** A map showing areas of various sizes and shapes representing qualitative or quantitative information.

**chromated copper arsenate (CCA)** A waterborne salt preservative for wood. Wood must be pressure treated for this preservative to be effective. It is highly recommended by experts as it is odorless, clean, does not leach, and its color can be masked easily when dry by painting or applying a solid color stain. Besides being good for preserving wood in weather aboveground, this stain can be used for wood placed in water and underground.

**chromated zinc chloride (CZA)** A waterborne salt preservative for wood. Wood must be pressure treated for this preservative to be effective. It is highly recommended by experts as it is odorless, clean, does not leach, and its color can be masked easily when dry by painting or applying a solid color stain.

**chromium plating** A protective finish able to take on a high polish that is corrosion resistant and extremely hard.

**c.i.** Abbreviation for cast-iron.

**c.i. or cu. in. or i³** Abbreviation for cubic inches. It is a volume equal to a cube measuring 1 inch along each edge.

**CIC** Abbreviation for Certified Irrigation Contractor.

**CID** Abbreviation for Certified Irrigation Designer.

**ciliate** In botanical terms, the margin of a leaf with a fringe of hairs. (Compare with entire, pectinate, cleft, lobed, dentate, denticulate, serrate, serrulate, double serrate, incised, crenate, crenulate, parted.)

**cinder block** A masonry unit that is lightweight and most often used for interiors. It is made of cinder concrete.

**cinder concrete** A lightweight concrete made with cinders instead of aggregate.

**cinders** Material from volcanoes or blast furnace slag.

**cinerous** Derived from or resembling cinders in composition or color (gray, usually tinged with black).

**CIP** Abbreviation for cast-iron pipe; and cast in place.

**circinate** In botanical terms, rolled inward from the end, like some umbrella handles.
circuit

1. An electrical conductor made of two or more wires through which current may flow to an electrical device and back again. 2. The area covered by sprinkler heads operated by a single valve.

circuit breaker A safety switch installed in a circuit that will automatically switch off when electrical current exceeds a predetermined amount, or when a short circuit is experienced. They can be manually reset when their switch is automatically flipped off.

circular saw A power-driven saw with a circular blade and a cutting edge along the rim of the circular blade.

citronella Oil derived from Cymbopogon nardus (common name: lemon grass) and other plants. This oil is often used for burning in containers outdoors as it is thought to repel insects.

city planner An officially designated city employee charged with the responsibility for interpreting and administering the zoning codes and other land development ordinances adopted by a city.

city planning The decision-making process and design process by which goals and objectives are established, existing resources and conditions are analyzed, strategies are developed, and controls are adopted to achieve goals, plans, and objectives for cities or towns.

civil engineer An engineer whose primary emphasis is the occupation of designing public works (roads, water, sanitary sewer, storm sewer, etc.) projects as well as subdivisions, and the overseeing of those construction projects.

civil engineering Application of the knowledge of forces of nature, principles of mechanics, and the properties of materials to the evaluation, design, and construction of civil works for the use of mankind.

cladode A descriptive botanical term referring to a flattened leaf-like stem.

cladophyll A flattened stem closely resembling a leaf.

clamp A tool for holding materials in place while working on them (e.g., for welding, grinding, gluing, etc.).

CLARB Abbreviation for the Council of Landscape Architectural Boards.

class 1. A designation of a pipe or component’s maximum design pressure, which increases with wall thickness. Class 200 pipe
has a pressure rating of 200 psi. Plastic pipe is often identified by class. They are solvent-welded or slip joint pipes because their thickness is not generally enough to thread. 2. A major category of taxonomy ranking above the order and below the division.

claw  In botanical terms, the narrow or stalk-like base of some petals.

claw hammer  A hammer with a head that has a striking side and a side that is curved for pulling nails.

clay  1. Earth with soil particles of a size less than 1/25,000 in (0.002 mm) in size, often made up of silicates and aluminum. It is the smallest of soil particles from the mineral fraction and greatly assists in loam soil structure formation by encouraging aggregation. Clay is plastic-like when wet and hard when fired. It is used for brick, tile, and pottery. 2. A soil textural class comprised of approximately 40–100% clay, with 0–40% silt and 0–45% sand. It is a fine-textured soil, usually forming very hard clods when dry, but is easily moldable and sticky when wet. When it is moist, it can be pinched between the thumb and fingers. It usually forms a long, flexible “ribbon.” An exception to this is when the clay is high in colloids. When a soil is classified as clay, it is usually easily compacted and has poor drainage. However, some clay is essential in the best soils to prevent leaching of nutrients, allow for root penetration by forming granules, contribute to the fertility status, and assist with water retention. Clay also has properties of surface charges for adsorption of water, gas, and nutrients. Clay has a potential for shrinking and swelling.

clay brick  A solid clay masonry unit warmed and then heated in a kiln to harden.

clay loam  A soil textural class comprised of 27–40% clay, 15–43% silt, and 20–45% sand. This fine-textured soil usually forms clods when dry, and when moist and pinched between the thumb and forefinger it forms a thin “ribbon” that will readily break and can barely sustain its own weight. If squeezed when moist, the cast will bear much handling without breaking. Kneading it will work it into a heavy compact mass that will crumble readily.

clay masonry unit  A masonry unit that is larger than the normal brick size.

clay pipe  A vitrified-clay pipe.

clay tile  1. A tile used in flooring. 2. A roofing tile made of clay, hardened through a heating process.

clean aggregate  Aggregate material that has been washed to be free of organic compounds, or earth.

cleanout  1. A pipe fitting with a plug that can be removed for placing a device down into the main piping system for cleaning or inspection. 2. An opening at the base of concrete forms for removing debris before concrete is poured. 3. The task of removing soil from a trench by hand after a machine trencher has initially dug the trench.

clear  To remove all trees, shrubs, and other plant material from an area of ground. Also see grub.
clear-cutting

**clear-cutting** Removal of an entire stand of trees or vegetation.

**clearing** Removing vegetation and their roots from an area.

**clear lumber** Wood without any knots or defects.

**clear span** The distance along a member or structure from one of its supports to the next nearest support.

**clear vision area** The triangular area bounded by the street property lines of corners and a line joining points along the street lines a determined number of feet from their point of intersection. This area is kept free of visual obstructions from street to street to provide an open view of the intersection, providing more safety for those traveling toward the intersection so that they can avoid intersecting traffic.

**clear vision triangle** See clear vision area.

**cleft** In botanical terms, having a natural cut or indentation halfway down or more. With regard to leaves, the measurement is from the leaf edge to the midrib. (Compare with ciliate, pectinate, centire, lobed, dentate, denticulate, serrate, serrulate, double serrate, incised, crenate, crenulate, parted)

**cleft timber** Wood that has been split along its grain and sold by approximated dimensions.

**clevis** A horseshoe-shaped or U-shaped piece of steel that receives a bolt or pin through the two ends of the U shape.

**CLIA** Abbreviation for Certified Landscape Irrigation Auditor.

**climate** The temperature, humidity, cloudiness, solar intensity, daylight hours, precipitation, wind, etc. over an area of the earth.

**climber** Vines or weak-stemmed shrubs (as with some roses) that have a tendency to climb.

**clinging** In reference to plant materials, the tendency of a plant to wrap around or attach itself to other plants or objects by twining or attaching (especially with tendrils or adventitious roots). Examples of vines that cling by attachment are English Ivy and Boston Ivy.

**clinometer** A handheld instrument for measuring vertical angles and slopes by focusing one eye on the instrument window and another eye on a point the same distance above the ground as the point on the slope. The angle and degrees are shown in the instrument window.

**clip joint** A joint in a masonry wall that is thicker than the usual joints. This is often done to bring a masonry coarse to its proper dimension.

**clock** A term sometimes used in reference to an automatic controller.

**clock valve** A type of check valve with an interior piece that opens on a hinge, allowing water flow in one direction and closing when flow is reversed.

**cloister** A covered walkway surrounding a courtyard.
clone A plant from a series of plants reproduced by asexual methods producing genetically uniform plants. These genetically identical plants are usually produced vegetatively (asexual propagation) by grafting, cuttings, budding, and divisions. These methods produce cloned plants.

closed canopy A tree cover thick enough that it does not allow one to observe the sky from beneath it or to observe the ground from above it.

closed-coupled volute pump A centrifugal pump with the distinctive feature of the pump being a part of the motor casing and frame. The pump is mounted directly to the motor shaft.

closed forest 1. A forest where undergrowth reaches from the ground to the lower canopy of trees. 2. A forest with a cover of interlinking tree crowns.

closed impeller A pump having an impeller closed by two discs (a shroud), one on either side of the impeller. This type of pump is usually more efficient for a longer period of time than an open impeller pump, but it does not pass objects well.

closed string A board along the outside edge of stairs that extends down their length and covers the stair risers and treads from side views. The steps are then closed to view when viewing them from the side. See also open string.

closed water-piping system An irrigation system or water system that does not allow water to reverse flow and return back to its source. This is usually facilitated by installation of a backflow preventing device.

close nipple A pipe nipple having threads along its entire length, which is the shortest possible length permitted in standard practice to facilitate tightening on each end.

closer The last stone, brick, or block laid in a horizontal course sometimes cut to fit the space available.

cloud nail A large, flat-headed nail used for fastening asphalt roofing, metal sheeting, plaster board, etc.

cramp hammer A heavy mallet-type hammer used with a bolster chisel to cut brick, pavers, or block.

club root A disease of wallflowers such as allysium, candytuft, vegetables, etc. caused by a fungus. It is sometimes called “finger and toe.” It misshapes and enlarges roots, and causes plants to wilt in the day while partially recovering at night. This can be controlled by having a pH over 7 or by having well-drained soil.

CLUG Abbreviation sometimes used for caulking.

clump 1. Trees that are grown (naturally or forced) with many stems or trunks growing from the ground. 2. A hard lump of soil. A dirt clod.

clump forming 1. A grass or herbaceous plant that forms separate crowns from the parent and does not form a thick sod. 2. A tree that tends to naturally form many trunks (as opposed to naturally forming one single trunk) from a fairly central point. 3. A shrub that tends to form a mass as several plants grow together in a colony.

clumping grasses A grass that grows in tufts and is often called a bunch grass because it grows in separate bunches rather than in a mass or sod. These grasses can appear as sod forming if planted close enough together.

cluster development See clustering.

clustering 1. A land development concept grouping buildings and roads closely together usually in groups or clusters, and usually keeping
the total development density at that which could be constructed on the site under conventional zoning and regulations leaving surrounding land without paving or buildings. This is a common method of preserving natural land features, agriculture, sensitive land areas, etc. The open space area is often developed for recreational use. 2. The grouping of plants, especially of the same type.

cluster (residential) 1. The layout of residential buildings or dwelling units in such a way as to provide less area of disturbance to the land, allowing more area to remain in agriculture or a natural condition, or as a developed open space. 2. The placement of more than one residential building on a single lot or parcel of land for the purpose of constructing single-family residential dwelling units, whether in an attached or detached construction arrangement.

cluster subdivision A wholly or principally residential subdivision that permits a reduction in lot area, setback, or other site development regulations, provided there is no increase in the overall density permitted for a conventional subdivision in a given zoning district. The remaining land area is used for common space as a visual or functional amenity or as a means of ecological preservation.

cm Abbreviation for centimeter(s).
cmp Abbreviation for corrugated metal pipe.
CMU Abbreviation for concrete masonry unit.
CN ratio Abbreviation for carbon to nitrogen ratio.
CNRC Abbreviation for Canadian National Research Counsel.
CO 1. Abbreviation for cleanout. 2. Abbreviation for certificate of occupancy. 3. Abbreviation for change order.

cobble or cobble stone or cobblestone 1. A rounded stone larger than a pebble or gravel but smaller than a boulder, especially when used for paving or construction purposes. 2. A rock fragment or rounded rocks between 2½ and 10 inches (64 to 256 mm).

cob wall A wall made up of clay, straw, and gravel.
cocoon A protective coating secreted by an insect larva in which a pupa develops.
code This term is sometimes used in the construction industry to reference any regulations imposed on design and work by governing agencies.
code of practice A document of standards outlining acceptable construction with various materials and workmanship.
codling moth  A small moth whose larvae infest apples, English walnuts, quince, pears, etc. The larvae enter fruit as it starts to form.

coefficient of expansion  The change in measurements of a material per unit of dimension per degree change in temperature.

coefficient of permeability  An expression of the rate that water flows through the soil. It is also referred to as hydraulic conductivity.

coefficient of runoff  A number representing storm runoff that varies depending on the type of ground surface, indicating the portion of a rainfall converted to runoff. It is a number between 0 and 1 with impervious surface having higher coefficients of runoff. It is used in the rational formula.

coefficient of uniformity (CU)  A numerical water distribution indication in an area of irrigation based on a formula that averages the entire area without highlighting small problem areas; treats overwatering the same as under-watering. Its formula is $CU = 1 - \left(\frac{\text{average deviation}}{\text{average catchment}}\right)$. It is a measure of the variability of water distribution (precipitation rate) for a specific irrigated area. Using a catchment test in an irrigated area, it is a comparison of the average precipitation of all catchments and the deviation from that average. A perfect score of 100 states that the system is efficient and there is no variability of water distribution.

cotaneous  In plant identification and descriptions, flowers that develop at the same time that leaves develop.

cofferdam  A temporary, watertight enclosure from which water is pumped. Holds back surrounding water or water-logged soil, providing an area for performing construction.

cog joint  A joint between two crossing structural wood members that have been notched to fit together.

cohesion  The attraction of like substances to one another. This is an important feature of water around soil particles and facilitates or prevents movement of water.

cohesionless soil  A soil that has little strength when air dried and little cohesion when submerged.

cohesive soil  A soil that has cohesion when submerged and strength when air dried.

coir  A fiber obtained from coconut and often used to prevent erosion, etc.

cold frame  Simple small structures built to protect plants from full exposure to weather. They usually have some glass and are not artificially heated. See also hotbed.

cold joint  A joint in concrete where the first pour is allowed to harden before the next batch is placed against it. This usually forms a poor bond between the two batches.

cold mix  Asphaltic concrete placed without heat. It is not usually hard or durable as hot asphalt.

coliseum  A large outdoor amphitheater.

collar  1. The outer side of a grass leaf at the joint of the blade and the sheath. 2. A root collar or branch collar.

collected plants  Any plants gathered on-site, in the natural landscape, or on another site, etc. and transplanted from where they have grown. They are not grown in containers and are not grown by a nursery.

collector road  A road that has more traffic than other roads, allowing access of traffic to it. See also arterial road.
**Colloid**

**Colloid** Any substance so fine that when it is dispersed in a liquid it stays suspended.

**Colonial** A reference to design reminiscent of American colonial design.

**Colonize** The multiplying of a plant type beyond its existing area of coverage.

**Colonnade** Columns in a line. They may be independent, a part of a roofed structure, or a series of arches, etc.

**Colony** A group, clump, or stand of plants separated from others of their type.

**Colossal Columns** A column that is taller than one story of a building.

**Colosseum** A large amphitheater that is usually outdoors.

**Column** 1. A tall narrow structure like a post or pillar that usually supports a structure above it, but may also stand as a feature without bearing any weight as a part of a building or wall. As ornamental building supports, they are often round with a base and a capital.

**Columnar** A plant form that is upright, narrow, with nearly parallel sides and reminiscent of a column. Usually tall narrow trees or shrubs. (Compare with round, weeping, fastigate, oval, broadly spreading, upright spreading, pyramidal.)

**Com** Abbreviation used in the lumber industry for common name.

**Comb** Abbreviation sometimes used on drawings for combined or combination.
combination pliers  A tool capable of wire cutting and gripping with jaws having a hinge point and handles. The handles can be squeezed and the jaws can grasp or cut items. The hinge point has a slip point giving the jaws two adjustments as to size.

combination square  A tool that may be used as a square, a level, a marking gauge, a straight edge, or a plumb that has one leg of the square capable of sliding along the other for adjustment.

combined aggregate  A mixture of both fine and coarse aggregate for use in concrete mixes.

combined sewer  A piping system facilitating the drainage of both storm water and sanitary sewage.

comfort station  A toilet facility for public use.

commercial fertilizer  1. Any fertilizer commercially available. 2. A fertilizer that is manufactured mostly from chemicals, then mixed (sometimes with inert materials to get the proper percentage), and bagged.

common nail  A nail with a wide, round, thin, flattop head and slender, sharply pointed shank for general construction purposes, especially for woodwork where finished wood is not critical. It is similar to a box nail except that its shank is not as slender as a box nail’s shank. Often used for framing wood structures.

common name  The name a plant is ordinarily known by that is not its botanical name (scientific name, Latin name).

common open space  Land of a development, not individually owned or dedicated for public use, and designed and intended for the common use or enjoyment of the residents of the development.

common wire  The ground wire in an electrical system. It completes the return path of electricity to the source.

commuter rail  The portion of passenger railroad operations that carries passengers within urban areas, or between urban areas and their suburbs. It differs from railroad in that railroad passenger cars generally are heavier, the average trip lengths are usually longer, and the operations are carried out over tracks that are part of the railroad system.

compact  1. In horticulture, a plant that has a tighter branching pattern or denser, more prolific foliage, and/or is shorter than other plants of the same species. 2. In landscape and excavation, to compress and cause a reduction of voids by the pressure of heavy weight, regulated moisture, or vibration. In relation to soil, aggregate used in a base for paving. This can be accomplished and increased by mechanical compactors, by natural settling over time, or by traveling (driving or walking) over the material. Adding just the right amount of moisture will assist compaction efforts when the material is too dry. Too much moisture or too little moisture will prevent adequate compaction. Too much water will cause the soil to become plastic or compact.
liquid-like, preventing compaction by mechanical means until dried sufficiently. The cyclical wetting by rain (or overhead irrigation) impact and drying generally increases compaction. Soil compaction is advantageous and usually essential to the stability of structures and paving, but is detrimental to plant growth. Plants find compacted soils adverse due to little aeration, little gaseous diffusion, difficulty in root extension and penetration, and the lack of water as it does not infiltrate well. The greatest cause of established tree deaths is compaction. A concrete that has been packed tighter by a process of vibrating or tamping when freshly placed to reduce the number and size of voids within the concrete mix.

**compacter volume** The volume of soil and rock material after compaction. There is usually a loss of volume through the compaction process.

**compaction** See compact.

**compactor** A machine or device used for accomplishing compaction by pressure of weight or vibration.

**companion flange** A wider portion or plate that is a part of a pipe or fitting suitable for connection to a flange of another pipe or fitting.

**companion planting** The practice of placing differing plants near one another for the beneficial effects to one or both plants (e.g., discouraging pests or diseases, improved growth qualities).

**compass** In design, an adjustable drawing instrument used for scribing circles.

**compass saw** A handsaw used for cutting circles or intricate shapes having a narrow blade and usually a wooden handle at one end.

**compass timber** Lumber cut from a branch of a tree having the shape desired for a construction member.

**complete fertilizer** Any fertilizer with all three of the primary nutrients for plants. Those ingredients and their chemical symbols are nitrogen (N), phosphorus (P), and potassium (K). They may be present in various grades and ratios. On many fertilizer bags there is no label of the ingredients, but the percentages of the ingredients are shown in the same order: N-P-K. A bag with 16-10-8 contains 16% nitrogen, 10% phosphorus, and 8% potassium.

**complete flower** A flower containing both male and female reproductive organs. It is also known as a perfect flower.

**completion bond** A bond that guarantees a contractor will pay his obligations associated with a project, leaving it completely free of all liens or financial encumbrances.

**completion date** The date work is to be complete. In the contract documents, the date of completion is usually specified, otherwise there may be an agreement with the owner, usually in writing, as part of the contract.

**compositae** The daisy family of plants, which includes asters, dahlias, daisies, dandelions, lettuce, sunflowers, zinnias, as well as many other flowers, some shrubs, and even a few trees. It encompasses about 900 genera and about 20,000 species.
**composite board**  1. Lumber comprised of more than one piece of lumber attached firmly together by fasteners, or glue, or both.  2. Wood particles pressed and glued together to form a wood sheet or board.

**composite plant**  A plant of the dicotyledonous family called *compositae*.

**composite roofing**  See built-up roofing.

**compost**  Decomposed or decomposing organic material (or mostly organic material) used as an amendment to soils in fertilizing land and improving the texture of soils. It may also be used as a surface mulch. Compost can be made of grass clippings, kitchen refuse, garden debris, leaves, sewage sludge, animal droppings, etc.

**composted sludge**  This is a recycled, dried product of municipal sewage treatment plants. It is usually composted with wood chips, aerated and allowed to cure to various stages of stability and maturity. If it is cured to meet EPA standards of Grade A requirements, it is odor-free and non-toxic. It is usually incorporated into soil as an amendment with a low primary nutrient content of about 2, 2-3, 0 (varies). The long-term effects of using sewage sludge are still under investigation. Heavy metals such as cadmium may be present in the soil where sewage sludge has been used, and they may build up after a period of time. There are possible negative effects depending on the origin of the sludge used.

**compound**  1. In botanical terms, having similar parts aggregated into a common whole. It often describes leaves that are completely divided to the midrib, forming two or more leaflets, or a branched inflorescence. (Compare with simple.)  2. A mixture of elements or minerals, etc.

**compound board**  See composite board.

**compound leaf**  In botanical terms, having a leaf comprised of two or more blades (leaflets) growing from woody portions of a plant on the same petiole. (Compare with simple leaf.)

**Comprehensive General Liability Insurance**  Insurance covering injury to persons or property in a broad range of construction activities.

**comprehensive growth management**  A state, regional, county, or municipal government program meant and prepared to control the timing, location, and character of land improvements, land development, and building construction.

**comprehensive plan or master plan or general plan**  A regional, county, or municipal document that contains a projection of land planning into the future determining how the community will grow and change along with a set of plans and policies to guide that vision of the future.

**compressed**  In botanical terms, flattened on two opposite sides.

**compression**  Stress force that tends to crush or shorten a structural member or to compact a material in the direction of its action.

**compression fitting**  A fitting for pipe that may have a rubber gasket or has a soft material that can be tightened on a pipe by turning a large nut around the pipe or bolts into the fitting to form a tight joint that will prevent leaking of fluid under a reasonable (designed) pressure. These types of fittings are useful for repairs, especially on galvanized (or any metal) pipes. Some compression fittings are used for connections with plastic pipe, especially in drip systems. Pressure can push the pipes out of the fittings; therefore, pipes should be held firmly in place with
hangers, thrust blocks, staples, etc., depending on the application and pressure.

**compression test**  With regard to mortar and concrete, a test to determine compressive strength of the material.

**compressive force** Any force that tends toward shortening (smashing, compressing) a member. This force is usually from weight placed on a member. (Compare with tensile force, shear force.)

**compressive strength** The ability of a material to sustain and prevent compressive stress before failure. (Compare with tensile strength, shear strength.)

**compressive stress** The tendency of a material to shorten, smash, or compress when placed under compressive force. (Compare with tensile stress, shear stress.)

**compressor** A machine capable of compressing air. Useful in the operation of pneumatic tools. Compressors also have many other uses.

**conc.** Abbreviation for concrete.

**concave** In botanical terms, being or appearing hollowed out.

**concealed flashing** In roofing, a flashing completely covered by shingles.

**concentrated load** A load in a specific area of a structure not distributed over a large area but confined to a small area.

**concentrated superphosphate** This is different from superphosphate in that gypsum is removed from the reaction products to allow it to become 98% soluble and have a formula of 0-45-0. This product is often used for mixing complete fertilizers.

**concentration time** See time of concentration.

**concept plan** A preliminary presentation plan of a proposed project showing basic layout and functions of uses or design types in a basic idea form with sufficient accuracy to be used for the purpose of discussion.

**concolored, concolorous** A botanical term, of uniform color, with both sides or all parts colored alike.

**concourse** 1. A place where several roads or paths intersect. 2. A large open area for accommodating crowds.

**concrete** A mixture of cement, sand, water, and small stones (aggregate, gravel) that dries to an extremely hard, durable surface. It is used in foundations, footings, abutments, walls, paving, etc.

**concrete block** A concrete masonry unit.

**concrete flat-work** See flat-work.

**concrete hardener** The mixture added to concrete to increase its strength by altering the rate of hydration.

**concrete insert** A material inserted in concrete while curing or by drilling after curing to receive a bolt or screw that will allow attachment of items or materials to the concrete.
concrete masonry unit (cmu)  A block of concrete made of Portland cement and aggregate used in building masonry walls, usually having hollow portions formed through the block, which affords a lighter weight, and space for reinforcement, as well as space for power, plumbing, etc.

cement mixer  A machine that turns with paddles or ribs for use in mixing cement, aggregate, sand, water, or other materials for the formation of concrete. Concrete mixers come in various sizes. The most common referred to by this term is a drum for mixing that is capable of being tilted up when mixing or down for pouring, all by hand, and usually with the use of a lever and or electric switches.

cement nail  A nail with a large, thick, flat top and a thick shank or a flat, long, wedge-shaped nail with a blunt point used for pounding into concrete. They are thick and hardened to be capable of penetrating and being attached to concrete by a sharp blow or blows.

cement pipe  A pipe made of concrete often used underground for drainage or culverts.

cement pump  An apparatus with a pump that forces concrete to its location of placement through a pipe line or hose by force.

cement retarder  Material added to a mix of concrete to decrease its rate of hydration allowing a longer time of setting up and hardening.

cement saw  A machine-powered saw capable of cutting hardened concrete.

cementation  1. A declaration by a governing jurisdiction that a piece of property or building is unsafe or unfit for human use. 2. The taking of private property for public use by a governing jurisdiction, which is compensated for by payment at an appraised value.

conditional stability  A condition in the landscape where stability of a soil or slope is based on such essential factors as plant roots holding a steep slope in place.

conditions of acceptance  Parameters specifying characteristics of the materials that they must fall within to meet the requirements of the contract documents.

conduction  The exchange of heat by molecular kinetic energy within a material such as when a hot or high temperature area flows to a cold or low temperature area.

cord 1. A wire or cable having a low resistance to electrical flow and thus useful in conducting electricity. 2. In landscape work, usually a reference to a vertical pipe intended for carrying rainwater from the roof of a structure. Erosion may occur at the outlet unless provisions are made to prevent it. 3. A material useful in transferring or transmitting heat.

conductor shielding  A metallic enclosure or sheath around an electric wire or cable.

conduit  1. A sleeve. In pressure irrigation systems, wires and pipes are often both placed in sleeves under paving. 2. A tube, pipe, or channel for accommodating the flow of water. 3. In electrical work, a tube, duct, or pipe housing
electrical wire. They are used to prevent electrical wiring from being damaged, or to facilitate rewiring or maintenance of wires where they can be pulled through these tubes or pipes. This is useful especially after construction to allow maintenance without removal or boring through walls, floors, pavement, or ceilings. In sprinkler irrigation work when automatic timers are placed in buildings, their valve wires are usually placed in conduits until they reach the ground.

4. In landscape ecology, a spacial form in or on the earth used for movement of elements (plants, animals, water, soil, air, etc.).

cone A woody seed bearing structure grown on some evergreen trees (those that are coniferous), especially those with needle-like leaves. In botanical terms, a mass of scales in a circular arrangement making a rounded structure with reproductive purposes as found on cycads or pines. An example is a pinecone.

cone of depression or drawdown cone A roughly conical concavity (or depression) in the groundwater surface around a pumping well.

confining bed A body of impermeable material in an adjacent geologic strata of one or more aquifers.

conglomerate A description of pebbles, gravel, etc. embedded and bonded together in a natural cementing material.

conical A term meaning cone-shaped with a broad base, narrowing toward the top. It is often used in plant descriptions, especially when describing the shape of the entire plant (i.e., some coniferous evergreen trees).

conifer Mostly evergreen trees and shrubs with true cones or arillate fruit. Most have needles, but some have quite narrow leaves. Some conifers are pine, fir, spruce, yew, cedar, etc.

coniferous Cone-bearing trees with true cones comprising mostly evergreen trees such as spruce, hemlock, pine, or fir. See conifer.

connate In botanical terms, being united or fused together.

connective A botanical term describing the tissue that connects the two pollen sacs of an anther in an inflorescence.

connectivity In landscape ecology, the measure of the degree to which a matrix, a corridor, or a network is connected. The fewer the gaps or aberrations, the greater the connectivity.

consent of surety A written permission from a bonding company for change orders to bonded work whether for a time extension or change in contract amount.

conservation Preservation from harm or protection from loss or consumption. It is often descriptive of efforts to save natural resources such as soil, vegetation, water, animals, coal, etc.

conservation easement A legally recorded, voluntary agreement that limits land to specific uses associated with conservation issues. Easements may apply to all or part of a property. They are usually permanent, but term easements may also be utilized, imposing restrictions for a specific number of years. Land protected by conservation easements usually remains on the tax rolls while it is privately owned and managed. Landowners donating permanent conservation easements are generally entitled to tax benefits. See also Agriculture Conservation Easement.

conservatory See greenhouse.

consolidation 1. The process of soil becoming compressed with less pores or smaller pores due to pressure. Compaction can be increased by
walking over earth, driving equipment over earth, or with special compacting equipment that vibrates or place weight on the earth. 2. The settling and compaction of green concrete to make certain there are no air bubbles around reinforcement, etc.

**consolidation settlement** A settlement of earth material over a long period of time, usually years.

**constraint** A feature or condition of the built or natural environment that poses an obstacle to design, planning, or construction.

**constructed wetland** A wetland constructed in a non-wetland area.

**construction** 1. The way that something is built. 2. The process of building or making an item or a change upon the land. Such work includes land clearing, excavation, erection of structures, assembly and installation of components, or equipment, etc.

**construction bond** 1. Usually refers to a completion bond. 2. Sometimes used in reference to a performance bond.

**construction detail** A drawing on a plan for construction work such as a planting plan or an irrigation plan, showing detailed information about the construction of a particular item on the plan. It is usually referenced on the plan with a circle divided in half and an arrow or line pointing to the item or area referenced. One half of the circle will indicate the page number, and the other half usually indicates the number or letter of the detail on the sheet where it can be found. The details are usually placed in rows or columns either numbered or in alphabetical order on a drawing sheet. The construction detail usually has a label telling what the drawing represents along with a circle divided in half (as indicated above) showing how it ties into the plan.

**construction dumpster** A large, very long dumpster (approx. $8 \times 20$ ft or more) used mostly in the construction industry because of the large amounts of debris it accommodates.

**construction envelope** One or more specified areas on a lot or parcel within which all disturbance of land such as construction of structures, driveways, parking, roads, landscaping, water surfaces, decks, utilities, walls, and improved recreation facilities are to be located. Some agencies omit areas restored with natural vegetation from being part of the construction envelope.

**construction joint** 1. An area along the two pours of concrete where they meet. 2. An indented line in a concrete surface that is scored while finishing or sawed afterward to control areas where concrete may break or to afford a particular desired pattern.
**construction loan**

**construction loan** A loan obtained for building a structure or landscape, etc. for the short duration of the construction period only.

**consultant** One hired to provide professional advice or design.

**cont.** Abbreviation for continuous or continued.

**contact adhesive, contact bond** Glue that is dry to the touch, but sticks and adheres upon contact.

**contact splice** A splice of reinforcement rebar where the two bars overlap and are in direct contact with one another.

**container** In landscape work, a confined, moveable space that is usually designed for the use of growing plants.

**container-grown** Plants cultivated in containers instead of in open ground or in a field grown.

**containerized** In the landscape or plant nursery industry, a plant material grown in a container. This term is usually in reference to plants in plastic containers larger than flats. Established plants in containers can be sold all year without serious danger in transplanting.

**contamination** Usually in reference to water supplies, the introduction of a water source that is not potable, or a solid into a potable water piping system.

**contingency allowance** An amount of money set aside for unforeseen items in construction work.

**continuous beam** A beam that extends over three or more posts, supports, or columns.

**continuous flushing emitter** A micro-irrigation system emitter designed to permit passage of large, solid particles while operating at a trickle or drip flow. This reduces filtering requirements of the system.

**continuous foundation** A foundation that supports several independent loads.

**continuous girder** A girder having more than two supports.

**continuous grading** A description of a size distribution of earth material, such as aggregate, where the intermediate size fractions are present. See also gap grading.

**continuous hinge** A hinge that extends along the entire length of the material to which it is attached.

**continuous truss** A truss that distributes its load over at least three supports.

**contorted** Twisted, strained in appearance or bent.

**contour** 1. A shape or form usually referring to a ground or land surface. 2. A line depicting a constant elevation. (Same as contour line. Compare with hachure.) 3. To shape, grade, or form (especially a ground surface).
**contour interval** The vertical distance between contour elevations.

**contour line** A line on the earth’s surface connecting points of equal elevation on the surface of the ground. On a plan they are drawn to a definite scale and every part of the line is expressed as the same elevation above or below a given datum. Contours with a curve pointing uphill indicate a swale, while those pointing downhill indicate a ridge or rise. They can only intersect on paper in the extremely rare case of overhanging rock, and are the same line in plan view only when they are on the face of a wall, cliff, or other vertical surface. A contour that closes on itself within a drawing is usually a depression or a raised area (ridge). Equally spaced contour lines indicate a uniform slope, and closely spaced contours indicate steep grade. Those far apart indicate slight grade. It is important to note that water drains perpendicular to contours.

**contour map** A plan showing contour lines as a visual understanding or description of a land area, site, etc.

**contract documents** All papers associated with a contract including the legally binding agreement itself as well as specifications, drawings, addenda, etc.

**controlling officer** The owner or someone duly authorized as a representative for a particular project.

**contractor** One who is responsible for, oversees, and directs the completion of a construction work. With regard to work on the land, this includes those engaged in the construction of buildings (residences or commercial structures) as well as heavy construction contractors engaged in activities such as paving, highway construction, landscaping, excavation, and utility construction.

**contract sum** The amount agreed to for a construction work.

**contract time** The amount of time specified, usually in contract documents, for completion of a work.

**contractual liability** The responsibility and liability of a contractor.

**control joint** A line of indentation in concrete, sawed after hardening, or tooled while still in a moldable state for design and also to control where future cracking may take place and avoid it from showing on the surface.

**controlled burn** A fire that is intentionally ignited and contained within a designated area to remove highly flammable undergrowth (reducing the risk of forest fire), or to prepare the site for planting.

**controlled fill** Earth material, gravel, rock, soil, etc. placed in layers and compacted, usually to a specified density, to make certain that the entire fill depth is stable.

**controlled-release fertilizers** Fertilizers that release their nutrients in regulated amounts. These are (1) fertilizers that very slowly dissolve in the soil, and (2) plastic-coated fertilizers through which water slowly penetrates, releasing the soluble fertilizer.
controller

controller  1. A mechanical or digital timer operating valves or heads to allow irrigation to be automatic at programmed intervals for programmed periods of time. See sprinkler controller.  2. Any device that controls other electrical devices as to when they operate.

controller program  See program.

control valve  In irrigation, the valve that allows water to enter distribution lines, may regulate amounts of flow, and also turns the flow of water off.

control wire  1. Any wire connected to the automatic controller and extended to an automatic valve where it is connected to control the opening and closing of the valve.  2. In an electrically operated, automatic irrigation system, there are two wires connected to each automatic valve, a common (ground) and an individual wire for each individual valve that is sometimes called the control wire or hot wire.

convection  The exchange of heat by flowing liquid or gas such as air or water such that it conveys heat by transfer to other surfaces and tends to circulate as it heats and cools.

convenience outlet  An electrical, receptacle outlet.

converted timber  Wood sawed from lumber as boards.

convex  In botanical terms, having the shape of the canopy of an upright umbrella.

conveyance zone  The central route of drainage in a drainage basin where water concentrates into the base stream flow.

conveyor  A belt that moves in a circle with its upper surface transporting material and dropping it at the other end where the belt loops back to the beginning.

cool season grasses  Grasses that thrive in cool weather (daytime highs approx. 60 to 75 F). Most of these grasses are evergreen, but they may turn color slightly in the fall or winter. An example of this type of grass is bluegrass. The classification of grasses as cool or warm season is somewhat arbitrary as grasses perform differently from climate to climate. Grasses growing throughout the winter months in a mild climate may become completely dormant in a colder climate.

cool season plants  Plants that thrive in cool weather (daytime highs approx. 60 to 75 F) such as some grasses, vegetables, and herbs.

Cooperative Extension Service  A service in the United States offered through counties. Many have access to resources of agricultural colleges and all have access to the United States Department of Agriculture.

coping  1. A protective top or ornamentation for a wall, column, etc. It is often used to direct water away from the face of the wall, as well as for aesthetic appearance.  2. The top row of stones or brick in a wall that differ in shape from the rest of the stones in the wall (usually for a decorative effect) and are usually thinner with a slope to their upper surface to facilitate water drainage.
coping block  Solid-topped concrete masonry units, sometimes having a design, that are often used as a top for a masonry wall.

coping brick  Brick designed and created for the top coarse of a wall.

coping saw  A small saw with a thin blade and an extended handle, capable of cutting tight radii in wood or other materials.

coping stone  The stone used on the top surface of a wall.

copper  A micronutrient found in soils, necessary for plant growth. It assists in the formation of growth-promoting substances in plants.

copper alloy  A metal made up mostly of copper (the main metal, copper, at least 40% content), but not having over 93.3% copper content. Anything over 93.3% copper content is considered copper.

copper fitting  A fitting for copper pipe that may be soldered or threaded.

copper nephthenate  A wood preservative that is dark green, and is not usually toxic to plants or animals contacting it in wood.

copper plating  A layer of copper given to the surface of another metal.

corbel  A masonry design where the course directly above another course of brick protrudes slightly outward from it. Usually this overlap extends for several courses.

cordate  A botanical term describing a plant part (especially a leaf) that is shaped like a stylized heart with the notch at the base (indented basal). (Compare with cuneate, obtuse, attenuate, auriculate, sagitate, hastate, truncate, oblique.)

cordon  1. To prune a plant to a single main stem. 2. An espalier, usually of a fruit tree, trained into a horizontal shoot or shoots.

core  1. The open spaces in a concrete masonry unit. 2. In a hollow stone wall, the filling between the two sides.

core-boring  Drilling and obtaining a sample from a hard earthen material or rock for testing.

core-drill  A piece of equipment useful for rotating through a rock, wood, steel, or hard earthen material to either obtain a sample or allow for some useful purpose or access.

core-test  A test performed on a piece of concrete cut from an in-place piece of concrete for a sample. The test is usually for compression.

coriaceous  In botanical terms, leathery in texture.

coring  Removing materials from masonry concrete or rock structures or surfaces for testing.

corm  A type of bulb usually broader than the tall swollen underground portion of the stem, covered with dead leaf bases arising from a basal plate. During growing season, new corms are formed from axillary buds at the top of the old corm. Smaller corms forming are called cormels.

cormel  A corm in its early stage or formation.

corner angle  A post-attachment that is an angled piece of metal along with a portion that is a long piece of metal to be set in concrete.
corner clearance

while the upper-angled portion sits on top of a concrete footing. The upper portion of the angled metal is bolted to the post.

corner clearance The triangular area bounded by the street property lines of corners and a line joining points along said street lines a determined number of feet from their point of intersection. This area is kept free of visual obstructions from street to street to provide an open view of the intersection and more safety for those traveling toward the intersection so that they can avoid intersecting traffic.

corner island A parking island located between two parking bays and running the length of the parking bays.

corner lot A lot that has, on two adjacent sides, frontage to a street or path, etc. Often there is a definition by a governing jurisdiction of what constitutes a corner lot, giving further definition by requirements of the length(s) of either or both sides.

corner notch A notch cut in boards where they overlap at a corner, such as at a log cabin, etc.

corner return block or corner block This is a concrete masonry unit with two solid faces adjacent to each other so that it may be placed on a corner with the two solid faces exposed to view.

cornice Any projection or crown that is the top of a wall or structure, used most often as a decoration, but also sometimes as a means of directing water away from the wall below. It is also the uppermost portion of the classical entablature (see illustration at entablature).

corolla In botanical terms, the flowery envelope (usually showy) within the calyx.

coroniform Like a crown.

corporation cock or corporation stop A valve used on water or gas service lines near their connection with a public (corporation) water or gas main.

corp stop See corporation stop.

corridor In landscape ecology, a narrow area or strip differing from its surroundings and usually facilitating the flow of animals, materials, elements, etc. along its length. It may differ from its surroundings in material composition, light, microclimate, cover, material, color, food availability, etc. Corridors may function as conduits, barriers, or habitats, and may be sources, filters, or sinks.

corrosion inhibitor Materials or chemicals used to inhibit the oxidation of metals.

corymb A flat or convex flower cluster, with branches arising at different levels and blooming from the outside toward the center.

corymbose In botanical terms, corymb-like.

cosmopolitan Distinctly urban or worldly; urbane.

costa The midrib of a simple leaf from the petiole where it meets the leaf blade to the leaf tip.

cost estimate An approximate deciphering of cost of construction or materials prior to bids, purchases, or construction commencement.
cotter pin A pin with a vertical, circular head and an opening in the center. It has two side-by-side arms extending down the pin's length. It is made of a malleable metal so that it can be pushed through a hole, and the two arms that extend beyond the hole are then bent over to assist in securing items (e.g., nuts) in place.

cottonseed meal Residue of cotton seeds after oil has been removed. It has an analysis of 7-3-2, is immediately available, and long lasting. It is acidic in reaction.

cotyledon The first leaf (monocotyledon) or first of a pair or whorl of leaves (dicotyledon) developed by a seed of a plant. The angiosperm division of flowering plants is divided into two classes (monocotyledon, dicotyledon) by the number of leaves in their seed embryo.

Council of Educators in Landscape Architecture (CELA) An organization that began about 1920 concerned with the content and quality of professional education in landscape architecture. Its publication is Landscape Journal.

Council of Landscape Architectural Boards (CLARB) An organization established in 1961 to facilitate exchange of information among state boards for licensing landscape architects and to produce and implement reciprocal licensing arrangements between states. In 1971 it was reorganized and its objectives broadened to include promoting high standards in landscape architectural practice, fostering the enactment of uniform laws pertaining to the practice of landscape architecture, and equalizing and/or improving the standards for examination of applicants for state registration.

counter-bore To enlarge a hole so that it will receive the head of a nut or bolt in such a way that it is below or at the surface of the material it is placed in.

counterflashing A strip of metal turned down over other flashing at a junction to prevent water from entering the joint.

countersink 1. To place a nail, screw, bolt, or rivet in material with its head flush with the material surface by preparing a depression for its head to be drawn into, or by tightening or pounding the head hard enough to cause it to bite into a softer material. 2. A bit used in a drill or router that has a conical shape to its cutting point so that it may be used to make a depression in a material to allow a head of a bolt, screw, nail, rivet, etc. to have its head flush with the surface of the material when it is secured in the material.

countersunk bolt 1. A screw with the top of its head flush with the surface of the material in which it is secured and tightened into. 2. A bolt with a circular, flat surface to its head that tapers to its shank so as to allow its head to easily be drawn into a soft material or into a countersink hole and provide a flush finish between the surface of the head of the bolt and the surface of the material it is secured into.

countersunk rivet A rivet used in conjunction with countersink holes having its point pounded flat into the countersunk space while hot.

countersunk screw 1. A screw with the top of its head flush with the surface of the material into which it is screwed. 2. A screw with a circular, flat surface to its head that tapers to its shank so as to allow its head to easily be drawn into a soft material or into a countersink hole and provide a flush finish between the surface of the head of the screw and the surface of the material it is secured into.
county agricultural agent

**county agricultural agent**  One who works for the Cooperative Extension Service.

coupler  In pipe work, a **fitting** accommodating the connection of the ends of two pipes in a straight line.

coupling  In pipe work, a device that connects while covering over or inserting into the ends of two pipes or male projections.

court  In reference to spacial definition, an uncovered space that is completely or mostly enclosed by walls, buildings, plants, etc.

courtyard  Synonym of court.

cove  A concave, curved edge between a ceiling and wall or a floor and wall.

cover  1. With regard to reinforcement in concrete, the distance between the reinforcing bar and the concrete. 2. In roofing, the portion of a shingle or tile that is covered with each coarse.

coverage  1. In sprinkler irrigation, the area (as a shape on the ground) a sprinkler head or sprinkler system waters. 2. In paint, the area that a gallon of paint (or a specified amount of paint) will cover on a particular surface type. 3. In roofing, the area that can be covered by a particular amount of roofing.

cover crop  Legumes (alfalfa, clover, cow peas, etc.) sown in fall and turned over in early spring to return humus and nitrogen to soil. Sometimes called green manure.

cover plants  Usually those plants used to cover (grow on) soil that has been exposed in construction, planted to prevent erosion.

cow manure  Feces of cows, dried and pulverized for a moderately slow-acting fertilizer (NPK 2, 1.5, 2).

cp  Abbreviation for candlepower.

CPVC  Abbreviation for chlorinated polyvinyl chloride.

crabgrass  An annual weed grass that thrives in poorly drained soils, landscapes with frequent surface watering, and in lawns that are lacking nutrients. It germinates from seed in early spring, can root where stems touch the ground, and prolifically produces seed in the late summer. It can easily be recognized in late summer as it turns somewhat purple. Its fibrous roots make it difficult to pull, but it should be pulled before it goes to seed. Pre-emergent herbicide can be effective before seed germinates.

cramp  1. A frame with a tightening screw useful in compression joints between wood pieces being glued together. 2. Any device for holding a frame together during construction. 3. A metal piece holding two abutting masonry units tightly together.

crandall  A tool much like a hammer with many sharp, pointed steel rods as heads mounted in the slot in the end of a handle. This tool is useful in shaping and preparing stone for construction.

crane  A machine with a tall boom and cable that is capable of being lowered from the top of the boom for lifting and moving heavy loads.
crawler tractor  Any power-driven vehicle with tracks on rollers allowing it to move about. This type of locomotion is useful in muddy soils or loose material. It also is helpful in that it distributes the weight of the machine over a wider area.

crc  Abbreviation for cold-rolled channel.

creasing  Courses of bricks or tiles toward the top of a wall overlapping the course below it 1 to 2 inches.

creep   1. With regard to land, a slow movement of earthen material or rock that is not easily perceived except over a long period of time. It is often only evidenced by the tipping of trees, etc. 2. With regard to roof materials, a stretching or shrinking as a result of moisture or temperature changes. 3. Water drainage flowing at the interface between a structure and the surrounding soil or rock. 4. The movement of structural materials due to stress and pressure over time.

creeper  In botanical terms, trailing shoots rooting at intervals.

creeping (stems)  In plant description, growing flat on or beneath the ground and rooting.

crenate  A botanical term that describes rounded teeth on a plant part, especially a leaf. (Compare with ciliate, pectinate, cleft, lobed, dentate, denticulate, serrate, serrulate, double serrate, incised, entire, crenulate, parted.)

crenate leaf margin

crenelated  Having a battlement design of repeated raised and lowered portions of a line or top of wall, etc.

crenulate leaf margin

crenulate  A botanical term describing a plant part, especially a leaf margin, that has a minutely crenate leaf margin. (Compare with ciliate,
pectinate, cleft, lobed, dentate, denticulate, serrate, serrulate, double serrate, incised, crenate, entire, parted.)

creosote A wood preservative made from coal tar that is mildly toxic to plants and animals and is insoluble in water. It is water repellent, stains black (especially on clothes), and has a mild aroma (offensive to some people) that returns whenever temperatures heat the wood. It has been most effective when wood is impregnated with it by pressure treating. This may allow as much as 40 years of protection. It has especially been used in railroad ties as a preservative and waterproofing material. Many have used these salvaged or new ties in landscape construction work, but recently they have been found to cause potential detrimental health effects, and the black sticky material comes off on clothing, making it difficult or impossible to completely clean.

crescent truss A truss shaped in the form of a crescent with bracing in between the upper and lower curves.

crest 1. The ornamentation of the top of a wall or roof. 2. The top of a hill or ridge.

crested In botanical terms, an elevated and irregular ridge.

crest tile Roofing tile that is made to fit on the top ridgeline of a roof.

crib 1. A framework constructed of steel, concrete, or wood members interlocked and usually forming a retaining wall. 2. A stall or partial enclosure for storing grain, hay, bark gravel, mixed soil, etc.

crib wall A retaining wall that consists of a hollow, box-like interlacing or interlocking configuration of timbers, reinforced concrete beams, logs, or even steel beams filled with rock or soil.

cricket In reference to roofing, a small raised area with a slope to either side of its ridge used behind an object protruding through the roof (such as a tower or chimney) that would otherwise catch water drainage behind it. This causes the water draining from above to be directed around the object.

crimp To bend, warp, or smash together.

crinite A botanical term meaning bearded with long, soft hairs.

critical angle An angle or slope of stairs or of a ramp that should not be exceeded as it would otherwise be considered unsafe or uncomfortable. The angle not to be exceeded is considered 50° for stairs and a maximum of 20° on ramps.

critical path method A way of planning and scheduling a project by showing a sequence in duration of operations that are critical to complete the project on time.

critical section The portion of an element considered most likely to fail.

critical slope The steepest angle on which a soil aggregate or other material will stand and support itself before sluffing occurs.

crook With regard to lumber, a piece that is not straight from end to end.

crop coefficient A numerical expression that shows variation in moisture requirements of plants.

croquet A game played with mallets, different colored balls, and hoops for passing balls through on a lawn. See lawn croquet and British croquet.

crosier The leaf buds of ferns that expand in the spring and then unfurl.

crossbreed To hybridize by producing plants from two separate varieties within a species.
cross bridging  Diagonal braces from the top of one joist to the bottom of the adjacent joist and vice versa, usually in pairs, placed to assist in preventing the twisting of joists.

cross connection  A connection between a potable water source and a water source that is contaminated (not suitable for drinking).

cross grain  Wood in which the cut is made not parallel with the grain lengths.

cross peen hammer  A hammer with the opposite side of the hammer head having a wedge shape.

cross section  A section through an object, building, device, site, etc., showing its shapes and attributes when cut through as in a crosswise cut.

cross slope  A slope in one direction (usually across a pavement or field) that facilitates surface water runoff.

cross valve  A valve on a pipe that connects two parallel pipes.

crosswalk  1. That part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the road measured from the curbs, or from the edges or the traversable roadway.  2. Any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines, paving types, or other markings on the surface.

crown  1. The point on plants where the roots and the top of the plant's structure (stem) join. See also root collar (root crown).  2. The basal portion of herbaceous plants at soil level where new shoots are produced.  3. The entire spatial area (head) of a tree, including its branches and leaves.  4. The high point of a road, path, patio, etc. when viewed in cross section. These are usually created to provide drainage of water from the surface.  5. The inside top of a pipe.

crozier  A plant structure with a coiled end as in the unfurling of a fern's frond.

cruciform  A botanical term meaning cross-shaped.

crushed gravel or crushed stone or crushed rock  1. Rock that has been mechanically crushed, having at least one face fractured.  2. Rock that is sifted and crushed to a particular size gradation having some pass without crushing, but any oversized portions being crushed in the process.

crustaceous  In plant identification and description, hard, brittle, and breakable.

cryptogamous  In botanical terms, reproducing by spores without producing seeds or flowers.

crypt  A complex of chambers or passages underground.

CSI  Abbreviation for Construction Specifications Institute.

CSK  On drawings, an abbreviation for countersink.

CSSA  Abbreviation for Cactus and Succulent Society of America.

CtoC  Abbreviation sometimes used for center-to-center.

cts  Abbreviation for copper tube size.

CU, cu  1. Abbreviation for coefficient of uniformity.  2. Abbreviation for cubic.  3. Abbreviation for copper.

cubic feet or c.f. or cu. ft. or ft³  An English and U.S. measurement of volume equal to 1728 cubic inches, or 0.0370 cubic yards or 0.028 cubic meters, or when this is a volume of water it has a weight of 62.43 pounds.
cubic feet per minute

cubic feet per minute  A measurement of the amount of a liquid substance passing a given point. It is usually in reference to water flow because of its large volume.

cubic meter (m³)  Cubic meter(s) or 1.307 cubic yards.

cubic yard bank measurement  The number of cubic yards of earth material in its original place on a site.

cubic yards  A cubic yard is equal to a cube with each side measuring 3 ft, comprised of 27 c.f.

cucullate  In botanical terms, hooded, or hooded shape.

cul-de-loop  A street that quickly turns into and reconnects with its main axis. The island created is often landscaped or used for parking.

cul-de-sac  The dead end of a street, which is usually bulb shaped or circular allowing for the turning around of vehicles.

culinary water  Any water fit for use in the kitchen and clean for human consumption. Within a municipality, this water is usually treated for purity.

cull  1. To remove undesirable offshoots or plants from a clump or group of plants. 2. A plant not suitable for selling or for its intended use. This is a relative term with many definitions, but generally cull describes plants that are undesirable or inferior in some way, in someone’s opinion.

culm  In botanical terms, plants having the peculiar hollow stem or stalk of grasses, sedges, rushes, and bamboo.

cultivar  In botanical terms, usually a cultivated plant that would likely not survive (or at least not be true to type) by natural reproduction from seeds. It has distinguishable differences from the species, or is a plant with a variation that has originated in a cultivated state. It is a term that has replaced older terms of horticultural variety and garden variety to avoid confusion with botanical variety. The International Code of Botanical Nomenclature makes the distinction between variety and cultivar by the way they are written in a botanical name. But there is much confusion about this and few follow the instructions, and instead simply list a cultivar or variety after the species without identifying whether it is a cultivar or a variety. To most of those in the landscape industry, it is not important which it is as it identifies the ability to reproduce true to type in the wild.

cultivate  To break up the soil surface for improvement of aeration, mixing of organic nutrients, improvement of soil texture, and improvement of water percolation.

cultivation  The loosening of a soil with either a hand or mechanical-type implement for the purpose of controlling weeds, providing aeration, or tilling in amendments.

cultivator  An implement for loosening the soil around plants.

culvert  A tube, pipe, or opening made of steel, corrugated metal, concrete, masonry, aluminum, etc., where water flows through under a structure, transportation route, etc.
cuneate In botanical terms, cuneiform, wedge-shaped, or triangular, having the narrow end at the point of attachment. It is often used in describing the base of a leaf of this shape at the point of the blade’s attachment to the petiole. (Compare with attenuate, obtuse, cordate, auriculate, sagitate, hastate, truncate, oblique.)

cuniculus A low underground passageway.

cup With regard to lumber, a board that has a curve in its width or face.

cupulate A botanical term meaning cup-shaped.

cupule In botanical terms, a little cup, as with the cup of the acorn.

curb 1. A wood, metal, stone, masonry, etc. low wall or slightly raised edge. Often used to contain a pavement, plants, water, etc. 2. A concrete divider or edger used in landscapes to separate one material from another. It may be flush with the ground or have a raised edge.

curb appeal A term describing the initial impression of an individual viewing a property from the street area. It is the feeling or perception obtained when approaching a property for the first time. It is based on the appearance of a building and its setting with the surrounding landscape.

curb box, or curb-stop box This is a vertical sleeve providing access for a long key to be extended down and placed on a valve such as a curb cock.

curb cock or curb stop A valve on a water-line servicing a site or a structure, usually placed between the sidewalk and curb, which allows the water supply to be turned off.

curb cut A space along a raised curb line is flush with pavement, allowing for vehicle access.

curb line 1. The line on a drawing representing the exposed vertical face of a street curb. 2. The line at the edge of a concrete or stone curb, etc. and the edge of asphalt or paving surface.

curb machine or curbing machine A powdered machine that extrudes a concrete or asphalt edge.

curb return A curved segment of curb found along a road at an opening of the curb that is made for ingress or egress. These curb openings usually have a return on each side of where driveways or future driveways will occur.

curing The hardening of concrete. Quality is influenced by humidity, temperature, as well as additives to the concrete mix.

curing agent Something added to a mix to increase its ability to harden.

curing compound A material or liquid applied to concrete, usually retarding water losses, while the concrete cures.

current 1. The flow of electricity, measured in amperes. 2. The flow of water in a narrow channel or within a large water body such as a lake.

curtain drain An intercepting drain.

cusp A botanical term referring to an abrupt, sharp, often rigid point.
**cuspidate**

**cuspidate** In botanical terms, tipped with a sharp and stiff point. (Compare with retuse, emarginate, aristate, acuminate, acute, mucronate, obtuse.)

![cuspidate leaf tip]

**custom-built** 1. Constructed on-site and not built at a factory or prefabricated. 2. The design of a structure only built once or with specific changes for a user.

**cut** With reference to excavation work, the removal of rock or soil from a site or a part thereof.

**cut and fill** In excavating, this is the moving of material in digging or filling.

**cut glass** Glass that has been decorated, drawn on, or labeled on its surface.

**cut nail** A nail that is wedge shaped and has a blunt point cut from a piece of steel.

**cutoff** A structure intended to eliminate or reduce percolation of water through porous earth material.

**cutoff valve** A valve used to stop flow of water (or fluid, or gas).

**cut stone** Rock used in building walls or structures made to a specified size.

**cutting** In gardening, cut portions of plants used for propagation. Certain types of plants can be propagated by cutting off portions of the plant stems, roots, or leaves and planting or nurturing those cut portions to create a new plant.

**cutting garden** A small space, usually on a residential lot, where the owner grows flowers specifically for the purpose of cutting their blooms off to use for indoor decorating.

**cutworm** Hairless larvae of night-flying moths that feed at night and on overcast days, cutting off plants at the roots, and eating leaves. These can be particularly devastating in lawns and annual planting beds.

**CV, cv** Abbreviation for cultivar.

**CW, cw** 1. Abbreviation for clockwise. 2. Abbreviation for cold water.

**c.y., or cu. yd., or y³** Abbreviation for cubic yards. A cubic yard is a volume equal to a cube with each side measuring 3 ft × 3 ft. It is comprised of 27 c.f.

**cyanami or calcium cyanamide** A chemical fertilizer containing 21% nitrogen, with an acidic reaction. It is toxic to some plants. It loses its toxicity in most soils if it is applied a month or so before planting.

**cybm** Abbreviation for cubic yard bank measurement.

**cycle** 1. In irrigation, this refers to one complete operation of a controller station or all stations. 2. One complete reversal of alternating current from a forward flow (positive alternation) to a backward flow (negative alternation).

**cycle and soak** An irrigation controller feature that allows the controller to divide up station runtime with several short periods of irri-
igation to complete one watering cycle, allowing the soil sufficient time to absorb the water (rather than run off) before continuing irrigation. This helps prevent runoff.

cyme In botanical terms, like a corymb (a flat-topped inflorescence), but blooming from the center outward.

cymose In botanical terms, cyme-like, or bearing a cyme.

cypress In lumber, a fairly strong and heavy wood. Its heartwood is often used on outdoor situations as it is decay resistant and durable.

CZA Abbreviation for chromated zinc chloride.
Abbreviation for **penny** (pennyweight), which indicates a size of nail by weight. The higher the number indicated in front of this symbol, the larger the nail.

**D1S** Abbreviation for **dressed** one side.

**D2S** Abbreviation for **dressed** two sides.

**D2S&M** Abbreviation for **dressed** sides and matched.

**D4S** Abbreviation for **dressed** two sides and standard matched.

dado A rectangular cut across a piece of wood allowing another wood piece to place its end in the cut and form a joint.

damping off In horticulture, disease caused by a certain fungus in soil. Seedlings die immediately before or just after they break through the soil surface. Careful watering of seedbed soil, using sterilized soil, and careful sanitation practices can assist in preventing this disease.

dampproofing With regard to concrete and masonry, an application of a chemical (usually liquid) to concrete or mortar to repel water.

dandelion A weed or potherb (**genus** Taraxacum) usually 2 to 18 in tall with yellow flowers, producing many seeds in a seed head that disperse in the wind like tiny parachutes. It has a fleshy taproot.

dap Similar to dado, this is any notch in a timber made to accept another timber.

darby A screed.

dasycarpus A description for thick fruit.

date of substantial completion The date when a construction job is finished enough for the use for which it was intended as agreed upon by the parties involved.

daylight The term used to describe the point where a pipe or underground tunnel surfaces and is open to daylight.

day-neutral plant A plant with flower formation not being controlled by length of daylight.

dB Abbreviation for **decibel**.

**DBH** Abbreviation for **diameter at breast height**.

dc Abbreviation for direct current.

DDT A dangerous pesticide that passes from plant to animal and has harmful effects upon the body including harm to the reproductive system. It is not biodegradable and is harmful environmentally. It is prohibited from use in many countries.

dead 1. In wiring, a wire not connected to a source. 2. A pipe in a sprinkler system that no longer operates.

dead end 1. A pipe with a plug or end cap at one end and not used. 2. A street that only has one access point.

deadheading In botanical terms, the removal of spent flowers from a plant in order to prolong its blooming period. Removing spent blooms causes many plants to produce more flowers in a
dead load

natural effort to reproduce through seed production. Removing flowers before seed is produced, which forces some plants to attempt reproduction again.

dead load 1. The weight of the members of a structure bearing on any given point on a structure. 2. The overburden above a pipe.

deadman 1. A piece of a retaining wall extending from the wall backward being buried and assisting in anchoring the wall by the earthen material pressing upon it. 2. A heavy object, or a wide object, or secured object buried in the ground as an anchor usually having a cable attached to hold something such as a large tree in place.

dead oil  Another name for creosote.

deadwood  Wood of a branch, trunk, or twig of a tree no longer capable of assisting the tree in life functions. A short time after dying, the wood dries, and bark usually exfoliates, making it easily identifiable.

decibel  A unit of measurement for loudness of sound or noise.

deciduous 1. Plants with leaves that fall in autumn. 2. Any plant that sheds all its leaves at one time once each year. Most broadleaf trees in the temperate zones lose their leaves before winter, and some plants in deserts lose leaves in the dry season. 3. A description of a plant that has parts (e.g., leaf or petal) shedding naturally at a particular stage of growth or season of the year.

decimeter (dm) One-tenth of 1 meter, or 3.94 in.

deck 1. The floor of a structure. 2. In landscape terms, a flat outside area with a durable surface (especially of wood) usually constructed for leisure activities. 3. Any flat platform, as on a roof, especially the upper flat or nearly flat surface of a mansard or curb roof. 4. The structural surface to which a roof covering system is applied.

decking 1. The boards used on the surface of a deck where people walk. 2. A reference to any and all wood used in a deck. 3. The boards placed as the flat portion of a flat roof.

declined  A botanical term meaning curved downward.

decompose  To rot, decay, and break up into constituent parts by chemical processes. Organic matter is said to be mature in decomposition in the soil when it no longer inhibits plant growth in its use of nitrogen for decomposition.

decomposition The action of decomposing. See decompose.

decomposed  In plant identification and botanical descriptions, this means repeatedly (and often irregularly) divided and compound with numerous leaflets.

deconstructed  Disjointed, cut-up, or made of artificial materials.

decorative block  A concrete masonry unit with special decorative design to be used in a visible area of a wall, etc. because of increased aesthetic appeal.
decorative fountain A water feature indoors or outdoors that uses water as an aesthetic interest for its sound, humidity, reflections of surroundings in its surface, or interest of flow.

decumbent 1. A plant growing flat and close to the ground with the summit, apex, or extremity tending to rise. 2. Any plant with a form that is flat or prostrate on the ground.

decurrent In botanical terms, extending downward from the point of insertion.

decussate In plant identification and botanical descriptions, arranged oppositely, with each succeeding pair set at right angles to the previous pair.

deduction An option on a bid for less services or materials than those included in the base bid, showing a decrease in costs.

deductive alternate An option on a bid for less services or materials than those included in the base bid, showing a decrease in costs.

derflection 1. Any bending or movement of a member under a load. 2. Deformation of a structural piece under a load.

deflexed In describing a part of a plant, this means bent abruptly downward.

deflocculation The destruction of aggregation in a soil, especially the fine colloidal particles in clay soils. See flocculate.

defluorinated phosphate rock A chemical fertilizer produced by heating phosphate rock. It supplies phosphate with an 8 to 24% availability and has a slightly alkaline pH.

defoliation A plant’s dropping, shedding, or loss of leaves either naturally or prematurely. Causes of premature loss of leaves can include lack of water, too much heat, cold temperatures, high winds, insect infestation, disease, chemicals, etc.

deformation A change in the shape of a structure or a structural element due to a force or a load.
deformed bar

**deformed bar or deformed reinforcing bar**
A steel bar used for reinforcing, having a pattern of raised areas on its surface to prevent it from moving in concrete with change in temperature or application of pressure.

**degraded wetland** A wetland negatively impacted by human action, impairing the wetland's physical or chemical properties, resulting in reduced functions such as valve for habitat or flood storage.

**dehiscent** In botanical terms, this often refers to fruit; opening at maturity to expose, release, or discharge the contents.

**dehydration** Loss of water. In plants, this is a critical problem leading to death if not corrected quickly.

**dekameter (dam)** The metric measurement equal to 10 m, or 32.81 ft.

**deliquescent** A botanical term describing a condition of a plant or one of its parts when the central axis is not apparent as it branches irregularly into a series of smaller pieces. (Compare with **excurrent**.)

**deltoid** In botanical terms, shaped like the Greek capital letter delta. A triangular shape that is mostly equilateral with one of its sides as a base.

**demand** The flow of water required to operate a sprinkler system expressed in gallons per minute or liters per second.

**demolish** The act of **demolition**.

**demolition** The collapsing, dismantling, or destruction of materials, buildings, utilities, site furnishings, vegetation, pavements, structures, etc. (all or any part thereof) on-site and removing them for disposal or **salvage**.

![demolition in progress](image)

**demonstration garden** A garden built to show a method(s) of gardening, landscaping, irrigation, etc.

**dendritic** Branching like a tree as in the water drainage pattern of gullies or canyons or the **venation** of some leaves.

**dendrology** The study of woody plants or trees.

**denitrification** The reduction of oxidized nitrate nitrogen to nitrogen gas by **anaerobic** microbial effects.

**dense-graded aggregate** Aggregate sized to afford a minimal amount of voids and higher bulk density.

**densiflorus** Densely flowered.
density  See development density.

density bonus  The allocation of development rights allowing a parcel to accommodate additional square footage or additional residential units in excess of the maximum for which the parcel is zoned, in exchange for some provision such as the preservation of an amenity at the same site or at another location. Such amenities could be public open spaces, plazas, landscaping, etc.

density factor  In irrigation auditing, the vegetation density factor. Newly planted and sparsely planted landscapes often have less leaf surface area than mature, dense, or heavily planted landscapes and typically will use less water. A medium density factor is one with higher density being greater than 1 and low density less than 1.

density transfer  A way of providing or preserving open space by concentrating densities and leaving unchanged historic, sensitive, or hazardous areas. In some jurisdictions developers can buy development rights of properties associated with agricultural land, public open space (sending zone), etc., and transfer the development rights of additional density to the base number of units permitted in another zone or site proposed for development (receiving zone or site).

densogram  A graphical representation of irrigation precipitation rates within a studied area. It usually shades higher precipitation rates with darker areas and lower precipitation rates with lighter areas.

dentata  Coarsely toothed.

dentate  A botanical term usually referring to a leaf edge that is toothed with spreading, pointed teeth. Covered or edged with pointed projections, but wider than serrate, not pointing forward, and not rounded as with crenate. (Compare with ciliate, pectinate, cleft, lobed, entire, denticulate, serrulate, double serrate, incised, crenulate, parted.)

denticulate  A botanical term usually referring to a leaf edge meaning that it is slightly or minutely toothed with small projections not pointing forward and not rounded. It is the diminutive (miniature or smaller size) of dentate. (Compare with ciliate, pectinate, cleft, lobed, entire, serrate, serrulate, double serrate, incised, crenate, crenulate, parted.)

depauperate  A small or poorly developed plant or plant part that is in such a state because of unfavorable environmental conditions.
deposited metal

**deposited metal**  Metal used as filler in welding.

**depressed**  In botanical terms, flattened, or as if pressed down from above.

**depression storage**  Runoff held in shallow, low spots in the terrain.

**desander**  See separator.

**desertification**  The degradation of land within dry subhumid, semi-arid, or arid areas resulting in decreased vegetation and less ability of the land to support it, brought about by various factors including climatic changes, fires, diseases, human activities, etc.

**desiccate**  To dry up. A drying up of leaves when plants do not receive enough water. If water is present, they may not be able to utilize it due to disease or the presence of too much salt. Another common cause occurs to **broadleaf evergreen** plants in the **temperate** climate when on sunny days winter temperatures freeze the ground so that roots cannot gather water while the leaves are experiencing **photosynthesis** and need water.

**desiccation**  The act, process, or completion of drying up a plant. See also desiccate.

**design**  The process of taking ideas and producing a work of art, a work to complete, a visual or written instruction for completing a work, etc.

**design flood**  The relative size or magnitude of a major flood as expressed in the expected frequency of such a storm precipitation rate (i.e., 100-year storm). It reflects flood experience and flood potential as the basis of the delineation of a floodway or a flood hazard area.

**design load**  Total weight in the most severe case that a timber, bridge, deck, or other structure is designed to sustain.

**design storm**  A rainstorm of a given intensity and frequency used as the basis for designing and sizing storm water facilities.

**design strength**  The weight-bearing capacity (or amount below capacity) of a structural member.

**design working pressure**  1. The pressure assumed to be available in formulating a sprinkler design. 2. In **class** type PVC pipe, the maximum pressure the pipe is expected to work under without failure.

**detail**  1. Intricate or minute portions of designs or elements. 2. A drawing showing a particular portion of an element of a design depicting specifics about how it should be built, assembled, or constructed. See also construction detail for an example.

**detention**  In storm water management, this is the practice of temporarily detaining runoff on-site to be released later at a prescribed rate. Or, the practice of restricting its flow to off-site.

**detention basin**  A man-made or natural water collector facility designed to collect surface and subsurface water to impede its flow and release its water gradually and slowly into natural or man-made outlets.

**determinate inflorescence**  Inflorescence that stops growth of a stem when it flowers at its end.

**dethatch**  The removal of dead stems, leaves, and remains of grasses and some ground covers that collect on the surface of the soil as thatch. This removal usually results in a more vigorous, healthy growth of the live plants. This removal in lawns is usually done with a gas-powered dethatcher (vertical mower). Otherwise, dethatching is accomplished by hand or with a thatching rake.
Cool-season grasses are usually detached in early spring or in fall while warm-season grasses are generally detached in late spring.

**detrital** or **detritus**  1. Dead plant material in the process of microbial decomposition.  
2. Any material produced by being disintegrated, or by being worn away, such as rock fragments, sand, etc.

**developer**  The legal or beneficial owner or owners of any land included in a land development.

**development**  A land planning or construction project involving substantial property improvement and often a change of land-use character within site.

**development density**  In land planning efforts, the intensity of development or land use on the basis of area covered by impervious surface, population density, building floor area coverage, or number of dwelling units. It is most often understood as the permitted number of dwelling units per gross acre of land to be developed.

**development regulation**  Governmental regulation of a use and development of land through zoning, subdivision regulations, site plan requirements, official maps, city planning, flood plain regulation, or other methods.

**development rights**  Entitlement of property owners to develop land in accordance with local land use zoning and other regulations. These rights may sometimes be sold to public agencies, qualified nonprofit organizations, or other citizens. See also transfer of development rights.)

**dewater**  The removal of water from a work area or construction site by providing drainage, well points, or pumping.

**dew point**  A point in temperature below which moisture in the atmosphere is condensed into minute drops, and deposited on surfaces.

**D horizon**  The portion of a soil profile usually considered part of the C horizon, lying beneath any O, A, B, or C horizons, that is comprised mostly of rock decomposing into clay and sand particles. It sits directly over bedrock (the R horizon).

**di-**  A Greek prefix used in botanical terms meaning two.

**DIA**  Abbreviation for diameter.

**diabrotica**  A beetle often associated with cucumbers and referred to as the cucumber beetle, but destructive because it not only feeds on vegetables, but also many flowering plants. Its larvae feed on roots.

**diag.**  Abbreviation for diagonal.

**diam.**  Abbreviation for diameter.

**diameter at breast height (DBH)**  A measurement of a tree trunk caliper (usually 12 inches or greater) at the approximate height of one’s chest. See also caliper.

**diameter of throw** or **coverage**  The average diameter of area wetted by a sprinkler operating without windy conditions.

**diammonium phosphate**  A compound chemical fertilizer with 21% nitrogen and 53% phosphorus.

**diaphanous**  A botanical term meaning thin and translucent or transparent.

**diaphragm pump**  A pump much like a piston pump except that the piston is replaced with a diaphragm that is driven up and down by a rod that is attached at the center of the diaphragm.
diaphragm valve

A valve commonly used in irrigation systems that opens and closes as pressure changes on a diaphragm. It can pass mud and small stones.

dias

A raised area for seating people such as speakers, leaders, or dignitaries.

dibber

See dibble.

dibble or dibber

A handheld pointed tool to make holes in the soil for planting seeds, cuttings, bulbs, and seedlings.

dibble hole

A depression (hole or cavity) formed in a container or in a planting bed generally the size and shape of the liner, pot, or tube containing a plant’s root ball to be placed in it.

dicalcium phosphate

A chemical fertilizer with approximately 40% available phosphoric acid.

dichlamydeous

Having two kinds of perianth members such as sepals and petals.

dichotomous

In botanical terms, forked or divided in two.

dichotomous vein

In a leaf blade, veins that fork and fork again, but never cross.

dicotyledon

An angiosperm plant (a division of flowering or seed plants) that grows from a seed producing two cotyledons to begin growth. In a scientific name, this is a class of plants that is one of two categories in the angiosperm division. See also plant classification, taxon, and monocotyledon.

didymous

A botanical term that means developing in pairs.

didynamous

A botanical term, four stamens in two unequal pairs, as with most lamiaceae.

die

A tool used for making threads on pipe, etc.

dieback

A condition in woody plants in which twigs or shoots begin to die from the tips, often continuing down the plant structure in progressive deterioration. This can be caused by insect infestation, fungus, inadequate water, inability to withstand climatic conditions, extreme weather, early or late frost, nutrient deficiency, etc.

dielectric fitting

A special type of adapter used to connect a copper or brass pipe with an iron or steel pipe that prevents galvanic action that otherwise would allow corrosion.

dielectric union

A pipe union having an insulator between the two sides of the union to reduce corrosion caused by galvanic action.

differential assessment

A property tax relief program for agricultural properties allowing eligible farmland to be assessed at its value for agricultural use rather than its fair market value, or highest and best use.

diffuse

In botanical terms, spreading widely and irregularly.

diffuse radiation

Diffused or scattered solar radiation. As it passes through atmospheric molecules, water vapor, dust, and other particles, it appears to come from the entire sky. There is no defined shadow as on a hazy or overcast day.

diffusion

The transfer of a gas or liquid from an area of high concentration to an area of lower concentration.

digital controller or digital sprinkler controller

An electrically operated sprinkler controller with a small (usually) computer capable of being programmed to automatically turn sprinkler valves on and off and keep track of time. It has a screen (various sizes) for reading programmed information regarding the operation of
the valves on the sprinkler system. (Compare with mechanical controller.)

digitally lobed In botanical terms, fingered and main veining radiating from more than one point.

digitate A leaf shape that resembles the extended fingers on a hand. An example is the leaf of a horse chestnut tree. The leaflets are all borne on the apex of the petiole.

dimension 1. A measured or scaled length. A measure of something (especially an object) in one direction. 2. A measurement on a drawing from point to point shown with indications of the portion measured and the amount measured being written. The amount measured has various methods of making certain one unfamiliar with the drawing will understand to which portion of the object it refers.

dimension ratio The diameter of a pipe divided by the wall thickness.

dimension stone Stone shaped or cut to desired shapes and/or sizes.

dimerous All parts in twos.

dimidiate A botanical term describing a plant part that appears halved as if one half were wanting.

dimorphic A botanical term, of two forms.

dimorphous A botanical term, occurring in two forms.

dioecious In botanical terms, stamens and pistils in separate flowers on different plants, or plants having male and female organs on separate plants.

diplostemonous A botanical term, a flower that has two cycles of stamens.

direct cross-connection A connection between a potable water pipe and a nonpotable water source with or without a valve on the connection.

direct current (dc) An electrical current with a constant flow (as opposed to alternating current) rate and a constant voltage.

direct-gain system A passive solar heating system in which sun enters and warms a house interior directly.

direct radiation Light (radiant energy) directly from sun, capable of casting a shadow.

direct solar water-heating system Solar heating of water that comes directly from a potable source to the collectors to produce a hot water supply.

dirt See soil. This word is offensive to those working most closely with soil.

disbudding Thinning flower buds to improve quality of flowers.

discharge pipe 1. Any pipe that facilitates water or another fluid to flow from its end. 2. With regard to a pump, the pipe from the outlet of the pump to its point of outflow.

discharge pipe friction loss The loss of pressure due to friction from a pump to the point of discharge.

discharge zone An area where groundwater seepage or springs are concentrated.

disease In plants, usually refers to insect infestation, proliferation of detrimental fungus, or an infection of a virus. These can be brought on by lack of water, excess water, lack of nutrients, excess nutrients, lack of sunlight, excess sunlight, excess or too little heat, frost, pollution in water or air, etc.
disease resistant

disease resistant  A term describing a plant that has some ability to resist particular diseases (other varieties of the same plant may be susceptible). The resistance may occur naturally, or it may be the result of a breeding program designed to enhance the plant’s resistance to specific disease(s).

disk, disc  In plants with florets arranged in dense, rounded or flatis disc heads, the central part of the flower head made up of closely packed tubular flowers. An example would be the raised center portion of the flower of plants of the daisy family.

dispersion  1. Scattering or mixing within a water or gas volume. 2. With regard to soils, the breaking apart of soil structure so that individual soil particles behave as individual units.

dissected  A botanical term, deeply (and often repeatedly) divided or cut into many small or slender parts, lobes, or divisions.

distal  A botanical term, toward or at the tip or end. (Compare with proximal.)

distichous  In botanical terms, two-ranked or being in two vertical rows.

distilled water  Water that has had all salts and other solids removed from it. Rainwater is naturally distilled through the process of evaporation. Bonsai plants are often watered with distilled water to avoid buildup of salts.

distribution uniformity (DU)  The evenness of water distribution over an irrigated area. It is calculated using a catchment test. It is computed by dividing the average reading of the lowest one-quarter of catchments by the average reading of all catchments, and multiplying the answer by 100. An excellent percentage is 75 to 85%, while a good percentage is 65 to 70%. Wind, equipment damage, and interference with distribution by objects or plants will affect distribution uniformity.

distribution uniformity of the lowest quarter  A coefficient of uniformity depicting water distribution in an area of irrigation based on a formula that treats under watering as a more significant problem than over watering. It is a method of rating the evenness of water applied over an irrigation area with perfect uniformity being 100%. Most landscapes have 55 to 75% distribution uniformity. It is the average water applied in 25% of the area receiving the least amount of water without regard to location, divided by the average water applied over the total area (multiply by 100 for percentage).

disturbance  1. Something that has an effect on the environment. 2. Something that negatively affects a plant. 3. In landscape ecology, an event of natural phenomenon significantly changing the pattern of variation in structure or function of a system of the landscape.

disturbed wetland  A wetland directly or indirectly altered by man or other natural force while keeping a defined area.

ditch  1. A long, narrow excavation dug in the ground for accommodating water flow, a pipe to
be buried, a foundation to be constructed, an electrical conductor to be placed, a sleeve to be buried, etc.

ditcher or ditching machine  See trencher.

diurnal  In botanical terms, daytime or pertaining to the day. It may often refer to flowers that only open in the daylight hours.

diurnal damping depth  The maximum depth from the surface that soil experiences temperature change over a 24-hour (diurnal) period.

divaricate  In botanical terms, very widely divergent or spreading from the axis or rachis.

divergent  A term sometimes used in botanical descriptions to refer to a plant part that spreads.

divided  In botanical terms, leaves cut into divisions extending approximately to the base or the midrib.

divided street or divided roadway or divided highway  A street having an island or another barrier or open space separating moving lanes.

dividing  See division.

division  1. In gardening, a method of propagation by dividing the roots of plants such as those with rhizomes, tubers, bulbs, clumping perennials, etc. In many cases, these plants are healthier after dividing. This is usually done in fall (preferred) or early spring when they have expanded in growing for a year or more. 2. In plant taxonomy, the broad category dividing a kingdom into categories. The subcategory under division is the class. See also taxon.

dk  Abbreviation for dekameter(s).

dm  Abbreviation for decimeter(s).

D&M  In the lumber industry, the abbreviation for dressed and matched.

DOC (dissolved organic carbon)  The total filterable organic carbon in a particular water sample.

dock  A structure built over or floating upon the water and used as a landing place for boats as well as for other marine transport, fishing, swimming, etc.

dodge ball  See team dodge ball.

dog run  An enclosed outdoor area intended for the exercising, housing, or containment of dogs or similar animals.
dolabriform

dolabriform  A botanical term, pick-shaped and attached toward the middle, or at some point along the length rather than at an end.

dollar spot on lawns  A fungus (Sclerotinia homoeocarpa) encouraged by spring’s warm, wet, weather and fall’s wet weather with cool nights. Lawns low on fertilizer (esp. nitrogen), or poorly drained areas are most susceptible. This disease is recognized by small, round, brown spots later becoming straw colored. A white cobwebby fungus growth seen most easily in early morning before the dew dries; may cover dying leaf blades. The best options for preventing this fungus is to plant resistant varieties of grasses and to water deeply, infrequently, and in the morning.

dolomite or dolomitic limestone  A mineral of calcium magnesium carbonate usually from compacted limestone beds. It is sometimes applied to growth mediums to supply both calcium and magnesium carbonates while raising the soil pH.

domestic well  A water supply from a well for household use.

dominant  With regard to plant materials, a species that is most characteristic of a habitat, or that tends to crowd out other plant species.

donor site  See transfer of development rights and sending site.

door head  1. In framing, the upper horizontal member of the frame for a door. 2. In finish design, any projection immediately above a door that gives emphasis to the top of the door.

dormancy  1. Plants or seeds that are alive, but not growing. 2. A regularly occurring period when plant growth processes greatly slow down or growing ceases. This occurs in many species in the temperate region beginning in winter as cold days grow shorter and temperatures begin to lower; this ends in spring when plants are exposed to higher temperatures and longer days. Dormancy protects plants against extremes of temperature. It is usually best not to fertilize during dormancy.

dormant oil  A highly refined oil used for spraying on deciduous shrubs and trees while dormant (preferably shortly before bud break) that kills eggs and or insects, usually by smothering. It can kill tender herbaceous understory plants, so it is best to cover them before spraying.

dormant spray  A sprayed application of fungicide, oil, or insecticide during a plant’s dormancy. This is a very effective way to assist in controlling disease. See also dormant oil.

dorsal  In botanical terms, the back or outer surface of an organ.

dorsifixed  A botanical term used in plant identification, attached on the back. (Compare with basifixed.)

dote or doat or doze  A dull appearance in wood indicating decay has caused it to become weak.

double-acting pump  A pump in which the up and down motion of a piston moves water as it moves in each direction.

double axe  An axe having a blade on both sides of its head.

double check assembly  A backflow device with two internally loaded, independently operating check valves together with tightly closing, resilient-seated shutoff valves upstream and downstream of the check valves with resilient-seated test cocks for testing of the assembly. It may be used to protect against a pollutant only.

double corner block or pier block or pilaster block  A concrete masonry unit having rectangular end faces and rectangular side
faces that are not indented but smooth and able to be exposed on any of these sides with a solid surface.

double-cut file  A file with two diagonal sets of cutting ridges, each set crossing the other.

double-cut saw  A handsaw with teeth designed to allow cutting both when the saw is pushed and when it is pulled.

double extra strong pipe  A steel pipe that has a thicker wall and twice the strength of a pipe of normal wall thickness.

double-faced hammer  A hammer having a striking face at each side of its head.

double flower  A flower with many petals densely arranged, not just in a flat, circular form, but three dimensional. Often used to accentuate a description of the ornamental aesthetic value of this type of flower.

double-head nail or scaffold nail or form nail  A nail with a head, and, a short distance down the shank, another head like an extended ring. This ring allows the nail to be pounded into material to that point where it is difficult to pound it in any further so that it can later be pulled from the material. These types of nails are often used in such work as making of forms for concrete so that the nails can be easily pulled when the forms are removed.

double manure salts  A fertilizer also known as potassium sulfate that supplies 30% water-soluble potash and up to 56% magnesium.

double serrate  A descriptive botanical term referring to a leaf with large teeth and small teeth that alternate along its margin. (Compare with ciliate, pectinate, cleft, lobed, dentate, denticulate, serrate, serrulate, entire, incised, crenate, crenulate, parted.)

Douglas fir  A strong, fairly straight wood useful for structural members and for any framing. It is also used to manufacture plywood.

dovetail  The end of a piece of wood shaped like a fan (or dove’s tail) with the widest dimension at its end, which is shaped to be placed within another piece of wood’s joint formed to accept it. This forms a joint that is difficult to pull apart. The shape of the joint can vary greatly, and more than one interlocking piece may form the joint with many varieties having their own name (sometimes only locally recognized).

dovetail saw  A small saw with a thin blade, fine teeth, and a protruding handle.

dowel  A small, usually cylindrical rod or piece used at a joint in metal, stone, dry-stacked masonry units, wood, etc., assisting in securing the joint by extending into holes prepared to accept it in each member and assist in resisting shear loads.
downpipe

See downspout.

downspout or conductor or downcomer or downpipe or rainwater pipe  A pipe or tube, usually exposed on the surface of a structure, and usually made of aluminum, plastic, or tin, for conveying precipitation or excess water from a roof or flat area of a structure downward.

downy  In botanical terms, being clothed with soft short hairs.

downy mildew  Any of a number of fungal diseases with a down-like white, gray, or lavender appearance; common to violets, Boston ivy, poppies, alyssum, and some vegetables. Unlike powdery mildew, these fungi extend through the plant tissue.

downzoning  A change in the zoning for a particular area, decreasing residential densities, decreasing allowable square footage of building, or restricting some or all uses previously allowed.

dozer  See bulldozer.

dpm  Abbreviation for damp proof membrane.

draft  1. To draw or design on a writing surface or with a computer. 2. A fairly smooth, narrow edge cleaned around the face of a stone.

drafting brush  A flimsy haired brush with an extended handle used to brush away erasing debris, writing debris, etc. without marring the drawing.

drafting machine  A useful instrument that can assist one who drafts because of its ability to act as a T-square, protractor, scale, and triangle. It is attached to a large board or drafting table, usually at the top, and has a jointed arm, allowing it to be moved about.

drafting template  A stiff, fairly thin plastic sheet with shapes cut in it that can be traced onto drawings.

drag  A tool consisting of a steel plate having a finely serrated edge; used to dress stone by dragging it back and forth across the surface.

drain  1. A pipe, channel, or an appurtenance carrying waste water or storm water. 2. A device
in a pipe system (especially irrigation) that prevents water from escaping until automatically (when pressure is released) or manually opened. (See illustrations of installations (construction details) for manual and automatic drains on a sprinkler system.

drainage 1. In regard to land, the ability of water to remove itself from an area by runoff, or percolation through the soil. 2. The ability or inability of soil to lose water when flooded by allowing air into the soil, alleviating anaerobic conditions. 3. Water leaving an area by gravity.

drainage basin The area defined by topographic flow boundaries that contributes storm water to a lake, pond, drainage system, estuarine waters, or oceanic waters.

drainage coefficient The amount of excess water that must be removed (including irrigation water) from a land area by a drainage system to prevent damage to crops, vegetation, structures, etc.

drainage divide The border between two drainage basins or watersheds.

drainage facility Any component of a drainage system.

drainage fitting or Durham fitting A threaded fitting, used on drainage pipes that has a shoulder affording a smooth, continuous interior surface that assists in avoiding clogs.

drainage fixture A device in a drainage system that is manufactured off-site and put in place on a pipe, ditch, etc.

drainage network A system or connection of stream channels that are usually connected in a hierarchical fashion.

drainage system 1. The system through which water flows from land, including watercourses, water bodies, and wetlands as a part of the hydrologic cycle. 2. The water courses and piping network providing means of moving excess water away from a site, area, or structure.

drainage tile See drain tile.

drainage well A bed of stone or hole in the ground constructed for the purpose of trapping storm water for infiltration into subsurface materials.

drained wetland A wetland in which the level or volume of ground or surface water has been reduced or eliminated by man-made or natural forces.

drainfield Underground pipes or tiles through which wastewater is percolated into the soil.

drain hatch A drain at a dump station with a cap that can be lifted by stepping on its handle with a foot. The cap helps prevent gases from
drain pocket

escaping, debris from clogging the sewer access, and animals from crawling in.

**drain pocket** In landscape irrigation, an amount of gravel (or similar granular material with voids for water to drain through) surrounding a manual or automatic drain. See illustration under drain. They allow water to easily flow from the drain and provide a larger area for water to filter into the surrounding soil. These are particularly useful in heavy soils where the water may otherwise have considerable difficulty flowing from the drain.

**drain tile** A tile formed as a short pipe that has loose or open joints when pieces are butted together. It allows water to drain into or out of the pipe when buried depending on the situation. It can be used to drain water from soil, or to disperse water into a soil.

drawdown cone  See cone of depression.

drawknife or drawshave A woodworking tool with a blade, and a handle at each end of the blade. It is useful in shaving wood by pulling it toward the user.

drawn finish  A smooth, bright finish on metal tubing, wire, rod, bar, strips, etc.

dressed  The finished, prepared face or faces of a brick, lumber, stone, etc. This finishing is usually to provide a more positive aesthetic effect for what is exposed to view in a completed structure. The finishing may be accomplished by sanding, rubbing, chiseling, or cutting the surface.

dressed and matched or tongue-and-groove In reference to lumber, wood members cut with a ridge on one edge and a recessed area on the other edge so that boards can be inter-

locked for strength and tightness in planking, decking, etc.

dressed size The dimension of lumber after sawing and smoothing the faces.

**DRG** Abbreviation for drawing.

dried blood  A product of a slaughterhouse, used as fertilizer with 12 to 14% nitrogen; causes an acid reaction. See also blood meal.

drier An additive that makes paint or varnish dry faster after application by absorbing oxygen.

drift  1. A deposit of rock fragments and soils driven together by water, wind, or ice. 2. With regard to irrigation, the change in a sprinkler application pattern due to wind.

drifter  A rock drill driven by compressed air.

drift pin  1. A device with a pin or steel post extending upward that is inserted into a post to attach it to a footing. This device must have its lower portion placed in a footing at the time of its pouring. 2. A tapered, round rod used to align holes in pieces of metal. 3. A round or square metal rod much like a nail. A hole is drilled smaller than the rod and the rod is then driven into it for a tight fit.

drift punch  A punch tool with a tapered, blunt nose used for aligning holes.

drill  1. A tool that rotates, being driven by hand or a motor and having various bits for boring, or for turning screws or bolts. 2. A tiny furrow made with the corner of a hoe, a pointed stick, etc. for seed to be planted in. Vegetables grown from seeds planted in straight rows are sown in the drills. 3. A machine usually pulled behind a tractor that lays down seed and covers it with soil, or pokes it into the ground to improve germination rates. Mechanical tractor implements for drilling are best used on large
land areas. 4. A machine used for boring holes in the ground.

drinking fountain A device that supplies water in such a manner that one may drink from a flow of water without the use of a container to catch it in. Most provide water for consumption by a slow-moving, usually arching water jet and a basin into which the spillage falls. The water emission device is metal, and the basin may be stone, metal, masonry, etc.

drinking fountain

**drip irrigation** Water distributed to plants slowly, usually at low pressure, through small emitters. Its possible virtues include: decreased loss of water to wind, runoff, or evaporation; a high uniformity of water distribution per plant; usefulness in difficult terrain or where spray on adjacent areas or structures is undesirable; increased leaching of salts as it keeps soil moist; and in some plants, an improvement in growth and quality. The drawbacks of drip irrigation include: difficulty of maintenance as emitters are not easily observed to check operation; plants are not washed off; the soft tubing is easily damaged by rodents, dogs, or excessive weight placed over it; the tubing at or near the surface is easily displaced or vandalized; filtering is necessary to prevent or reduce clogging; and there is a possibility of salt buildup at the edge of the wetted area.

drip line 1. A line drawn around a tree at the edge of the outermost ends of its branches. The line at the outside edge of a plant’s head where water drips off the plant in an approximate line around the plant. 2. A pipe carrying water to drip emitters or a drip emitter pipe with emitters integral to it or placed in it.

drive band A steel band encircling the head of a timber pile to prevent it from splitting when driven into the ground.

drive cap A steel cover placed over the top end of a pile to prevent damage to the pile while it is being driven into the ground.

drive island A parking island that is located between a parking bay and an access drive.

driveway 1. A private way or road used for vehicles. 2. A parking area in front of a garage, usually in private residences.

drop cloth A protective covering of plastic, cloth, or paper to spread over a floor, furniture, the ground, etc. when construction is underway.
drop hammer

A heavy weight used for driving a pile into the ground.

drop manhole A manhole provided for inspection and maintenance of sewers where the incoming sewer pipe is considerably higher than the outgoing sewer pipe.

drop siding Cladding for walls in horizontal pieces that overlap when one is placed (dropped) upon another. It is usually made of vinyl, aluminum, or wood.

drop tee A pipe tee having lugs in its side, allowing it to be attached to a support.

drought A prolonged period when an area of land receives less natural precipitation than it historically has been accustomed to.

drought resistant Used interchangeably with drought tolerant.

drought tolerant A term often used to describe plants with low water requirements, the ability to withstand extended periods without water, or plants of a desert region. They usually have deep and well-developed root zones, waxy leaves, leaf hairs that reduce airflow over the leaf surface, shiny leaf surfaces to reflect light, or leaves that fold up or drop under stress conditions. This term is often inappropriate, or ambiguous because tolerance of drought varies with temperature, soil type, exposure to winds, exposure to sunlight, degree of establishment, age of the plant, size of the plant, depth of rooting medium, etc., and the degree of drought varies greatly.

drove A mason’s chisel; its useful end is 2 to 4 in wide.

drove work Stone that has been finished with a drive.

drumlin A narrow ridge or hill, often curved, that was formed by glaciers and is composed of glacial till.

drupe In botanical terms, a fleshy, indehiscent, one-seeded (usually) or many-seeded fruit. When it contains more than one stony seed, it provides an endocarp to enclose each of the seeds.

drupelet In botanical terms, the diminutive (naturally much smaller, or not normal sized) of drupe.

dry density The weight of soil after all moisture is removed by an oven, usually at a temperature of 221F (105°C).

drying off Intentionally withholding water from a plant as it enters dormancy (usually to assist in becoming dormant).

dry lumber See kiln-dried lumber, or air-dried lumber.

dry masonry Brick, stone, concrete, masonry units, etc. placed and assembled together in construction without the use of mortar.

dry-pack Slightly moist, almost dry concrete capable of being rammed into spaces.

dry-rodoved weight The weight per unit volume of an aggregate when compacted dry.

dry rodding Compacting dry aggregate materials with a rod in a calibrated container to measure the weight per unit volume.

dry rubble construction Rough stones of irregular shapes and sizes assembled together without the use of mortar.

dry well 1. A well collecting surface waters from such areas as roads, roofs, basement floors, or foundations providing for the water to be dispersed and absorbed into the ground. 2. A
water well in the ground that is no longer capable of providing water. 3. See cesspool. 4. See absorbing well.

**DS** Abbreviation for **downspout**.

**DU** Abbreviation for **distribution uniformity**.

**dual programmable** A feature of some **automatic controllers** that allows them to turn on one set of valves or heads separately at completely different times or days from another set of valves or heads. This is essential where there are valves operating lawn areas requiring a significant amount of water and shrub areas requiring little water.

**dub** To strike, cut, rub, or finish, making a surface smooth, or of an equal height.

**duckboard** A wooden walkway over muddy ground.

**duck tape** See duct tape.

**ductile-iron pipe** Pipe fabricated of cast-iron alloys in which graphite replaces the carbon that is in **cast-iron**. It is stronger than cast-iron, but more expensive.

**duct tape** Thin, strong, cotton or synthetic material made in a roll with one side that is very sticky and adherant to most any clean dry surface. It is usually gray and 1 1/2 to 4 in wide.

**duff** Partially or completely decomposed organic matter on the ground, usually beneath an organic litter layer.

**DU\textsubscript{LUQ}** Abbreviation for **distribution uniformity of the lowest quarter**.

**dump station** A place provided for recreational vehicles, camp trailers, etc. with contained sewage to dump their sewage into the sanitary sewer.

**dumpster** A large metal container used for refuse and dumped only by a large truck or motorized device able to lift it. It may be dumped on-site into the truck, or, with a larger dumpster container, it may be hauled off-site for dumping.

**dump truck** A truck that has a body capable of lifting to slide its load out.
dumpy level

**dumpy level** A surveying instrument for measuring differences in elevation.

**dung** 1. Feces. 2. To spread manure for fertilization purposes.

**duplex** A structure containing two **dwelling units**.

**duplex nail** A nail with 2 heads, one like an extended ring a short distance down the shank. This second head allows the nail to be pounded into material to that point where it becomes difficult to pound it in any further so that the nail can later be pulled from the material. These types of nails are often used in such work as making forms for concrete so that the nails can be pulled easily when the forms are removed.

**duplex outlet** See **duplex receptacle**.

**duplex receptacle** An electrical device having receptacles for mounting in an outlet box.

**Durham system** A waste water system using recessed drainage fittings. This prevents waste from catching on connection joints in the pipe.

**dust** Fine particulates deposited from the air that can block stomata in leaves and block gas exchange.

**dusting** Applying powdered fungicides or insecticides to plants.

**Dutch door** A door with two separately hinged portions such that one is above the other and each can be opened or closed independently. These are especially useful in barns, etc.

**Dutch elm disease** Disease caused by the fungus (*Ophiostoma ulmi*), spread by elm bark beetles. It affects American and European elm trees. This disease is best prevented by planting resistant varieties and keeping them healthy.

**Dutch lap** A method of laying shingles, slates, etc. on a surface in which each one overlaps the one directly below it and one to the side.

**dwarf** With regard to plants, a **variety** of a particular plant that is lower and more **compact** than other plants of the same species.

**dwarfed or dwarfing** Plants that are kept from becoming their normal size at maturity through cultural practices or abnormal environmental conditions. This can be induced by elevation, size of container, lack of water, pruning roots or tops, removing leaves, restricting stems with wires, grafting to a **dwarfing stock**, etc.

**dwarfing stock** An understock that causes a plant grafted upon it to become dwarfed.

**dwelling unit** Usually a space providing complete, independent living facilities for one or more persons, including provisions for living, sleeping, eating, cooking, and sanitation. Different jurisdictions may define this differently.

**dwg** Abbreviation for drawing.

**dynamic head** The pressure in any water system when in use and flowing.

**dynamic penetration test** A soil test facilitated by pounding a testing device into the soil. In pile driving, the resistance of a pile to further penetration expressed in blows per unit depth of penetration.

**dynamic pressure** In a sprinkler system, the pressure measured at a point inside the system while it is in operation with water in motion and flowing.

**dynamic pump** A pump having pumping action created by a dynamic action taking place between some mechanical element and a fluid. Examples of this pump type are centrifugal pumps, and jet pumps.
A symbol for an elbow (90°) used in a pipe system.

e- or ex-  A Latin prefix used in botanical descriptions meaning without, from, or away from.

E.W.  Abbreviation for each way.

E/A  Abbreviation for engineer/architect.

ea.  Abbreviation for each.

early maturing  A descriptive term applied to certain vegetables that mature faster than others of the same species. Faster-growing varieties tend to fit into this category.

earth  1. In landscape terms, the loose material mainly composed of minerals on or near the surface of this planet. 2. A soil. 3. The surface of the ground.

earth berm  See berm.

earthen  Of or relating to earth or ground.

earthing up  Mounding the soil against the main stem of a plant to blanch or otherwise prevent light from affecting its crop. Leeks, potatoes, and celery are often blanched in this manner. Too much light on potato tubers may turn them green and poisonous. Mounding against woody plants is ill advised. See root collar and mulch.

earth pressure  The horizontal pressure exerted by earth that is retained.

earthwork  1. Any work dealing with the moving of earthen material, especially that of excavators. 2. A construction work of earth such as an embankment, mounds, etc.

earthworms  Members of the class Oligochaeta and mostly the family Lumbricidae. They move through the soil improving aeration and excreting organic matter valuable in creating topsoil. They assist in maintaining soil fertility and enhancing soil composition. Mucoprotein is produced within earthworms and appears in castings, which contributes to stability of soil aggregates. It also can be used by other organisms as an organic material to provide energy. They tend to move lower in the soil profile when the upper portion of the soil is hot and dry, and rise to the surface or move elsewhere when the soil is saturated with water.

earwig  Any of many long insects with jointed antennae, and appendages at the end of the body resembling forceps. They feed at night on flowers, leaves, and other insects. During the day, they hide in soil or dark places.

eased  A slightly rounded edge of a construction element, such as stair nose.

easement  A designated part of a property owner's land authorized by the property owner for use by another for a specified purpose. These areas of easement may be for right of travel, access to facilitate installation, maintenance of utilities, drainage facilities, conservation, agriculture, etc.

east elevation  1. A drawing, usually to scale, showing the east-facing portion of a structure or element as it would be seen by one standing east and facing west to view it. 2. The elevation of a portion of ground, paving, or structure situated east of the remainder of it.
eastern elevation

eastern elevation  See east elevation.

eastern exposure  1. A slope that from top to bottom slopes downward toward the east. 2. The east-facing portion of a structure. 3. The area to the east of any nearly vertical surface that has a changed microclimate effected by it with regard to heat or cold, or brightness of sunlight or shadow.

eastern red cedar or aromatic cedar An aromatic, decay-resistant, fine-textured wood having a reddish color with white streaks. It is often used in outdoor applications such as fences and decks.

east-malling stocks Understocks used for grafting apples.

easy elbow  In pipe work, an elbow that makes a sweeping bend (as opposed to an abrupt bend) of 90°. These elbows are usually installed as conduits to facilitate pulling wire through them.

eave  In structures, the portion of a roof projecting outward and overhanging the wall below.

eaves channel  See rain gutter.

eaves gutter  See rain gutter.

eccentric fitting Any pipe having its center offset from the center of the run of pipe.

eceptacle  The end of a flower stalk on which the floral organs are borne.

echinate  In botanical terms, with prickles.

echinulate  Diminutive of echinate.

eclectic  Design utilizing a variety of historical styles.

ecological impact  A modification or change in processes effecting living things or their environment that could result in the disruption or loss of normal processes of habitat, vegetation, air quality, soil, water resources, or an increase in ambient noise levels, or other positive or negative changes to other ecological elements.

ecology  1. Interactions of organisms with the physical environment as well as with each other and the results of those interactions. 2. The study of living things in their environment, or the interdependence between life forms and their habitats.

ecosystem  1. An area of living organisms and the associated nonliving things with which they interact. 2. In a selected area, the system of interactions between all living and nonliving things. 3. An area of similar appearance and function with the group of organisms associated with that area interacting with their environment. This area may be a small piece of land (e.g., patch, corridor, matrix) or a large-scale area.

ecotone  1. A boundary between ecosystem types adjacent to one another. It can include environmental conditions that are common to both of the adjacent ecosystems, and it can have higher or lower species diversity. 2. A smaller area than an ecosystem with a variance in environmental conditions.

ecotope  The smallest unit of land that is mapped with generally homogeneous vegetation and ecosystem functioning.

ecotype  Plants of the smallest taxonomic subdivision (subspecies, strains, or varieties) that are adapted to a restrictive set of environmental conditions.

ectomycorrhiza  A type of mycorrhizae that forms a symbiotic relationship with plant roots.

edaphic  Relating to the soil or being influenced by it rather than by climate.

edema  Swelling of plant tissues with excess water; any watery swelling of plant parts usually showing as small blisters that can burst and
leave a small rusty brown spot. They are most often found on undersides of leaves but also appear on petioles, cacti, etc. The most common cause is abundant, warm soil water and a cool, moist atmosphere. These conditions cause the roots to absorb water at a rate faster than transpiration, which creates a loss of water on the plant's surfaces. Water accumulates in the leaf or plant tissue in excess of its storage capability, some cells enlarge and block the stomatal openings, which usually vent water vapor from the plant, and this contributes to increased water retention. As this condition continues, rupture occurs in plant tissue. The raised, crusty brown or light-colored older spots are areas of past epidermis rupture.

**edge** In landscape ecology, an area which when viewed from above is at the outer portion of a patch or corridor where environment differs significantly from the interior portion (interior). It is the portion of a mostly homogeneous shape on the earth's surface at its outer limits where the environment (sun vs. shade, cool, dampness, plant differences, animal differences, etc.) is different from the interior of the shape. It may be a lake, a grassy area, a patch or corridor of forest or heavy vegetation near the boundaries where environment becomes different and so favors different organisms than those further within the shape. 2. In a designed landscape, see **edging** (2).

**edger** 1. See **edging.** 2. A tool used to cut low-growing plants (grass, ground covers) along the edge of sidewalks, curbs, gutters, or edging.

**edge trimmer** A mechanized device usually with a string but sometimes with a blade that is rotated at high speed so that one may direct it at grass or other thin plant material to cut it; a part of maintenance.

**edging** 1. In a landscape, the strip of steel, fiberglass, concrete, plastic, wood, etc. used in a linear form, whether straight, curved, or contrived, used as a border, boundary, or aesthetic dressing and separating two types of ground coverings such as lawn, bark, rock mulch, shrubs, etc. They not only have an aesthetic function, but they also keep one plant (usually grass) from overrunning another, or acting as an edge for a mower to run over and near a vertical surface. This prevents having to come back to trim long grass that otherwise could not be reached by mower blades adjacent to vertical surfaces. 2. A planting placed at an edge in a landscape for a physical barrier, a visual barrier, a dressing, a visual delineation, a windbreak, etc. Items used to create such a border, edge, or boundary include trees, shrubs, flowers (most commonly plants for small borders) or indeed, just about any plant types arranged in a row. 3. A strip of metal, wood, etc. used to hide or protect edges. 4. In concrete finishing, the effort of rounding edges to improve the finished edge, to prevent cracking and chipping of an edge, or to prevent tripping. 5. The act of trimming grass, ground covers, or other plants along a hard surface edge.

**edible landscaping** Landscapes wholly or mostly comprised of **edible plants.**
edible plant

A plant with some portion of it that may be eaten. It may be the leaf, root, flower, stalk, or the fruit.

effective span The distance between supports measured from center to center of vertical supports.

efficiency curve With reference to pumps, an indication on a pump performance curve showing the best ranges for a pump with regard to head-capacity performance. It is expressed or measured as a percentage, and is created from a ratio of liquid output horsepower to the input horsepower.

effluent Liquid or gas flowing from a process or treatment system. Effluent is a waste water and may be termed as such after any level of treatment. Discharge from a septic tank or a sewage treatment facility is effluent.

egress An exit.

EIR Abbreviation for environmental impact report.

ejector pump See sump pump.

elastomeric coating A closely adhering neoprene, rubber, or silicone-based coating that forms a watertight, tough, skid-resistant surface.

elbow In pipe work, a fitting facilitating a change in direction of a pipe. The most common elbows are 90° and 45°.

electric-discharge lamp A man-made light source with a glass enclosing a gas that produces light when electricity passes through it.

electric remote control valve A valve with a solenoid and attached wires that allow operation by an electric sprinkler controller from a location remote to the valve.

electric sign An electrically illuminated element with words or symbols conveying information or attracting attention.

electrolysis Reducing dissolved or fused chemical compounds to a simpler form by passing electricity through them in the presence of an electrolyte or a conductor of electricity other than metal. In piping systems, this occurs with the water being the electrolyte when two dissimilar metals are in contact with one another, especially a galvanized fitting or pipe and a brass or copper fitting or pipe. This leads to corrosion and decomposition of the metals.

electrolytic corrosion Decomposition of materials caused by electrolysis. This occurs when two quite dissimilar metals are touching one another in the presence of water or another electrical conductor. This is a cause of deterioration and corrosion of metal fittings when copper or brass is in contact with galvanized metal in a piping system.

electrolytic protection A way of defending or saving ferrous metals (metals containing iron) from galvanic corrosion when they are covered with moist soil or when they are under water. One method is to attach to the metal fittings or pipes another piece of metal that is more electronegative to divert the electrolysis.

electroplated A metal surface having a thin electrochemical deposit of brass, zinc, copper, cadmium, tin, or nickel.
elephant trunk  A hopper with a long tube for assisting in placing the concrete in deep shafts or forms.

elevated planter  A planter with an elevation higher than the grade beneath it. The planting soil is contained and held aloft by poles, cables, or other points of attachment.

elevation  1. The measured amount above or below sea level of an object or area. It is usually expressed in feet or meters.  2. The measured amount above or below a given base point on a drawing or site. This base point is usually a floor elevation, a paving elevation, or a known surveyed benchmark.  3. A drawing showing the view of, or appearance of, something as seen from a specific side projected to a vertical plane without any vanishing points (not a perspective drawing).

elevation view  See elevation (3).

elliptic  In botanical terms, elliptical, oval, or oblong, with the ends regularly rounded. It may describe a leaf shape, tree crown shape, etc. A tree of this shape is more tall than broad with its widest point near the middle of the height of its crown.

elliptical arch  An arch having the shape of an ellipse.

elm  In lumber, a tough, strong, hardwood of brown color. It has been used for veneer, piles, and decking, but is difficult to obtain.

elongate  Drawn out in length, often used in descriptions of plant parts.

elongation region  The region of the root in which existing cells undergo elongation. These cells are thin walled and help to absorb water and nutrients.

eluviation  Movement of dissolved or suspended substances in soil when water input exceeds evaporation.

emarginate  In botanical terms, notched or indented at the summit, tip, or apex. (Compare with retuse, cuspidate, aristate, acuminate, acute, mucronate, obtuse.)
emboss

emboss  A raised or indented design or message.

embryo  In botanical terms, a young seed plant still within a seed and capable of becoming a mature plant.

emergent plant  1. An herbaceous plant standing erect, rooted in shallow water but having most of the plant growing above the water's surface. 2. A rooted plant that grows on land that is periodically or permanently flooded, and, when flooded, has portions of the plant (stems and leaves) extending above the water surface.

emery  A granular form of impure carborundum. It is used for grinding and polishing.

emery cloth  A cloth coated with emery, often used for polishing metal.

eminent domain  The power or right of a governing jurisdiction to obtain private property for public use while making certain the property owner is reasonably compensated.

emission uniformity  The index of uniformity of emitter discharge rates throughout a micro-irrigation system. It considers both variations in emitters and variations in the pressure to operate emitters.

emitter  In drip irrigation, a small device placed on a low-pressure pipe that allows water to be provided only in small droplet amounts, usually measured in gallons per hour or liters per hour instead of per minute as with sprinkler irrigation. (Compare with orifice emitter, turbulent flow emitter, pressure compensating emitter, vortex emitter, laminar flow emitter, continuous flushing emitter.)

emitter tube  A plastic tube intended for distribution of water to or from one emitter. It is usually about ½ in in diameter.

emitter tube stake  A plastic or metal stake to hold plastic micro-irrigation tubing in place.

EMT  Abbreviation for Electrical Metallic Conduit; Thin Wall Conduit.

emulsifier  A dispersant or something that holds in suspension; usually a liquid.

enamel  A paint composed of finely ground pigments and a resin binder that dries to form a hard, smooth, glassy surface.

enation  An outgrowth on the surface of a plant as a result of a virus.

encorbelment  The projection of any course of masonry over the course immediately below it.

encroachment  The unauthorized extension of any portion of a structure or land.

encumbrance  A restriction of the use of real property.

end dump  A long trailer with at least one set of tandem dual wheels pulled by a large semi truck capable of holding large amounts of bulk materials such as rock, topsoil, bark mulch, etc. for delivery and dumping by raising from the front end high enough to allow the material to slide out the back.

end island  A parking island of landscaping located at the end of a row or bay of parking stalls that is not connected to any other landscaping.
endangered species  A species in considerable danger of extinction in all or a significant portion of its range.

end lap  The amount of overlap at the end of a roll of material such as roofing felt.

endemic  A native plant in a restricted region, or being restricted to a particular region.

endless saw  See band saw.

endocarp  The inner layer of a pericarp of a fruit of a plant (as with an orange or apple), which contains two or more layers of different texture or consistency.

endosperm  Food storage tissue in a seed.

engineer/architect  A reference to the designer of a project, most often found within contract documents; landscape architect, architect, civil engineer, or mechanical engineer.

engaged bollard  A low post, partially embedded into a wall or column, so as to prevent motor vehicles from damaging the surface.

engineer's chain  A distance measuring device used in land surveying consisting of a series of links, the length of which is 100 ft.

engineer's level  Precision leveling instruments used to determine differences of elevation.

engineer's scale  A ruler or straight edge divided uniformly into multiples of 10 divisions per inch facilitating drawing or measuring scaled drawings with decimal values for distance. For example, a drawing may be drawn at a scale of 1 in equal to 20 ft (1 in = 20 ft, or 0.20 in = 1 ft).

English bond  A brickwork pattern alternating courses of headers and courses of stretchers. This makes a stronger wall than offset stretchers.

English garden  An informal garden deliberately lacking symmetry. These gardens attempt to mimic nature with winding paths, naturally shaped ponds, plantings in informal masses, etc. This design is the opposite of the formal garden.

enhanced wetland  An existing wetland with certain functions that have been increased or enhanced by human influences.

ensiform  A botanical term, sword-shaped (e.g., leaves of iris).

entablature  In Classical architecture the horizontal bands of moldings in mass, supported by a column and composed of (from lowest to highest) the architrave, the frieze, and the cornice. This design has sometimes been used in formal design of colonnades and pavilions.
entire

entire leaf margin

entire In botanical terms, a leaf with smooth margins. They are not at all toothed, notched, or divided. (Compare with ciliate, pectinate, cleft, lobed, dentate, denticulate, serrate, serrulate, double serrate, incised, crenate, crenulate, parted.)

entomology The study of insects.

entomophagous A term used to describe a plant that is insect-eating.

entomophilous A flower relying mostly on insects for pollination.

environment The complete surroundings of either an organism, a portion of an organism, or an organism’s community.

environmental assessment A preliminary study of a proposed land use development and the effects it may have on the environment. These assist in determining whether there is a need for a detailed environmental impact report.

environmental impact The results of impelling change by one or more forces in an environment upon other elements within the same environment whether climatic, geologic, biotic, edaphic, anthropomorphic, etc. The force may benefit other environmental elements (positive environmental impact), or it may be detrimental to other environmental elements (negative environmental impact). Most changes in the environment affect more than one organism or its environment, and what may be a positive impact for one may be positive to several others, but it is often a negative to others.

environmental impact report A report required by government agencies that assesses all the significant and known environmental characteristics of an area and determines what presently understood effects or impacts will result if the area is altered or disturbed by a proposed action.

environmental inventory Gathering and categorizing data and information on natural
and human features in an area proposed for a planning project.

**environmentally friendly**  Said of a process or product that is beneficial to, or not destructive of, the environment.

**enzymes**  Substances (organic catalysts) produced by living cells that may bring about or speed up chemical reactions.

**EPA**  The Environmental Protection Agency of the United States.

**EPDM**  Abbreviation for ethylene propylene diene monomer, a synthetic rubber liner often used to line water features, roofs, or roof planters because it is waterproof and more stretch resistant and UV resistant than PVC liner.

**ephemeral**  1. Plants with flowers that last one or two days. 2. Short-lived plants that may grow more than one generation per year. 3. Lasting one day. 4. Lasting a short time. 5. A spring-blooming herb usually found in mesic deciduous forests.

**epi**  A Greek prefix used in botanical terms meaning upon; often used to mean outer or outermost.

**epicarp**  See exocarp.

**epigynous**  Joined to the ovary. A botanical term meaning the perianth and stamens are attached to the top of the ovary instead of beneath it. (Compare with hypogynous, perigynous.)

**epipetalous**  A botanical term describing a plant part attached to the petals or corolla.

**epiphyte**  A plant that obtains its nutrients and water from the air and grows sitting on the surface of another plant, but receives no nourishment from the plant that supports it. They are often incorrectly thought of as parasites. Examples of these types of plants can be found amongst ferns or orchids.

**epistyle, epistylium**  An architrave.

**epithedes**  The upper member of the cornice of an entablature.

**epoxy resin finish**  A waterproof surface most often applied to wood. It is usually applied in three coats and is $\frac{1}{8}$ to $\frac{1}{4}$ in thick.

**equestrian**  1. Related to horseback riding. 2. One who rides a horse.

**equilibrium**  A term used in structure design to describe a condition where the sum of all the moments are equal to zero; sometimes referred to as the law of equilibrium.

**equinox**  A point in the year when the sun is at the equator causing the length of days and nights to be equal both south and north of the equator. This occurs at approximately March 21 and September 23.

**equipment ground**  In electrical wiring, a connection from the exposed metal parts of equipment housings and from the grounding port of outlets to provide a ground.

**erodibility**  The susceptibility of a soil to erosion by water or wind.

**erodibility factor**  A value used in the universal soil loss equation representing relative erodibility of the soil.

**erose**  In botanical terms, something with an irregular shape appearing as if it were gnawed.

**erosion**  The detachment and movement of soil or rock fragments, or the wearing away of the land surface or subsurface by water, wind, ice, or gravity.

**erosion control fabric**  A rolled or sheeted material laid over the soil surface or at a water body edge to prevent erosion. It is made of small intertwined wood strings, coconut fiber, plastics, jute, paper, etc.
errors and omissions insurance

errors and omissions insurance  Insurance covering mistakes by a designer when preparing the contract documents.

escutcheon  A pipe flange used to cover a hole through which the pipe passes.

esker  A narrow, long ridge of coarse gravel deposited by an ancient stream flowing in a valley or tunnel walled with ice in a melting glacial ice sheet.

espalier 1. A shrub or tree trained or pruned to grow flat against a wall, fence, etc. They may be trained into formal or informal patterns and are often trained with wire, sticks, or rods to guide the branching pattern. Typical formal espalier patterns include candelabra, horizontal cordon, and Belgian fence espalier. 2. A trellis, wire pattern, fence, etc. on which plants are trained to grow in an espalier pattern.

esplanade  A relatively open area designed for walking or driving, while usually offering a view.

Essex board measure  A chart listing the number of board feet in a board one inch thick and of various standard sizes. It is usually printed on a special carpenter’s square.

est. Abbreviation for estimated.

established  See established plant.

established plant  1. A plant that has been transplanted long enough to extend roots outside the original root zone at the time of planting to the surrounding soil, or has become firmly rooted in existing soils surrounding the original planting pit. 2. A plant that has been grown in a container of some type for a sufficient period of time so that it holds all the soil of the container when pulled from the container. Established plants have roots extending to the bottom of the container and should not leave significant growing-medium residue when pulled from the container. 3. A plant that has overcome transplant shock.

established shrub  See established plant.

established tree  See established plant.

estimate  See cost estimate.

estuary  The lower end of a river where the ocean tide has an effect.

ET  Abbreviation for the word evapotranspiration.

ethnobotony  The plant lore of a culture, race, or group of people.

etriolation  A condition of being pale or feeble without natural vigor.

eu- The Greek prefix (used in some botanical terms) meaning true, real, or typical.

eutrophic  Water having an excess of plant-growth nutrients that typically create algal blooms and feature high or low dissolved oxygen.

eutrophication  The natural aging process of a water body whereby eventually the basin is filled in. This water-body aging is speeded up by increase of biomass, which occurs when nutrients (especially nitrogen and phosphorus) become more prevalent in the water, promoting algae and other aquatic vegetation. Eventually in the natural process, areas silt up and become bogs.

evaporation  The change of water from a liquid to a gas in the process of vaporization as water molecules escape from surfaces to the atmosphere.

evaporation pan  Standard U.S. Weather Bureau Class-A pan (48-in diameter by 10-in deep) for estimating a crop evapotranspiration rate.

evapotranspiration (ET)  1. The process of water loss from soil by both evaporation and by
transpiration through plants growing in the soil.

2. The amount of water needed by a plant. It is the sum of the amount of water lost through the evaporation of moisture at the soil’s surface and the transpiration of the water through the plant. The daily evapotranspiration rate is used in scheduling the irrigation needs for plant material.

even-pinnate A botanical term, pinnately compound, but without a terminal leaflet; typically there is an even number of leaflets. (Compare with odd-pinnate.)

everbearing A term usually associated with berry plants indicating they bear fruit more or less the entire growing season.

everblooming Flowering more or less continually throughout the season of growth.

evergreen A plant that does not naturally lose its leaves yearly, all at once. These types of trees hold their leaves over winter or longer until new ones appear.

everlastings Plants that retain form or color when dried, often being used in dry flower arrangements.

ew Abbreviation for each way.

excavation 1. The mechanical removal or digging, piling, scraping, leveling, compacting, etc. of earth material for utilities, roads, paths, pipes, buildings, landscapes, features, large plants, etc. 2. The work or livelihood made of cutting or filling soil or rock from an area of the earth.

excavator 1. A company or person who performs excavation for their vocation. 2. Power-driven machines that dig, move, or transport earth gravel, etc.; especially a machine with tracks, a hydraulically operated arm, and a bucket at the end of its arm.

exceedance probability The likelihood of a storm occurring during any one year equaling or exceeding the rainfall rate used as a basis for the design of a storm-water drainage system.

excessively drained soil Soil in which water is removed very rapidly. These soils are porous, shallow, or steep. Optimum amounts of soil moisture for plant growth are seldom present in these soils. Irrigation is usually required.

excess joint A space between units (bricks, stones, etc.) in masonry work where more than enough mortar is placed between units, causing it to project beyond the wall face.

excess runoff 1. Surface runoff not satisfactorily accommodated by natural or planned drainage systems. 2. Any water moving from a site surface and not being detained or infiltrated on-site.

exchange time The time it takes to completely replace water in a lake or other water body at the rate of inflow.

excurrent In botanical terms, projecting beyond the apex, or a tree trunk continued to the very top, or with an apparent central axis from which lateral branches arise. (Compare with deliquescent.)

exempt meter Where sewer fees are based on water usage, this is a water meter placed on a waterline where the water will not be entering the sewer (such as for landscape use) and is exempt from being considered as water for determining sewer fees.

exfoliating A descriptive botanical term referring to a plant part (especially bark) peeling off in thin strips or sheets.

exfoliation 1. Peeling, swelling, curling up, or scaling of a surface. 2. The loss of leaves from a plant.

EXIST. Abbreviation for existing.
existing conditions

existing grade  The surface of a site prior to construction efforts of cutting or filling any of its area.

existipulate  A botanical term meaning without stipules.

exocarp  The outermost layer of the pericarp of the fruit from a plant (such as a cherry or peach).

exogenous  A botanical term describing something that originates externally.

exotic  1. In horticulture and ecology, this refers to organisms that are introduced into an area (by wind, ocean current, water drainage, birds, or humans) other than that which they are considered native. This may apply to plants, animals, bacteria, all living things. 2. A plant or animal species that has been intentionally introduced by human intervention, that does not naturally occur in a region. 3. A plant from a foreign part of the world. It is not indigenous and not capable of prolonged survival under local climatic conditions without aid or protection.

exp.  Abbreviation for expansion.

expanded metal  Metal mesh made from a steel plate and sometimes twisted between openings to provide roughness or traction (e.g., for walking upon, etc.).

expanded slate  Slate enlarged and made porous by heating. This material is lightweight and sometimes used as an aggregate where weight is critical. It is often used in soil mixes for roof structures to limit weight loads.

expansion bolt  A bolt in an expandable sleeve that is inserted into a material (concrete, drywall, brick) until the sleeve is flush with the surface. The bolt is then screwed and tightened into the sleeve, causing it to expand and be held tightly in place. These types of bolts are useful in anchoring items to existing masonry, concrete, etc.

expansion joint  A joint in paving that is filled with a material that can expand or compress as
the paving on either side expands or contracts due to heat, cold, or loads. This prevents paving from cracking or damaging structures it abuts.

**explanate**  A botanical term meaning spread out flat.

**exposed-aggregate finish**  A finish of concrete where rock embedded in the concrete can be seen on the surface. The aggregate can be mixed in concrete before pouring or sprinkled on its surface and lightly pounded into green concrete. Before the concrete sets, the concrete film on the rock must be washed off. This is usually accomplished with a spray nozzle on a hose.

**exserted**  In botanical terms, protruding out of (e.g., the stamens out of the corolla).

**ex-situ**  Something out of place or off-site. It can refer to groundwater or earthen material removed or hauled off. It may also refer to the propagation and care of rare plants on a site or area where they are not native.

**ext.**  Abbreviation for exterior.

**extension agency, cooperative extension, county extension service, extension service**  In the United States, an agency in each state that has the responsibility of providing information to citizens of its local state and county regulations regarding agriculture, soil conditions, historic climatic conditions, expected plant diseases and remedies, etc.

**external grip**  A reference to the type of attachment on the outside of a pipe for a machine to pull the pipe underground.

**extra**  An item or task in construction not a part of the original agreement and usually calling for extra compensation.

**extrastaminal**  A botanical term meaning outside of the stamens.

**extrorse**  In botanical terms, turned outward, or facing outward. (Compare with *introrse*.)

**extruded concrete edger**  A linear piece of concrete extruded from a machine used as an edge between landscape ground finishes (i.e., lawn, rock mulch, ground covers, and bark mulch).

**eye**  In botanical terms, an undeveloped growth bud capable of producing a new plant or more growth.

**eyebolt**  A bolt with a head that forms a circle with a hole for accepting wire, rope, hooks, chain, etc.

F 1 hybrid In botanical terms, a first generation hybrid obtained by artificial cross-pollination between two dissimilar parents, each from a pure line or race, and each bearing hereditary factors.

F 2 hybrid or F 2 generation In botanical terms, the second generation from a cross, usually obtained through self-pollination within F1 hybrids; not expected to be true to the form of their parents.

FAB Abbreviation for fabricate.

faboid A botanical term meaning bean-like.

façade 1. A building's exterior face. The exterior wall of a building exposed for public view. 2. That portion of any exterior elevation on a building or structure extending from ground level to the top of the parapet, wall, or eaves and including the width of the building elevation.

face 1. Any exposed surface. 2. The widest surface of a board. 3. The surface of a hammer used for pounding nails. 4. The act of placing one building material over another, usually to improve the finished look.

faced A building material surfaced with another material to improve its finished look, or to make it more durable.

face stone Stone used on a surface exposed to view.

facia See fascia.

facing brick or face brick Brick made with attention given to its aesthetic appeal.

Fahrenheit (F) A measurement or scale of temperature in which boiling water occurs at 212° above 0 and freezing of water occurs at 32°F. The temperature in F degrees may be converted to centigrade (Celsius) by subtracting 32 from the Fahrenheit temperature value, then multiplying by 5, and then dividing by 9.

fair-faced brickwork A tidy, clean-looking surface of brickwork.

fairway The usually manicured lawn area between the golf tee and the green with its hole.

fairy ring A fungus causing dark green rings in lawns caused by mushroom-like fungi and spreading in a circular ring that enlarges to sometimes several yards (meters) across.

falcate In botanical terms, curved like a hand, sickle or hawk's beak.

fallout shelter A structure, usually below grade, for use as protection against radioactivity in the event of a nuclear blast or accident.

fallow 1. Agricultural cropland allowed to be idle during the growing season to restore productivity through the accumulation of water, nutrients, or both. 2. Description of land not planted for a season. 3. Plowed land.

family In plant classification, a grouping of related plant genera that are distinctly different from other genera. As a group of related plants, they form a category ranking in the plant classification system (taxonomy) that is a subcategory of an order, and ranks between it and the genus.
(a subcategory of it). A plant family category is most often made up of several or many genera (in some cases it may contain only one genus and species). Examples of common plant families are the rose family and the pea family. See also taxon.

**FAR**  
Abbreviation for floor area ratio.

**farinose**  
A botanical term meaning covered with a meal-like powder.

**Farm Bureau**  
A U.S. nonprofit organization for farmers, often with information about assistance with growing plants, etc. They have chapters in every state and some counties.

**fascia, facia**  
A flat horizontal member usually covering and attached to other structural members, as on the eave of a roof.

**fasciate**  
A broad, flattened stem.

**fasciation**  
A growth defect causing a flattening or spreading of a stem.

**fascicle**  
A botanical term meaning a close cluster or bundle.

**fascicled**  
Growing in bundles or tufts.

**fastigiate**  
1. A plant with upright, erect branches; narrow at the top or somewhat columnar, but narrower in form. (Compare with round, columnar, weeping, oval, broadly spreading, upright spreading, pyramidal. See also illustration.) 2. A description of plant parts crowded close together, more or less parallel, and most often erect.

**fastigiated (branches)**  
In botanical terms, close; parallel.

**fast track**  
Construction being undertaken while design is still being finalized.

**fatigue**  
In construction materials, the repeated application and removal of loads or pressure on a metal or other material causing a structural change that can lead to cracks or failure.

**faucet or water tap**  
A water outlet valve operated by turning a handle.

**fc**  
Abbreviation for footcandle.

**FCAP**  
Abbreviation for fluorochrome arsenate phenol.

**FD, fd**  
Abbreviation for floor drain.
feathering  This often means to slightly change. Two edges not flush often need feathering. Shutting a valve off slowly, or turning it on slowly can be feathering.

fecal  Relating to, pertaining to, or constituting feces.

fecundity  The potential reproductive capacity of a plant, taking into consideration the number of viable seeds produced.

feeder roots  These plant roots are mostly within about 12 to 18 inches of the soil surface and absorb most of the nutrients and water for a plant. They are relatively short lived. See also anchor roots.

fees simple  Land ownership encompassing all property rights, including the right to develop the land.

feet of head  One foot of head is equal to the pressure at the bottom of a column one foot tall. That pressure expressed in pounds per square inch is 0.433.

feet per second  In reference to pipes, ditches, or rivers, the speed (velocity) that water flows.

female  A pipe fitting or device that either has inside threads or an inside socket for acceptance of a male end; used for the connection of pipes or devices.

female plant  A plant that produces fruit or seed without producing pollen.

female thread  A thread inside a fitting, plumbing fixture, sprinkler head, valve, etc.

fen  A freshwater wetland on low ground dominated by herbaceous and shrubby vegetation. The soil is usually organic peat, and it is partly or totally covered with water.

fence  An upright enclosure or barrier, such as wooden posts, wire, iron, etc., used as a boundary, means of protection, privacy, screening, or confinement, but not including hedges, shrubs, trees, other natural growth, or landforms.

fenestration  An opening or openings in a wall.

fermate or ferbam  Ferric dithiocarbonate used as a fungicide.

fermentation layer  The layer of the O horizon where most decomposition takes place. See Oe layer. It is comprised of unrecognizable organic material physically disintegrated into pieces and decomposing.

ferns  In botanical terms, plants without flowers or seed, and having fronds.

ferrous metal  Metal having iron as the principal element.

ferruginous  A descriptive botanical term referring to a plant part with a rust color.

fertile  1. Regarding soils, see fertility. 2. A plant bearing functional reproductive structures capable of producing seeds.

fertility  With regard to soils, the ability of a soil to sustain plant life. A soil that is fertile for one plant may not be fertile for another plant. Fertility is generally thought to encompass only the nutrient content of the soil. But, in reality, soil fertility (its ability to sustain plant life) includes drainage, physical condition, aeration, acidity or alkalinity, moisture, presence of any diseases and pests, toxic substances, and depth to a solid surface, etc.

fertilize  1. The process where pollen is applied to the female portion (pistil) of a flower, allowing for the formation of seed. 2. To apply nutrients (naturally or by human intervention) to a plant or the ground in proximity of a plant's roots for use by the plant.

fertilizer  In landscape work, material or chemicals that supply needs (other than air, water, space, and stability) of plants in the soil. The primary nutrients of most fertilizers are nitrogen.
(N), phosphorus (P), and potassium (K). They are usually listed on containers of fertilizer in the foregoing order as a percentage of each (i.e., 5-10-8 or 5% nitrogen, 10% phosphorus, 8% potassium). See also secondary nutrients, complete fertilizer, and micronutrients.

fertilizer analysis The breakdown usually labeled on fertilizer products showing the minimum percentages of nutrients included.

fertilizer burn This is a burning or wilting of leaves caused by salts commonly found in fertilizers (especially nitrogen fertilizers), which changes osmotic pressure in the soil thereby preventing water from entering roots. Leaching salts from the soil with excess watering can move the salts from the root zone. Fertilizers have a salt index number that can be helpful in determining the amount of fertilizer that can be applied without excessive salt application.

fertilizer ratio The amount of nitrogen (N), phosphorus (P), and potash (K) present in a fertilizer by percentage. It is usually listed as three numbers always in the order of N, P, K.

fertilizer spike A hardened fertilizer in the shape of a spike that can be pushed or lightly pounded into the soil. Concentrations at the spike can sometimes burn roots.

fertilizer tablet A hardened fertilizer in the shape of a large tablet (or pill) that can be buried in the soil. Concentrations at the tablet can sometimes burn roots. It is meant to slowly decompose and leach into the soil where it can feed roots.

festoon A decorative chain, strip, or banner hung between two points, or a festive pendant hung from a point, etc.

fetch The distance of water surface across a water body. This is an important factor in determining wave sizes.

fetid An offensive odor.

fiberboard A board made of glue and wood chips formed into sheets.

fiberglass reinforced pipe A pipe fabricated from glass fibers and resins for durability and strength.

fiber optic A communication cable comprised of glass or plastic fibers with protective cladding, strengthening material, and an outside cladding. Lasers or diodes transmit light through these fibers. They are better for communication cables because they do not have electromagnetic interference problems or grounding problems, they are small in diameter, lightweight, and have a large transmission bandwidth. These may be encountered when digging underground, and it is important to locate them before digging commences because they are expensive to repair and more expensive to compensate for any necessary costs associated with loss of service. (Damaged large lines have been known to be expensive enough to put a reputable excavation or landscape company into bankruptcy, even with insurance.)

fiber-reinforced concrete Concrete with fiberglass filaments mixed in to add strength and resistance to cracking.

fibrous In botanical terms, made up of fibers, or thread-like parts.

fibrous concrete Concrete having fibers in its mix, to reduce its weight and improve its tensile strength.

-fid A botanical suffix meaning deeply cut.

fiddlehead The unfurling of a fern crosier.

fiduciary An overseer or one in a position of trust.

field capacity The amount of water held in soil when gravitational force on the water equals the retentive force. After saturation, the soil pore
spaces are filled with water, but the larger pores drain due to gravity and the smaller pores are left with water retained. Field capacity is determined by the amount of water in the soil or the moisture condition of the soil at that point. Expressed as a percentage, it may be calculated by subtracting the oven dry weight of a soil sample from the wet weight of a soil sample, and dividing that difference by the oven dry weight of the soil sample.

field check 1. To observe or measure on-site.

field drain A buried, perforated pipe used to drain an agricultural field.

field grown A term referring to nursery stock grown directly in soil in the field as opposed to being grown in containers.

field order A minor change in construction work not increasing or decreasing the cost to the owner.

fieldstone 1. Loose rock found in soil or on its surface. 2. Flat or rectangular rock easily placed and fit in masonry.

fieldwork Efforts not in an office, but outdoors, or especially on a site.

filament In botanical terms, the thread-like stalk of an anther or stamen.

file A metal handheld tool with ridges, or small teeth, useful in feathering or smoothing metal, plastic, wood, etc.

filiform In botanical terms, thread-shaped, very slender, or stringy.

fill With reference to excavation work, the placement of soil or rock material.

filler A small aggregate used to improve the wearing surface of an asphalt coating.

filler coat A primer paint coat.

fillet 1. A slender band, square in section, used as ornamentation. 2. A narrow space, concave between two surfaces.

filling In work related to land, the depositing on land whether flat or in trenches or holes, whether submerged or not, of gravel, earth, or other materials.

fill pump A pump that supplies a tank with water.

filter 1. In irrigation this is a device that removes debris or small particles of soil from flowing water to prevent irrigation devices (i.e., heads, emitters, etc.) from clogging. They must be cleaned periodically. Most of them are cleaned manually, but there are a few that can be cleaned automatically from the sprinkler controller. 2. In landscape ecology, this is a penetrable change in the landscape that causes a change in the numbers or amounts of output of organisms, or materials that penetrate the landscape change. The change in landscape may be a road, a clearing, a rocky area, a forested corridor, etc.

fimbriate In botanical terms, fringed.

fimbrillate A botanical term that is the diminutive of fimbriate.

final grade See finish grade.

final plan or finished plan A map, layout, or construction design to scale and ready for implementation of the designed project.

fine grade 1. The act of grading, raking, etc. to prepare a finished landscape surface, usually in preparation for sodding, seeding, planting, or placement of surface mulch. 2. The finished surface of a ground ready and prepared for seed, sod, mulch, or plant material.

fines The by-product of rock processing, being fragments of rock from powder size to sand size.

fine sand The portion of sand with particles 1/500 to 1/250 in in size.

fine-textured soil A soil containing 35% or more clay, also known as heavy soil.
finish carpentry

finish carpentry The application of wood trim to structures, as well as the installation of doors, windows, etc.

finish grade or finished grade 1. The final grade, slope, shape, and elevation of all surfaces (lawn, walks, patio, etc.) at the completion of an outdoor project. This may be the surface of sod, soil, mulch, pavement, a wood deck, etc. 2. The smooth completed grading of soil prior to seeding, planting, sodding, etc.

finishing Smoothing, brushing, troweling, treating, etc. to give a green concrete surface its final appearance.

finishing machine A motorized machine used to give a finished surface to green concrete.

finishing nail This is a nail with a small head just slightly larger than its shank. The head is slightly rounded at its edges, or is a consistent diameter from the top of its head surface to its shank (this is a very short distance compared to its shank length). It is used where it is not desirable for a nail head to show on the finished material. It can be driven into material with a punch or the force of a mechanical nail gun so that it can be covered with similar-looking material to that which it is nailed into so that its location is concealed.

fir A softwood useful in the framing of structures.

fire blight Disease common to flowering pears, pyracantha, and other plants. It is identified by blossoms and leaves shriveling, turning a blackish brown, and dying. Bark becomes dark brown and may form cankers. For preventing, plant resistant varieties, avoid poorly drained soils, and avoid too much fertilizer. Cut off dead twigs 1 ft below affected area and discard (do not use in compost or mulch).

firebrick or fired brick A ceramic brick containing a high percentage of silica capable of withstanding high temperatures and useful in chimneys, bar-b-que structures, etc.

fire hazard area Land where, due to slope, fuel, weather, or other fire-related conditions, the potential loss of vegetation, habitat, life, and property from a fire necessitates special fire protection measures.

fire hydrant A point of connection for firehose and a valve to turn the water on and off.
**fish meal** A complete organic fertilizer made of dried, ground fish or fish parts containing 8 to 10% nitrogen, 4 to 9% phosphoric acid, and 2 to 4% potash.

**fishplate** A wood or metal piece attached by nails or bolts to the ends of two abutting ends of lumber.

**fish tape** A long, thin, stiff metal strip used to extend through a conduit or sleeve and then attach to an electrical conductor to pull it through.

**fistulose, fistulous** A botanical term meaning hollow.

**fitting** Pipe connectors (devices for connection of pipes) such as elbows, tees, couplers, reducer bushings, unions, etc.

**flanged joint** A pipe joint with an extended ring at its end or ends allowing it to be bolted to a companion ring (flange) of another fitting. It is prevented from leaking by use of a gasket between the flanges.

**fix** With regard to soils, formation of a compound that is stable, stationary, and available to other organisms or plant roots (e.g., bacteria that fix nitrogen). See rhizobium and nitrogen fixation).

**fixation** The process of changing a soluble or exchangeable nutrient form to a relatively insoluble form, which may have a negative effect on plant health and may even cause death.

**flabellate** A botanical term meaning fan-shaped.

**flaccid** A botanical term meaning weak, soft, flabby, or hardly, if at all, capable of supporting its own weight.

**flag** 1. A synonym of wilt. 2. A common name for plants with sword-like foliage such as iris. 3. Any fabric or other flexible material attached to or designed to be flown or dangled from a flagpole, staff, or structure. 4. The act of flagging a sprinkler system with small flags (sprinkler flag) on wires or plastic staffs, or the flags themselves. 5. See flagstone. 6. A symbol or symbols represented on material, or even on a plain piece of material, usually triangular or rectangular, that represents an entity (country, state, company, etc.), advertises a product, or is hung in celebration of a holiday, etc.

**flagelliform** A botanical term meaning very slender and elongate, with the form of a flagellum.

**flagging** 1. The layout of a sprinkler system on a site with small flags at each head location. 2. A flagstone pavement or the setting of flagstone.

**flagpole** A freestanding structure or a pole attached to a building or to the roof of a building and used for the purpose of displaying flags.

**flagstone, or flag, or flagging** A flat stone, about 1 to 6 in thick, used in making patios, walkways, or stepping stones.

**flambeau** A luminaire mimicking a flaming torch.

**flange** A projection or ring on a shaft or pipe.


flange union

flange union  A flanged fitting in two pieces, each of which is screwed onto the end of a pipe and then bolted together.

flap valve  With regard to piping, a check valve made of a hinged disk that permits flow in only one direction.

flashboards  Boards used to control water levels that may be removed.

flashing  A thin waterproof material to prevent drainage and seepage between a roof and a wall or over exterior door openings and windows. It extends under shingles or roofing and is bent to cover an intersection as with another surface at 90° (e.g., a wall or parapet).

flat  In the nursery industry, hollow boxes or trays fitted with small containers for raising plants from seed, cuttings, or sets.

flat grain  A reference to lumber that is cut from a tree with its end’s shortest dimension nearly parallel to the growth rings. This produces a grain in the face (largest dimension) of the board that is marbled and with lines changing direction. Looking at the end of the board one will see grain lines perpendicular to its shortest dimension, which is parallel to its widest flat side. See also vertical grain.

flathead wood screw  This screw has various indented shapes in its head for accepting a tool (screwdriver) to drive (turn) it into wood. The top of its head is flat with either a threaded taper from its flat-head surface to its more slender pointed shank, or it is a slender shank of a constant diameter continuing to its threads where it then tapers with threads to its point. Its tapered head allows it to be drawn flush with the surface it is driven into.

flat washer  See washer.

flatwork  Concrete construction work associated with areas where concrete has more horizontal flat surface than other surfaces and usually requires a finished surface.

Flemish bond  A pattern of brick in a wall made by alternating stretchers and headers with each header centered on the stretcher immediately above and below it.

flexible diaphragm/compensating emitter  See pressure compensating emitter.

flexible liner  A material that comes on a roll, is waterproof, and is used in lining ponds or planters.

flexuous  A descriptive botanical term referring to a plant part having a wavy or zigzag pattern.

flight  A continuous run of steps without a landing.

float  1. A tool or device for smoothing a surface. 2. An apparatus in a water feature that controls the elevation of a water body and the inflow of water from an outside source by means of a floating device that raises and lowers and opens or closes the water supply line.
float check  The float used in an atmospheric vacuum breaker, preventing water flow when water pressure drops.

floating foundation  A thick, reinforced concrete slab used instead of wall or column footings or foundations to support and distribute the load of a structure to a soil having low-bearing capacity. It is also called a raft foundation or mat foundation.

float switch  An automatically actuated switch turned off or on by a float on a liquid surface.

float valve or float-controlled valve  A valve controlled by a float riding on a liquid surface allowing water to flow when it drops to a preset level and stopping water flow when it rises to another level. These are often used in water features.

tommentose  In botanical terms, composed of or bearing tufts of woolly or long, soft, fine, loosely arranged, and more or less tangled hairs. (Compare with tomentose.)

flocculate  The aggregation of fine particles together. This is important in clay soils for the colloidal portions because they fill the pore spaces preventing aeration, gaseous exchange, or penetration of roots or water. Liming acid clay soils and the freeze-thaw process tend to encourage clay’s ultramicroscopic particles to cling together in larger aggregates or crumbs allowing for freer water and airflow, etc. This texture can be destroyed by working the soil while wet, repeated walking over the soil, or equipment driving over the soil.

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floriculture

or crowded flower head. They are individual flowers making up a large flower head. Though grass flowers and others are mostly green or brownish, they are flowers made up of florets or a floret. Examples of some other flowers containing many florets are daisies, dandelions, and thistle.

floriculture A branch of ornamental horticulture concerned with the study, cultivation, management, and marketing of flowering plants, cut flowers, or potted plants. The broadest meaning of the term includes all aspects of growing flowers.

floriferous A descriptive botanical term referring to a plant that bears flowers. It is most commonly used to describe a plant with abundant flowers.

florist One who deals in cut flowers.

floristic system The botanical classification system. Under this system plants are categorized into divisions, each of which is subdivided into smaller and smaller groups arranged according to relationships and similarities or dissimilarities among plants. See also botanical name.

flow The movement of fluids through pipe, fittings, valves, or other devices or equipment generally measured in gallons per minute (gpm), gallons per hour (gph), cubic feet per second (ft³/s), cubic meters per hour (m³/h), liters per minute (l/m), or liters per second (l/s).

flow control A device, usually on an automatic valve, which allows for manually increasing, decreasing, or shutting off water flow potential.

flower 1. A blossom; inflorescence. It is the reproductive structure of flowering plants (angiosperms, Greek for seed in a vessel). Complete flowers are comprised of stamens, pistils, petals, and sepals. An incomplete flower lacks one of these items. The illustration shows a complete flower; though each flower is unique in some way, this depicts the major components as they may be found. 2. To bloom.

flower bed An area utilized for the planting of flowers.

flower bud A bud on a plant that will produce a flower. (Compare with leaf bud.)

flow pressure See working pressure or dynamic pressure.

flow range In irrigation, the minimum and maximum water flow required for an automatic valve to turn off or on.

flow sensor A device that monitors or senses the water flow past a given point.

fluochrome arsenate phenol (FCAP) A waterborne salt preservative for wood. Wood must be pressure treated for this preservative to be effective. It is highly recommended by experts as it is odorless, clean, does not leach, and its color can be masked easily by painting or applying a solid color stain when dry.

fluorescent light A luminaire that gives off light by lighting a phosphor coating.

flush 1. Two surfaces even with and immediately adjacent to one another, neither extending beyond the other. 2. To wash out, as with a filter on irrigation systems. 3. In sprinkler or drip irrigation systems, the process of running water through the lines before attaching heads, valves,
emitters, or other devices that could become clogged with debris (rocks, sand, etc.) left in piping systems during construction fitting (especially when work has been done in a trench).

**Flush-cut joint or flush joint** A joint in masonry work where the joint of mortar is made flush with the brick or masonry unit face. This is not often used out-of-doors, especially in temperate climates, as moisture tends to eventually enter the joints and cause damage when freezing.

**Flush-head rivet** A rivet that is placed in material with its head countersunk.

**Flushing** Cleaning out debris and sediment from pipes by the force of moving liquid, usually water.

**Flush plate** The small metal, plastic, or wood finishing covering an electrical receptacle on a finished surface with holes if necessary to allow switches, or points of plug in, etc.

**Flush valve** A valve in an irrigation system, water feature, etc. that can be opened to run water backward through a filter to remove (flush out) debris that has accumulated during normal use.

**Fly rafter** A rafter in the overhang of a gable-type roof.

**Foamed concrete or foam concrete** A relatively lightweight concrete made by adding foam or gas while still in a liquid state.

**FOB** Abbreviation for free on board. It means the price of an item not including the freight to ship it.

**Focal point** A noticeable area or spot of attention, activity, or attraction. It may be such a spot because many paths, views, rays, walks, etc. converge or it is of a different color, texture, height, width, brightness, etc.

**Fodder** Tracing paper (translucent paper) usually sold on rolls of various lengths and widths in a yellowish or whitish color.

**Foetid** An offensive odor.

**Fogger** A device that creates a water fog when in operation. These seem to be most often used indoors in greenhouses.

**Fogging** A term sometimes used to describe a sprinkler irrigation system that has too high of an operational pressure (dynamic pressure) causing the individual sprinkler heads to not only spray water but to disperse some water to the air as a mist (fog). This is a detrimental situation because water in the form of mist is most often lost to wind or evaporation.

**FOK** Abbreviation for free of knots.

**Folding rule** A rigid ruler with measuring units, and joints for folding it to a small size, allowing convenience in hand-carrying and storage.

**Foliaceous** A botanical term meaning leafy in texture.

**Foliage** Plant leaves. This term usually refers to the leafy material of the entire plant head or sometimes a portion of leaves of a plant or the leaves of many plants.

**Foliar** Of or relating to leaves.

**Foliar feeding** Supplying nutrients to plants through their leaves. This is a benefit, but not a substitute for soil nutrients. It is sometimes used for immediate results.

**Foliar fertilizing** The application of fertilizer (usually mixed with water) to plant leaves in a fine spray.

**Font** A style of lettering.

**Food chain or web** The interconnected group of plants and animals in an ecosystem. One living organism is food for another, which is food for another, which is food for another, etc. Contaminated food may have a chain reaction.
foot

foot, (ft), (') English or U.S. length equal to 12 in, or 0.3333 yd, or 30.48 cm.

footbridge Any bridge built and intended for pedestrian use.

foot-candle (fc) A measure of illumination on a surface that is everywhere 1 ft from a uniform point source of light of one candle and equal to 1 lumen per sq ft. It is equal to 10.76 lux. Natural outdoor light intensity may vary from 10,000 fc or more to 2,000 fc or less depending on cloud cover, time of day, obstructions, and time of year.

footing In terms of construction, that portion of a structure placed at the lowest part to prevent settling; usually under a foundation, post, wall, pier, or column and enlarged (especially wider) so as to bear and distribute the load from above by dispersing it to the earth material it contacts. It is usually wider than the portion of the structure attached to its upper surface for stability and has increased area to transmit weight (load).

footpath A walkway.

footprint With regard to construction and land, the horizontal area of a structure or element as seen in plan, measured at the outside of all exterior portions where it meets the ground. It is formed by an outline where a structure or any object meets the ground.

foot valve With regard to pumps, a valve that is placed on the end of a suction pipe and only opens when the pump is in operation. It is only needed when the center of a pump's suction entrance is higher than the water source.

forb A nongrassy plant that does not form wood. It may be an annual, perennial, or biennial. Often used to describe plants of meadows or prairies.

force account Construction work on a time-and-materials basis that may have a limit set by money available.

forced bloom See forcing.

forcing Bringing flowers, vegetables, and fruits to maturity out of season.

forecourt An entry space.

foreman A specially trained individual that leads, works with, and is responsible for the actions of a crew.

forest 1. A biological community dominated by trees and other woody plants covering land. Also, any large area where trees are predominant. 2. An area designated by a governing agency as a forest.

forestry Generally, a profession involved with the science, business, and art of creating, conserving, or managing future use of forests.

forklift truck A motorized vehicle with two extended steel prongs capable of lifting and moving heavy materials or objects.
form  Boarding or sheeting of plywood in place temporarily to hold a shape for poured concrete, etc.

formal garden  An outdoor area for human use, enjoyment, leisure, aesthetic pleasure, etc. comprised of such elements as plants, benches, patios, decks, walks, water features, fountains, etc. organized into symmetrical shapes or geometric patterns or forms (definitely having a human influenced and perhaps even engineered appearance).

formal plant  A plant that is dense, rigid, or compact or one that can be pruned to shape. See topiary.

formaldehyde  This toxic gas is sometimes used as a soil fumigant. It is colorless, suffocating, tear provoking, and deadly to plants.

form nail  A double-headed nail that can be pounded into a form, etc. to its first flange or head and then later be pulled out easily with a claw hammer.

form release agent  A substance sprayed in forms to facilitate easy removal with less sticking or chance of damage to the concrete when removed.

form stripping agent  See form release agent.

foundation  1. The masonry or concrete portion of a structure usually below surface grade that transmits weight (load) from the structure above. 2. The earthen material or rock upon which a structure transmits its load and depends upon for stability.

foundation bolt  A usually L-shaped bolt set in concrete or masonry on a foundation tip with its threaded end exposed pointing upward for fastening materials, structures, or equipment.

foundation planting  Individual shrubs or massing of shrubs or other plants at the base (foundation, where they meet the ground) of buildings, or structures.

fountain  1. An artificially manufactured place where water comes forth for aesthetics (see also decorative fountain) or for drinking (see drinking fountain). 2. The source or point from which something is supplied. 3. The device or structure from which an artificial source of water arises. 4. A natural spring of water coming from the earth.

foxfire  A greenish, phosphorescent glow produced by a fungus that infects the roots of oak trees or rotting wood.

foxy timber  Structural-sized wood members having portions with a reddish color indicating the beginning of possible wood decay.

fpm  Abbreviation for feet per minute.

fps  Abbreviation for feet per second.

fpt  Abbreviation for female pipe thread.

fragipan  A hard, dense soil layer that has been compacted to a point that roots cannot penetrate it and water cannot penetrate it easily.

fragmentation  The process by which the landscape with its various spatially identifiable habitats is divided into smaller and smaller areas, patches, or corridors as a result of land use development, or natural processes.
frame

frame  An assemblage of wood and/or steel supports as structural members.

frame construction  Structures made of wood or steel members providing form and support for all sheathing of the structure.

framework  See frame.

framing  1. See frame. 2. The actions of constructing the framework of a structure.

framing anchor  A thin steel device with holes for bolts, nails, or screws, shaped to hold or attach to wood members at their joints as a way of joining them together.

framing clip  See framing anchor.

frass  Excrement from insects.

freeboard  1. The distance between the expected maximum water level and the top of a tank. 2. In water features, the vertical distance between an expected high water level of a water body and the elevation at which it will overflow.

freeze damage  1. In irrigation work, damage to pipes, valves, heads, etc. due to water being left in them and freezing. The expansion of the water when it freezes will even break metal pipes and valves if they are full of water. An insignificant amount of water in pipes can freeze without damage to them. In the temperate zones piped irrigation systems should be drained before freezing temperatures arrive. 2. With regard to plants, any damage to them caused by temperatures below 32°F (degrees C, the point at which water freezes). Plants can endure various amounts of cold temperatures. As the temperature drops, so does the number of plant species able to withstand the colder temperature. One should always check historic temperatures of a site and plant hardiness before specifying or planting plants.

freezeless faucet  A valve at the end of a long pipe with a handle and spigot (faucet) at its top that allows one to pull the handle up to release water from the valve. After water is turned off, the pipe and faucet drain to prevent the water from freezing and breaking the pipe or faucet.
French drain or boulder ditch  A trench filled with loose rock, rubble, or gravel for carrying away excess runoff or any excess water.

Fresno scraper  An earth scraping machine that fills with earth as it is moved, and then as it is raised on each side (on runners) releases the load.

Friable  A condition of soil when its aggregates are easily hand-crumbled to their smallest size when dry. It is normally moist but not wet, and when it is wet, it is not sticky and does not flow. It is not hard when dry.

Friction factor (Christiansen Procedure)  The coefficient used in the Christiansen Procedure to determine pressure loss in a multiple outlet system.

Friction loss  1. In general terms, the loss of pressure (reduction of gpm or cfm) or loss of water velocity due to resistance to flow from friction with the walls of the surfaces surrounding the flowing water. 2. In irrigation systems, the total amount of pressure (usually expressed in gpm) lost as water flows through the water meter, pipes, fittings, valves, and other equipment of an irrigation system. As the velocity of water flowing through the irrigation system increases, friction loss will also increase. These losses can be used to calculate the approximate dynamic (working) pressure at any given point of the irrigation system.

Frieze  In Classical architecture, the portion of the entablature between the architrave and the cornice. See illustration under entablature.

Frits  Small glass beads bound to a metal micronutrient of questionable value in most landscapes, but thought to be effective in growing citrus.

Fritted trace elements  Soft glass infused with micronutrients that slowly dissolve in soil or plant growth medium, thus releasing the nutrients slowly.

Frog  A hollow portion in a brick or block mortar face allowing for more mortar, forming a better bond and a more stable structure.

Frond  1. The leaf-like portion of a fern. 2. Any relatively large leaf.

Frontage  The length of a parcel of land adjacent to another element such as a street, boardwalk, water body, pipe, or another parcel of land.

Front-end loader  A tractor with a bucket at its front capable of holding, lifting, and moving heavy objects or materials.
frost-free days

the cause of breaking pipes and devices in outdoor irrigation systems not properly drained.

frost-free days The number of days in warm months that an area historically can expect under normal conditions to have weather not producing frost. This is always approximate, and most areas will have frost pockets freezing sooner than other adjacent areas.

frost hardy A term describing a plant capable of enduring frost and associated temperatures.

frost line The approximate lowest elevation below ground level where frost is expected or freezing actually occurs during winter.

frost pocket 1. A portion of soil that is frozen within a soil that is not frozen. 2. A low-lying area where cold air sits and frost is more prevalent than the surrounding area.

frost tender A plant that is easily damaged by frost.

fructescence The maturing or ripening of fruit.

fructify To bear fruit.

fruit 1. The ripened ovary of a seed plant and its contents. 2. The edible reproductive portion of a seed plant. 3. The process of a reproductive body of a plant ripening.

frutescent In botanical terms, becoming shrubby.

fruticose In botanical terms, shrubby.

fry Recently hatched or young fish.

fs Abbreviation for forged steel.

ft, (') Abbreviation for foot or (plural) feet.

ft2 Abbreviation for square foot (feet).

ft3 Abbreviation for cubic foot, or cubic feet. A cubic foot is comprised of 144 sq in.

ft. lb. Abbreviation for foot pound.

FTG, ftg 1. Abbreviation for footing. 2. Abbreviation for fitting.

ftng Abbreviation for fitting.

fugacious A botanical term meaning fleeting or lasting only a short time.

full-circle head A sprinkler head that distributes its water over an area in a full circle (360°). It may have a stationary spray that covers the circular area or it may be a rotating spray or stream. See rotor head, spray head, impact head.

full-open valve A valve capable of shutting off a pipe, but when open having a cross section of at least 85% the size of pipe.

full sun A term used in describing a location for a plant or the requirement of a plant to have no shade during the day; sometimes meant to describe at least 5 to 6 hours of direct sunlight.

fulvous A term used in botanical descriptions meaning tawny, dull yellow.

fumigant Smoke, vapor, or gas that can control insects.

fumigation Saturation of air or soil with smoke, vapor, or gas to control insects, pests, or fungi.

functional connectivity In landscape ecology, the measure of the degree to which a landscape element is connected for a process such as deer movements, frogs movements, or water movement.

fundula An old term for a dead-end street.

fungicide Chemicals or compounds applied to plants for controlling fungal diseases.

fungus (fungi, plural) Microscopic or small heterotrophic, plant-like organisms without
chlorophyll. They do not have roots, stems, or leaves and usually grow in dark or moist environments. Long filamentous hyphae compose this organism. These microorganisms may invade or penetrate organic materials, which brings about rapid decomposition. They are one of the few organisms that are able to decompose lignin, which is highly resistant to decomposition.

fungus gnats Small flies (Sciaridae family) whose maggots feed on fungi, plant roots, plant stems, and decaying organic matter.

funiculus A botanical term referring to the stalk of an ovule.

funnelform A botanical term meaning shaped like a funnel.

funny fittings or funny coupler or funny tee or funny elbow Those fittings with barbs on at least one end used to connect funny pipe to a sprinkler head, or a pipe fitting in a lateral line, or two funny pipes together, or three funny pipes together, etc.

funny pipe Polyethylene pipe, usually ½ in, connected with barbed fittings. This pipe was originally and currently used to connect sprinkler heads to a sprinkler system’s lateral lines.

fusarium wilt A fungus that kills seedlings.

fuscous A term used in botanical identifications and descriptions referring to a gray-brown color.
fuse

A device in an electrical system protecting against an overload of current that cuts off electrical flow by melting a gap (blowing) when it receives excess current. Fuses cannot be reused when blown.

fusiform In botanical terms, spindle-shaped (both ends taper from a wide middle).

fxm Abbreviation describing the ends of attachment of a pipe system component (esp. fittings); female by male.
g Abbreviation for gram(s).

ga. Abbreviation for gauge.

gabion walls A retaining wall made of rectangular containers (baskets) fabricated of heavily galvanized wire, which are filled with stone and stacked on one another, usually in tiers that step back with the slope rather than vertically.

gable The end of a pointed roof with two sloping sides of equal length meeting at a ridge point.

gable roof A roof having two sides of continuous slope meeting at a ridge point.

gain A groove or notch cut into one wood member to receive another wood member shaped to fit.

gal Abbreviation for gallon(s).

galeate Helmet shape.

gall Abnormal growths on leaves, stems, trunks, or branches usually caused by an infestation of insects, fungi, bacteria, or viruses.

gallery 1. A long, covered area used as a corridor. 2. An underground passageway usually for servicing. 3. The highest, usually enclosed, seats in a stadium.

gallon English or U.S. capacity measurement comprised of 4 quarts, 231 cubic inches, or 3.785 liters.

gallon can or gallon container A loose term describing the size of a plant container (usually plastic or metal) that varies in volume from \(\frac{1}{2}\) to 1 gal.

gallons per minute The number of gallons per minute passing by a point of reference. This is the usual U.S. (English) volume flow measurement for sprinkler irrigation calculations in pumping, pipe sizing, and irrigation regulation and distribution devices (sprinkler heads, emitters, meters, valves, etc.).

gal./min. Abbreviation for gallon per minute. See gpm.

GALV, galv Abbreviation for galvanized.

galvanic corrosion The decomposition of metals through electromechanical action (electrolysis) in the presence of two dissimilar metals (galvanized steel and copper or brass, etc.) in contact and a compound capable of carrying electrical current such as water. This action causes decomposition and corrosion in metals.

galvanized A metal object covered with zinc to protect it from rusting.

galvanized iron Zinc-coated iron for use where there is exposure to water.

galvanized pipe Steel or iron pipe that has a zinc coating to resist corrosion. This is especially helpful in preventing corrosion when the exterior of a steel pipe is to be exposed to water, soil, or weather. The fittings for this type of pipe are normally threaded, but may also be compression fittings.

game In the ecosystem, animals harvested from the wild by hunters.

gamopetalous A description of a flower with united petals.
gamophyllous

**gamophyllous** A botanical term identifying a plant with *connate* leaves, petals, etc.

**gamosepalous** With the *sepals* *connate*, at least toward the base.

**gap grading** A measurement of particle sizes in earthen material where intermediate-size particles are completely lacking. See also *continuous grading*.

**garage** A building, or a portion thereof, used or designed to be used for the parking and storage of vehicles.

**garden** 1. An ornamental outdoor landscape. This type of garden is almost always near a building or in a city and is highly maintained. It may be a *formal garden* or *informal*. 2. A landscape near a building or, indeed, any land space that is enjoyed. It is a place used in leisure enjoyment and/or to enjoy viewing. It is pleasant to the eyes and gladdens the heart. “God Almighty first planted a garden; and indeed it is the purest of human pleasures; it is the greatest refreshment to the spirits of man; without which buildings and palaces are but gross hand-works . . .” (Francis Bacon, *Of Gardens*, 1625 A.D.) 3. A piece of ground for growing edible plants, especially vegetables, but also fruits, or any plant with edible parts. It is usually of a small size and capable of supplying some food for a single family or a neighborhood.

**garden apartment** An apartment building located on a lot, either singly or together with other similar apartment buildings, generally having a lower density of population than other apartment complexes and having substantial landscaped or natural open space adjacent to the dwelling units.

**garden hoe** A tool with a long handle and a small metal plate at its end at nearly a right angle to it that is useful in weeding, making furrows, etc.

**garden hose** The common hose used for attachment to a hose bib, or water spigot, for distribution of water, usually in \( \frac{5}{8} \) or \( \frac{3}{4} \) in.

**garden rake** A long-handled tool with a 12 to 18 in head of tines useful in raking up rocks, clods, debris, etc.

**gargoyle** A water spout or drainage opening projecting from a roof, or the *parapet* of a wall or tower, or a fountain opening on a wall, with the essential element being a human, an animal, etc. carved into a rather odd figure.
garland  A structural ornamentation in the form of a border, wreath, or a festoon of leaves, fruits, vines, or flowers.

garland drain  A ditch or trench of small proportions used to prevent runoff or other surface waters from reaching an excavation.

garth  An open courtyard area surrounded by a covered walkway or building. These spaces historically were often grassed areas.

gas concrete  Concrete made lightweight by generating gas in its mix before hardening.

gasket  In piping (cast-iron, steel, some PVC, etc.), a rubber ring or other resilient material used in coupling together some types of pipes to prevent leakage.

gasketed pipe  See gasket.

gas main  A pipe from a gas utility company that supplies gas to the consumer's pipes.

gate  A portion of a fence, wall, or other barrier that may be opened to allow passage.

gate valve  A valve that has a wheel-type handle for turning off or on by raising or lowering a gate in the path of fluid flow. Gate valves have a brass to brass seat and are not recommended for frequent use.

gateway  1. A narrow opening for passage.  2. An entrance to a city, community, valley, or other large-scale space or an area of ecologically changed landscape.  3. An opening in a wall, fence, or other vertical man-made barrier.  4. An entrance gate that, along with the barrier of which it is a part, offers privacy, protection, ornament, or seclusion.

gauge, gage  1. A number designating the thickness or size of wire, metal, screws, etc.  2. A template showing a thickness (or depth) for a material layer or depth (sand, trench, asphalt,
gauge pressure
eq_

3. The portion of a slate, shingle, etc. that is exposed after placement in roofing.

gauge pressure Water pressure minus the value of atmospheric pressure at a particular elevation above sea level.

gazebo A small, free-standing, roofed structure open on all or some sides, usually placed in a landscape or garden for seating or standing out of sun or rain, for observing appealing views, or for its aesthetic value.

gear-driven head In irrigation, a rotating spray or stream sprinkler head operating via a set of gears in the head. Their operation is usually smooth and quiet as opposed to the noise created by an impact head. See also rotor head.

geminate A botanical term referring to plant parts in pairs.

genera Another term for genus or the plural of genus.

general contractor The contractor directing and responsible for a construction project. They often employ subcontractors.

general plan See comprehensive plan.

generator A machine used for converting mechanical power into electrical power.

geniculate A botanical term meaning abruptly bent or twisted.

geniculum In botanical terms, having a thickened joint or node of a stem.

genus In botanical terms, a group of plants that closely resemble each other and are distinctly different from other genera. In classification it is the rank between a family and a species. A genus may have one or more species. Botanical names first give the genus then the species. For the botanical name ginkgo biloba the genus is ginkgo and the species is biloba. The gingko genus only has one species. Other genera have many species such as with prunus. Genera are established for plant material based on botanical publication in accordance with the internationally established procedures. See also taxon.

gedetic survey A survey of land where the curvature of the earth is considered in calculations. This type of survey is only necessary on very large land parcels needing precise points of controlling other surveys.

geographic information system (GIS) A program of computerized, spatially explicit, land-related information digitally stored and capable of efficient analysis, comparisons, and correlation in a computer system. The geographic data is useful in spatial analysis, and because it is rectified with specific points on the earth its interpretations can be useful in analysis. Geographic maps and special information can be acquired from a variety of sources for computer analysis. It may use topographical maps, soil maps, aerial photographs, vegetation distribution maps, etc. This information can then be used to create spacial maps for record-keeping and decision-making. GIS systems may be used to maintain maps of protected land, regulation distribution, suburban sprawl, etc.

gemorphic system A natural system comprised of an association of landforms linked together by the flow of water, air, or ice.

gemorphology The relief features of the earth.

gematropism The response of a plant to gravity. Roots tend to grow toward the center of the earth's gravity while stems grow away from it. Root growth directions are also extremely influenced by aeration, compaction, nutrient presence, etc., while stems are influenced by light. See also phototropism and tropism.
germinate  To sprout or begin to grow.

germination  See germinate.

germination rate  The percentage of seeds that can be expected to grow when properly planted and receiving adequate nutrients, light, water, etc.

GFCI  Abbreviation for ground fault circuit interrupter.

GFI  Abbreviation for ground fault interrupter.

GFRC  Abbreviation for glass fiber reinforced concrete.

GI  Abbreviation for galvanized iron.

gibberellic acid  A plant hormone used to encourage larger plants or fruits or to promote grapes without seeds.

gibbous  In botanical terms, more swollen at one place than another.

gimlet  A small tool having a sharp, threaded point used to bore holes into wood by hand.

girder  1. A large steel, wood, or reinforced concrete member supporting other structural members with concentrated loads (from beams, joists, etc.) at various points along its length.
          2. A large beam, especially one that is built of several elements.

girdle  See girdling.

girdling  1. Removal of bark completely around a branch, trunk, or stem.  2. Something tied (staking attachment, etc.) around a woody portion of a plant that has been left long enough to become embedded into the plant.  3. A condition when roots cross and grow upon one another. As they increase in size they cut off circulation and become a weak point in root structure.

GIS  Abbreviation for geographic information system.

glabrate  In botanical terms, becoming glabrous with age, or almost glabrous.

glabrous  In botanical terms, smooth; having no hairs, bristles, or other pubescence.

glacial till or boulder clay  Unstratified deposits of glaciers that usually contain mixes of clay, sand, silt, cobble, boulders, etc.; often useful in sustaining loads from structures.

gladiate  A botanical term meaning sword-shaped with a straight or somewhat curved shape.

gland  In botanical terms, a secreting surface or structure; any protuberance or appendage having the appearance of such an organ.

glandular  A descriptive botanical term referring to a plant part having secreting organs.

glass-fiber–reinforced concrete  A concrete mix with an admixture of short alkali-resistant glass fibers to give it strength.

glasshouse  See greenhouse.

glaucous  A descriptive botanical term referring to a plant part that becomes glaucous.

glaucescent  A botanical term referring to a material with a very hard surface, a glossy finish, or a surface covered with a glossy or glassy film.

glazed  A description of a material with a very hard surface, a glossy finish, or a surface covered with a glossy or glassy film.

glazing  1. The act of placing glass in an opening.  2. A glass surface for seeing through.
gliding

The application of a precious metal such as gold in flakes or leaf to a surface as a finish, or the finish itself.

global coordinate system  The network of east–west and north–south lines measured as degrees, minutes, and seconds to locate points on the earth’s surface.

globe valve 1. A valve configured with its water outlet oriented 180 degrees from its water inlet. This valve allows a pipe to continue in a straight line. 2. A valve with a somewhat round shape and a wheel-like handle capable of moving a shaft with a washer type seat to regulate the amount of flow or completely stop the flow of water, or other liquid.

globular

In botanical terms, a spherical shape or nearly so.

glochid  In botanical terms, having barbed hair, or bristles, as is common in cacti.

glochidia  A botanical term meaning hair-like outgrowths with barbs at the tip.

glochidiate  A Latin word used in botanical descriptions meaning barbed at the tip.

glomerate  A botanical term meaning densely compacted in clusters or heads.

gglomerule  A botanical term meaning a small, compact, dense cluster.

glued-laminated or glue-laminated timber  A beam, girder, joist, or other wood timber comprised of several boards (four or more) bound together by an adhesive. Each board is usually less than 2 in wide.

glue-lam  Abbreviation for glued-laminated, a type of lumber formed by glueing smaller boards together.

glume  In botanical terms, either of two empty bracts at the base of the spikelet of grass seed heads.

glutinous  In botanical terms, sticky.

go-devil  An item used to clean out pipes by placing it in a pipe near the source and forcing it through the pipe with water pressure.

golden ide  See golden orfe.

golden orfe  A fish (Leuciscus idus) native to Europe that may grow 1.5 to 2.5 ft long, gold, silver, orange, or blue, and sometimes used in water features. It is a slender, bullet-shaped schooling fish that sometimes has black dots on its head and back. It survives winters in the temperate climate, helps control mosquito larvae and snails, and can survive somewhat brackish waters.

goldfish  A small fish usually 2 to 8 in long of a brown, black, orange, gold, or white color(s), useful in water features for interest and for assisting in keeping water clean.
**golf course**  A tract of land laid out with at least nine holes for playing a game of golf; consists of greens, fairways, and hazards.

**gooseneck**  In pipe work, any section with a U shape.

**gopher**  See pocket gophers or ground squirrels.

**gouge**  A chisel with a curved blade.

**GOVT**  Abbreviation for government.

**gpd**  Abbreviation for gallons per day.

**gph**  Abbreviation for gallons per hour.

**gpm**  Abbreviation for gallons per minute.

**gps**  Abbreviation for gallons per second.

**GR**  Abbreviation for grade.

**grade**  1. The amount of slope of an area of ground surface. It is usually expressed in a percentage derived by the rise in elevation being divided by the length. 2. The action of smoothing, raking, or shaping the surface of the ground. 3. Grading 4. The elevation of a point on the ground. 5. The lay of the land, its form and shape.

**grade beam**  A foundation that carries the weight of the outside wall and extends a short distance beneath the soil to distribute the load.

**graded aggregate**  Aggregate sorted for size.

**grade line**  A staked line with indications marked for elevations referring to common datum.

**grade ring**  A concrete ring made to various thicknesses for use under a manhole and placed by itself or with others to achieve the needed elevation for the manhole cover.

**grader or towed grader**  A large, usually six-wheeled, machine (unless towed) used in earthwork for leveling, spreading, side casting, or for light stripping operations.

**grades**  In connection with drainage or the shaping of earth, an amount of slope.

**grade stake**  A stake marking a specified elevation for earthwork operations.

**gradient**  The amount of inclination or rate of slope of land surface, paved surface, pipe, etc. between two points, expressed as a constant percentage of grade. It is arrived at by dividing the vertical distance between elevations by the horizontal distance between them.

**grading**  1. In land work (excavation), removing (cutting) earth, filling, or usually a combination of both on a site. 2. Moving soil to form a shape or obtain a smoothness. 3. The classification of plant material according to quality or size.

**graffiti**  An inscription, word, figure, marking, or design that is marked, etched, scratched, drawn, or painted on any building, structure, fixture, vehicle, trailer, or other property, whether permanent or temporary, which has the affect of defacing the property.

**grafting**  In gardening, a method of propagating certain varieties of plants by removing twigs from one plant and cutting them into branches or onto root stock of another plant.

**grafting wax**  A substance used for placement on fitted parts of a new graft.

**grain**  1. A grass-like plant with a hard seed. 2. In landscape ecology, the texture of land when viewed from the air. Land with small patches makes a fine-textured landscape, and land with large patches makes a coarse-textured landscape.

**gram (g)**  The metric weight measurement of 1 or 0.035 oz.

**grandstand**  A raised area or structure allowing spectators to observe activities at ball fields, race courses, stadiums, gatherings in parks, etc.
**granolithic concrete**

**granolithic concrete** A hard surface concrete usually with granite aggregate suitable for finished floor surfaces.

**granular fertilizer or granular herbicide** A fertilizer or herbicide incorporated with particles usually about \( \frac{1}{10} \) inch diameter, or with any material that has a coarsely ground carrier such lodicule as coal, corn cobs, or calcined clay, that is applied dry and incorporated into the soil by watering it in.

**granular material** Gravels, sands, or silts.

**granular structure** In soil science, one of the six types of soil structures. Characterized by rounded, porous heads with large macropores. This soil's structure forms under conditions of frequent wetting and drying with high organic matter and organism activity. This type of soil structure has a great deal of pore space with many macropores, which affords a high infiltration rate and ease in root penetration, with favorable gaseous diffusion. These soils are usually found in the A horizon.

**graphic** In landscape architectural work, any drawing or drafting work.

**grapple** A hydraulically operated steel jaw on a tractor bucket that clamps down on the bucket assisting in picking up demolished materials, large branches, boulders, etc.

**grass** Mostly herbaceous plants with slender leaves, jointed stems, and flowers in spikelets of bracts (the palea and the lemma bracts).

**grasshopper** A plant-eating insect (Orthoptera order) with large hind legs for leaping, sometimes with wings. They can be highly destructive to plants as they are ravenous eaters. They sometimes gather for migratory movement, which may completely denude vegetation in their path.

**grassland** Land that has grasses as its predominant vegetation type (e.g., prairies or meadows).

**gravel** An accumulation of small stones or crushed stones close to the same size without much fine material or larger stones. It is larger than sand and smaller than cobble. This term is usually applied to aggregate passing a 76.1 mm (3 in) sieve, but being retained by a 4.76 mm (No. 4) sieve. It is useful in mass, usually facilitating drainage or providing stability, leveling, etc. under structures or paving.
**gravel board or gravel plank**  A board (usually treated for resistance to decay or a decay-resistant board) attached at the bottom of a wood fence to prevent the rest of the fence planking from contacting the ground where the planks would decay faster.

**graveling-in**  The process or action of spreading gravel on built-up roofing.

**gravel stop**  A raised edge on a gravel roof to prevent gravel from falling from the roof.

**gravity wall**  A heavy concrete wall prevented from overturning mainly by its own weight.

**gray water**  Water having been used for other purposes than those associated with human waste, and not being highly contaminated. This water is more easily treated and reused. Water wasted from home use is often termed gray water (except for sanitary sewer water), but one should test it before using directly on plants as it is often high in salt from the soaps included.

**grease cap**  A plastic cap for waterproofing the joint of two or more conductors (wires). They usually enclose or cover wire nut connectors and contain grease or a grease-like substance. They usually accept a wire nut when it is pressed into the cap through its base. The wires extend out of the cap and the grease-like substance prevents water from accessing the wire nut. This prevents shorting out the wires.

**grease trap or grease interceptor**  An underground enclosure for removing and retaining (trapping) grease from waste water, sewage, or runoff of pavements, etc. The grease is usually allowed to float to the top of the trap, where it is held or soaked up by material, and later removed.

**great house**  The main residence or largest building of a large estate or plantation.

**green**  1. An open lawn area. 2. An open space available for unstructured recreation, its landscaping consisting of grassy areas and trees. 3. In golf, the area of manicured very short grass (usually bent grass) around a golf hole where one uses a putter to move the golf ball toward the hole.

**green area**  Land not covered with buildings or paving, and devoted to plant material.

**greenbelt**  A series of connected open spaces, or any tract of vegetation in urban or rural areas that is somewhat linear. It may be an area of open space such as agriculture parks, undeveloped land, etc. usually surrounding or cutting through a city, neighborhood, or community. They often follow natural features such as ravines, creeks, or streams.

**greenfield**  1. This term in land planning and landscape architecture is used in reference to land planned for a use that is in a natural, agricultural, or pristine state, not having prior land development. See also brownfield. 2. Farmland and open areas where there has been no prior industrial, commercial, or intense residential activity, and where the threat of contamination is much lower than in urbanized areas.
greenhouse

**greenhouse or conservatory** A building or structure constructed chiefly of plastic, glass, glass-like or translucent material, cloth, or lath, which is devoted to the protection or cultivation of flowers, vegetables, ground covers, or other tender plants. In these structures where the climate is modified or completely controlled, the climate is improved for the growing of plants. They may have artificial means (natural gas heater or electrically powered humidifier, etc.) of controlling temperature, light, or humidity. They can also extend the growing season, winter over tender plants, start annuals early, raise vegetables and flowers out of season, or grow plants that could otherwise not be grown in the hardiness zone where the greenhouse is located.

green lumber Lumber with 20% or higher moisture content that should be dried (seasoned) on-site before use.

green manure Legumes (alfalfa, clover, cow peas, etc.) sown in fall and turned over in early spring to return humus and nitrogen to soil. It is referred to as green manure because the crop is turned under while still green.

green thumb Someone good with growing and caring for plants.

greenway A linear park, strip, or belt of vegetated open space land, or open space conservation area that provides passive recreational opportunities, pedestrian or bicycle paths, or the conservation of open spaces or natural areas. They are also often valued for aesthetic relief, buffering between land uses, or to provide a corridor for wildlife or people.

**grinder pump** A pump that is capable of solids-handling; designed for grinding sewage solids or such to produce slurry capable of pumping.

grip 1. A temporary ditch removing rainwater from a foundation while a structure is being constructed. 2. The length of a fastener or rivet measured within the materials it binds or fastens together.

groin 1. A wall or barrier built from the beach into the surf zone to slow or stop movement of sand. 2. The intersection and formation between two vaults.

groove A cut or indentation as a line across wood grain. When a similar cut is made parallel with the grain, it is a plow.

grooved joint A coupling device sometimes used to connect steel or iron pipes. It is comprised of a split, circular clamp with an elastomeric gasket that fits around the joint and can be bolted tightly in place to prevent leakage.

gross acreage The total acres encompassed within a parcel of land. (Compare with net acreage.)

gross area or gross volume The area or volume in its entirety, without omitting any portions.

gross precipitation rate The total flow of water through a sprinkler station that does not account for the losses of water between the sprinkler nozzle and landscape. Or, the rate at which water is applied over an area of irrigation without considering losses that occur between the point of discharge and the ground (wind, fogging, blockage, evaporation, etc). It is expressed in an amount of depth per hour or minute. The most common use is gpm, and the factor for converting gpm per area to inches per hour is 96.3. The formula then for gross precipitation rate is the quantity flow in gpm multiplied by 96.3 and divided by the area.

gross section A term used for the area of a cross section through a structural member without deducting any holes in the area of the section. (Compare with net section.)
grotto A cave or a recessed area made to resemble a cave. When artificially created, they often include waterfalls or fountains with decorations or representations of sea shells or sea creatures, etc.

ground 1. Any solid portion of the earth including soil, rock, or minerals. 2. A reference to the surface of the earth as in “placed on the ground.” 3. A conductor that facilitates electric current being connected to the earth (ground) through the conductor(s) and used as a common return for an electrical circuit.

ground bark The bark of trees ground into pieces for use as mulch in landscaping. It can be ground coarsely to be used as top dressing or to a fine texture more suitable for mixing with other components to create a growing medium for plants.

ground cover 1. Any mulch or plant covering the ground. Landscape uses may include decoration, erosion prevention, weed control, etc. 2. Plant material used to cover the ground and usually in reference to plants not seen as individual shrubs when mature, but as a mass to cover the ground.

ground fault circuit interrupter or ground fault interrupter (gfi) A device that turns off electrical power when it detects a short or contact with water. It is a fast-acting circuit breaker that senses slight imbalances in a circuit caused by current leakage to a ground and, in as little as 1/40 of a second, it shuts off the flow of electricity.

ground floor The first floor of a building, not including a cellar or basement.

grounding conductor A conductor that grounds electrical equipment or an electrical circuit, but does not carry current during normal operation. It returns current to the source to open a circuit breaker or fuse if a metal component accidentally becomes electrically charged.

grounding rod A metal rod in contact with the ground, acting as a grounding conductor.

ground layering In gardening, a method of propagation by forcing a branch to the ground, cutting halfway through the lower portion of the branch and covering it with soil until it grows roots when it is cut off and transplanted.

ground squirrels A squirrel that lives in burrows 2 to 4 ft underground. It is a landscape nuisance when it eats bulbs, nuts, roots, flowers, bark, fruit, vegetables, etc.

ground sun angle The angle between a beam of solar light and the slope of the surface that it encounters in the landscape.

groundwater Water beneath the earth’s surface; usually refers to water concentrated to an anaerobic state in the soil. However, the water may be fresh with a groundwater flow. This may also refer to water in the ground occupying micropore or macropore space. Its level in the ground varies with wet weather, irrigation, and mechanical extraction.

groundwater divide A vertical, imaginary, impermeable boundary that, in an ideal groundwater system, coincides with the ground surface ridges or high points from which water flows in opposite directions.

groundwater recharge The process of infiltration and percolation of rainwater or snow melt from land areas or water bodies through permeable soils or rock into water-holding rocks, soils, or cavities that provide underground water storage serving as a replenishment or recharge for aquifers.

ground wire See grounding conductor.

gROUT A rich, strong mortar containing more water than normal, allowing it to be more liquid
and useful in filling cracks, spaces, and joints of masonry, pavers, tile, etc.

grower  A plant farmer who grows and sells plant material mostly to wholesale nurseries, but also to retail outlets or even the general public.

growing medium  See growth medium.

growing-on  Plants in a nursery that are kept in order to be grown to a larger size or specific shape before selling.

growing season  The season or portion of year when a plant is not dormant, and has its active growth period. Different areas on the earth and differing climates affect this period with seasonal changes in temperature, moisture, or available daylight. Commonly this term is used in reference to the period of growing from spring to fall, especially in the temperate climate regions. There it is the period of time between the last frost of spring or winter and the first frost of fall or winter.

growth habit  With regard to plants, the expected natural form an entire plant displays in three dimension. It usually refers to a mature plant.

growth media  The plural of growth medium.

growth medium or growing medium  1. The natural or artificially made rooting material sustaining a plant’s growth and usually the base of its support. 2. The soilless artificial mix or pure material such as ground pine bark or peat used by nurserymen in propagating plants in containers.

growth regulators  Synthetic or natural organic compounds affecting plant growth. Some examples of these are indoleacetic acid, gibberellic acid, abscisic acid, 2,4-D, naphthalene acetic acid. In dilute amounts they will promote, inhibit or change plant growth. Other names they are known by are auxins, plant hormones, and phytohormones. These hormones affect such growth phenomenon as regulation of leaf drop, root initiation, bud dormancy, bending of plants in response to light, as well as other growth characteristics.

growth retardants  Chemicals that produce compact, stunted, or greener growth on some plants.

growth rings  The annual growth colorations visible as circular rings when branches or trunks of dicotyledenous plants are cut perpendicular to their longitudinal direction. They are concentric rings wider and lighter colored with good moisture and sun, and darker and thinner otherwise. Darker rings are usually winter with slower growth, and lighter rings are usually summer with faster growth.

grozing iron  A tool with a hot tip used by plumbers to finish soldered joints.

grub  1. To dig in the ground, especially for looking for something. 2. A small, soft, thick, worm-like larvae of an insect, usually found in the ground or decaying material. 3. Clearing an area of ground by removing from the ground roots, stumps, etc. It generally does not include removal of rock materials, buildings, utilities, etc. unless specified. See also clear.

grub axe  A tool for digging and chopping roots of vegetation, etc.

guano  The waste product of sea birds and bats yielding 9% water soluble phosphate and 13% nitrogen. This type of phosphate is very soluble and useful to plants, but is in short supply. A fast-acting fertilizer with an NPK ratio of 13-12-2.5.

guarantee  In construction work, a legally binding commitment by a company or individual for their finished work, or installed or delivered materials, to be of good quality, and if found
inferior stating that they will be replaced or reconciled with the owner at no extra cost.

guardrail  A short safety fence or barrier at the edge of a vehicular passageway protecting vehicles from danger of any kind off the edge of the road.

gully  1. A small trench formed by erosion that is big enough not to be removed easily by a farm tractor’s implements. This is a sign of heavy erosion. 2. A small gulch or narrow ravine on the land. In natural areas these are usually well-established, fairly stable natural water channels. They are usually several feet deep and wide, but not of great concern for erosion potential. 3. Any linear depression of the natural ground facilitating drainage from the size of a canyon to the size of a swale.

gully erosion  See gullying.

gullying  Soil erosion identified by the formation of narrow, steep-sided channels fed by runoff rivulets (small streams of water). This is an indication of serious erosion.

gunite  1. Concrete material applied by being pumped through a hose. It is useful on water features and amorphous designs. 2. A proprietary name of shotcrete.

gusset plate  A flat steel plate used as a connector between structural members or as a stiffener.

gutter  1. A lower area along a roadway that is usually paved with concrete or asphalt where water from the road is drained and carried away. 2. A shallow channel along the edge of a roof to convey water away.

guy  A stabilizing or supporting wire, rope, cable, etc. anchored on one end and attached to an object (such as a tree) on the other end to assist in giving the object stability.

guy anchor  A buried object to which a guy is attached for stability. When planting trees, these are sometimes buried in the outer areas of the planting pit.

guying  See tree guying.

gymnosperm  Naked seeds. A plant in which the seeds are not enclosed in an ovary. Examples are conifers and podocarps. (Compare with angiosperm.)

gynodioecious  A botanical term referring to plants that produce female flowers and perfect flowers on separate plants.

gypsum  Calcium sulfate used in landscaping as an inorganic soil amendment to lower pH or to assist in the improvement of the texture of clay soils. One of its soil-enhancing qualities is that it can facilitate the leaching of salts that otherwise bind clay particles.
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h  Abbreviation for hour.

ha  Abbreviation for hectare(s).

habit  With regard to plants, the natural form, growth style, or natural growth tendency of a specific plant type. Examples are upright, columnar, prostrate, weeping, trailing, clinging, ascending, etc.

habitat  1. The ecosystem surrounding and interacting with an individual, species, or a group of species. 2. An area of land inhabited by any individuals of species or population. 3. The local environment that an organism uses to live in or with. It is variable in size, content, and location as long as it meets with organism’s needs.

hachure  One of many adjacent parallel or nearly parallel lines sometimes drawn on topographic maps in the direction of slope indicating relief or steepness of land. Steeper slopes have heavier shading with these lines by being more closely spaced.

hacking  1. Brick laid with their lower edge set in (indented) from the face of the wall. 2. Stone courses in a wall changed into courses of different heights.

hacksaw  A saw with a handle at its end perpendicular to the blade (or nearly so) and an adjustable frame that holds thin blades with small teeth suitable for cutting metal.

ha-ha or haw-haw  A fence concealed from view below a slope or in a depressed area (ravine, trench, etc.).

half-cut notch  A way of joining timbers at a corner by cutting off the end halfway through the timber and just enough of the end length to allow it to be placed over another timber at 90° and fit snugly.

half-hardy  1. A condition with plants in which they may or may not survive a winter climate of an area (depending on the year and the severity of weather), but in some cases, with some winter protection they may survive. 2. An annual plant that will withstand cold temperatures, but will not survive frost or freezing.

half header  A half piece of block or brick useful for ending a course.
half-ripe

The condition of current season shoots of trees and shrubs that are somewhat beyond the softness of actively growing young stems and fully firm wood. In this condition a plant is often preferred as a cutting in propagation efforts.

half standard  A woody plant with a tree form, having a head that starts its branching about 2½ to 4 in above ground. This term is often used for trees that normally branch to the ground, but have been pruned to do otherwise, or for shrubs that are grafted, pruned, or trained to have a tree form with a single trunk and a head formed above the ground.

halophyte  Plants adapted to growing in salty soils.

halophytic  Plants that are accustomed to (or prefer) growing in saline soils. They are usually xerophytes.

hamate  A botanical term describing a plant part that is hooked at the tip.

hammer  A hand tool with a slender handle and a metal head forming a T, and at least one side of the head has a surface for pounding. It is used to pound nails, pull nails, or for flattening and shaping materials.

hammer drill  A rotating power device that also pounds as it turns and is useful in making holes in concrete, stone, or masonry.

hammock  A place for lying down, usually outdoors, that is made of netting, canvas, etc.; long enough to lay on, tied at each end, and then tied to a support (tree, pole, sand, etc.) beyond each end. It is usually not tied to make the canvas or netting taught, but is allowed to hang slightly.

hand compactor  1. A heavy metal plate with a long handle attached upward from its center above the plate, allowing the plate to be lifted and dropped or thrown to the ground, causing compaction beneath the plate where it is pounded. 2. A compaction machine that is operated by hand without riding upon it, but instead, is walked behind or pulled. See compact and compactor.

hand level  1. The act of grading an area with hand tools such as shovels and rakes. 2. An instrument like a telescope with crosshairs and a bubble to indicate when it is level. This instrument is useful in drainage and grading work.

hand pump  A type of piston pump with a handle for accomplishing pumping by hand.

handrail  A rail provided at stairways, ramps, the edge of dangerous heights, etc. for people to grasp with their hands, assisting them with stability and protection from danger or harm, and sometimes to prevent them from damaging sensitive items outside the rail.

handsaw  A saw used for cutting wood that has a handle to grasp while manually pushing and pulling it to cut.
hanger 1. A device used to suspend one item from another, such as a pipe, conduit, etc. from a structural member (joist, bridge, beam, etc.) overhead. 2. Any device used to suspend one object from another.

hard compact soil According to OSHA, earth materials not classified as running or unstable.

hardening Slowing growth, reducing water, lowering the temperature, decreasing fertilizer, or slowly shifting the plants from a much sheltered area to a less sheltered area. This is done to increase chances for plant survival at transplantation.

harden off 1. A process (usually a week or more) of gradually adapting a plant that has been grown in protective shelter to withstand light, temperatures, or other environmental factors of full exposure outdoors. 2. The process of a plant becoming adapted to colder weather in the fall, and becoming able to withstand cold.

hard freeze or hard frost Generally, a description of freezing temperatures that drop below 32°F and remain there for several hours, killing all unprotected annuals and other plants not hardy to freezing. However, some sources indicate the temperature must be below 28°F, while others indicate that the temperature must be at least as low as 26°F for a period of at least 4 hours.

hard hat A hat usually made of plastic with space between straps on the head and the hard plastic outer surface that is often worn for safety on construction projects in an effort to protect the head. It is often required on construction jobs by OSHA.

hardiness The capacity of plant material to adapt to a given climate.

hardpan A hardened soil layer preventing or greatly hindering drainage and hand excavation. It is often hidden under topsoil, and restricts or prevents water percolation. In desert soils, it is usually caused by a caliche (calcium carbonate) layer of weathered soil where particles have been cemented together by minerals. They may also be cemented together by iron and aluminum compounds. Plant roots in hardpan are restricted to the shallow soil layer above it. This may stunt shrubs and trees. The poor drainage may bring on disease, and trees are subject to wind throw.

hardscape The hard surface elements of a planned (designed) landscape that give it definition (sometimes called the bones of a landscape) and style, including walks, driveways, edgers, walls, buildings, fences, and large ornamental or sculptural pieces.

hardware A general term for metal and plastic fittings, devices, tools, equipment, etc. used in construction.

hard water Water most often found in alkaline areas containing minerals, usually salts such as calcium and magnesium, carbonates, and bicarbonates, etc., that often collect inside metal pipes, causing incrustation, etc. This water is not good for acid-loving plants.

hardwood The wood of a deciduous tree. This term does not refer to the relative hardness of the wood.

hardy With regard to plant material, an indication of ability to withstand the normal temperature changes and other climatic features of an
hardy plant

area. It does not mean that it can withstand all (i.e., soil pH, drought, etc.) conditions of the area.

hardy plant  1. A plant that can be planted before the last killing frost in the spring.  2. When applied to plants in the temperate zone, it means the ability to resist frost, or long freezes.  3. To plants in general, it refers to a plant’s ability to survive the climate, microclimate, soils, or other conditions of the place they are or will be planted.  4. A reference to whether a plant is likely to survive a designated climate zone or hardiness zone.

harrow  1. An attachment for a tractor (or anything that can pull it, even horses) that has many downward pointing prongs used to break up, pulverize, or smooth soil that has been plowed to prepare it for planting.  2. To break up, pulverize, or smooth.

hastate  In botanical terms, a shape like an arrowhead, but with the basil lobes pointing outward, nearly at right angles. (Compare with cuneate, obtuse, cordate, auriculate, sagitate, attenuate, truncate, oblique.)

hatchet  A tool for chopping wood and pounding that has a head with a sharp edge on one side and a flat side on the other. It is about the same size as a hammer, but is much like a short wood ax.

hatracking  Pruning a tree by flat topping it, cutting its central leader, or stubbing off mature wood.

haunch  1. The portion of an arch between its apex and a point of support.  2. The lower-third portion of the circumference of a pipe.

haunching  Placing pipe bedding material such as sand or cement around and under the lower one-third of the pipe.

hayloft  An upper area of a barn where hay is stored.

hazardous waste  Any refuse or discarded material in solid, semisolid, liquid, or gaseous form that cannot be handled with routine waste disposal because it presents a hazard to human health or the health of other living organisms due to its chemical, biological, or physical properties.

hazards  In golf, those areas adjacent to fairways where if golf balls enter it is difficult to recover a ball. They include areas such as sand traps, water features, plants, or very tall grass.

Hazen-Williams Formula  A formula developed for calculating the pressure loss in large pipes. The information obtained from using this formula for various pipes is usually available from the pipe manufacturer in a chart. It takes into account pipe length, pipe roughness, pipe inside diameter, and velocity of water.

H-beam  A steel beam that when viewed from the end or in section is shaped like an H; com-
monly used in earthwork as retaining structures or as pilings.

hdr. Abbreviation for header.

head 1. Generally the top, end, or upper portion of a structure or part. 2. A sprinkler head. 3. See static head. 4. See head pressure. 5. The entire leaves and branches above the ground of a woody plant. 6. The upper horizontal piece of a door or window jamb forming the top of the frame. See window head or door head.

header 1. A brick laid crosswise in a wall with its end(s) exposed. 2. A masonry unit placed with its ends exposed and overlapping two or more adjacent withes of masonry in tying them together. 3. A framing member that crosses and supports the ends of joists, rafters, etc., transferring weight to the parallel joists, rafters, etc.

header pool The pool that is highest in elevation in a recirculating water feature.

heading back A method of pruning in which 1-yr old shoots are cut back to buds, or an older branch or a stem is cut back to a stub. Shearing is a form of heading back. This type of pruning ruins the natural shape of plants, especially trees, and promotes weakly attached new growth. Thinning is a better method of pruning trees.

head pressure or head feet pressure An expression of pressure as related to the height of the surface of a column of water (or other liquid) above an elevation, indicated in feet of water. It is equivalent to 0.433 psi per foot of water. The term head is usually understood to mean static head and not dynamic head.

head-to-head coverage In sprinkler irrigation, a layout design of sprinkler heads with the radius or limit of coverage of one head reaching to the next head. As most sprinkler heads do not provide even coverage throughout their radius of reach, this allows a much more even distribution of water to the coverage area. Common methods of spacing of sprinkler heads for head-to-head coverage include square spacing and triangular spacing.

headwall A masonry or concrete retaining wall around the outlet or entrance of a drain pipe or culvert. These provide protection against erosion of the surfaces around pipe entrances or exits where water is turbulent.

heart rot A disease usually in old trees caused by fungi that normally rot dead wood. It affects ornamental trees. This disease may be evidenced by yellowish to brown mushroom-like or woody growths on the tree bark exterior. Invisible beneath them is internal decay. Hard growths are called conks.

heartwood or duramen Nonliving wood at the center of a tree that is generally darker, much more durable than sapwood, and more decay resistant than sapwood.

heat exchanger A device that transfers heat from inside to outside air, or from fluid, or from solid to solid, without allowing direct contact between the two.

heat-fusion joint A special pipe and fitting that is heated and placed together to form a bond and a leak-proof joint.

heat gain The net temperature increase in an area or material.

heath Open, level, uncultivated land with poor soils, usually acid, and usually having poor drainage.

heat island The microclimate, area, or patch of warmer air that forms in and over urbanized areas because of paved or impervious surfaces, reflection from upright structures, and buildings gathering heat or generating it and then releasing it.
heat loss

*heat loss*  The net temperature decrease in an area or material.

*heat transfer*  The flow or exchange of heat between gases, solids, or liquids, through conduction, convection, or radiation.

*heave*  The upward lifting of soil caused by expansion due to frost, moisture absorption, etc.

*heaving*  The lifting of plants, rocks, or structures in soils (esp. some clays) from the actions of freezing and thawing.

*heavy soil*  Any soil with a significant amount of clay, making it more difficult to work, more sticky, and slower to warm in the spring. They are not necessarily heavier than other soils.

*hectare*  A metric measurement of area comprised of 10,000 sq ms. One hectare is approximately 2½ ac.

*hectometer (hm)*  A metric measurement of 100 ms or 328.08 ft.

*hedge*  A row or line formed by shrubs, bushes, small trees, or any kind of plant being planted closely together, forming physically or visually a boundary, fence, decorative line, or barrier. They are often pruned to a symmetrical shape that is flat or cube shaped, etc., forming a natural-looking wall.

*hedgerow*  A tall row of vegetation that separates lower vegetation or open lands, configured in a line and usually on a boundary (not necessarily straight) of fairly constant width such as between fields or along ditches. In landscape ecology, they include fencerows, shelterbelts, *hedges*, *windbreaks*, and plants along many water *corridors*. They are sometimes planted for wind and water *erosion* protection in agricultural areas, but are more often found along roads or fields seeded by wind, water, birds, etc.

*herbal*  A Greek suffix, often used in botanical terms to describe something relating to a surface.

*heeling-in*  A method for storing bare root plants temporarily by burying or covering their roots with moist material such as sawdust or soil to prevent them from drying out.

*heirloom garden*  A landscape designed and installed with plant material used in a particular area at a particular period of time in the past. These gardens have a historical style of planting design and materials.

*helistop*  An area to be used for the landing, takeoff, or parking of a helicopter.

*hemi-*  The Greek prefix meaning half, sometimes used in botanical descriptions.

*herb*  1. An annual, biennial, or perennial that produces seed and does not develop woody tissue. Herbs die at least back to the ground at the end of a growing season. 2. An annual, biennial, or perennial that has culinary value and is prized for use in cooking.

*herbaceous*  1. Having the characteristics of an herb with little or no woody tissue and lacking a persistent live stem aboveground. 2. Plants that die to the ground and grow a new stem each year.
**herb garden**  A small plot of land usually near a residence and close to the kitchen where herbs are grown for culinary purposes.

**herbicide**  1. Certain chemicals or compounds in liquid or granular form used on ground surfaces to prevent germination of seeds. This is particularly helpful in control of weeds. 2. An agent (usually a chemical) used to kill plants that it comes in contact with directly upon application or through translocation to roots in the soil. See also selective herbicide and nonselective herbicide.

**herbivore**  An animal that eats plants or parts of them.

**hermaphrodite**  In botanical terms, having both sexes present; stamens (male) and pistils (female) in the same flower.

**heroic**  A golf hole design style with two routes for approach of a hole, with the safer route taking at least an extra stroke over the risky and difficult route. The risky route is very difficult to negotiate. See also strategic and penal.

**herringbone**  A pattern sometimes used in placing brick or rectangular objects where pieces are at right angles to one another, but the end of one piece is placed adjacent to an end of a side of the other.

**Hessian canvas**  A British term for burlap.

**hetero-**  The Greek prefix meaning unlike, or of differing sorts, sometimes used in botanical descriptions.

**heterogeneity**  1. The state of being heterogeneous. 2. In landscape ecology, having variety, being uneven, not spatially configured in any given way, yet not random.

**heterogeneous**  Made up of dissimilar or diverse parts.

**heteromorphic**  A botanical term meaning of two or more forms or types.

**heterosporous**  Producing two different kinds of spores, one of which produces male gametophytes, the other female. The opposite of homosporous.

**heterotrophic**  A description of organisms that live on organic carbon compounds.

**hewn**  Roughly shaped, usually with hand tools.

**hewn stone**  The American term for ashlar.

**hexa-**  The Greek prefix meaning six, sometimes used in botanical terms.

**hidden nailing**  Nailing that is covered when construction is finished.

**high-density polyethylene**  A type of polyethylene, often used to make pipe and other irrigation components.

**highest and best use**  A phrase generally promoted in real estate as the use of property that will bring to its owner the greatest profit if offered for sale.

**high hazard**  According to the National Standard Plumbing Code, a situation where backflow of water in a system is an actual or potential threat to health or the purity of the potable water supply.
high-water mark

**high-water mark** That mark on reservoirs, ponds, lakes, and streams that is the elevation of the highest normal water level. In natural systems, this normally occurs annually. Although the annual water mark varies, it can usually be found by examining the banks and ascertaining where the presence of waters is so common and so long continued in ordinary years, as to mark the soil or rock with a character distinct from that of the abutting land surface.

**hilling up** The practice of mounding soil up, usually several inches at the base of plants. This is beneficial to some vegetables, roses, and a few shrubs, but it is detrimental to trees.

**hillside** Generally, a portion of a hill between its crest and the base where it no longer slopes in the same direction.

**hillslope processes** The geomorphic processes that shape slopes, including soil creep, landslides, and runoff.

**hilum** A botanical term referring to the scar on a seed at its point of attachment.

**hinge** A device attached to a lid, door, cover, etc. and a frame or wall that swings or pivots, allowing opening for access. Most hinges have two plates with screw holes for mounting and cylinders on one edge that fit together allowing a pin to slide through them to hold the hinge together and allow pivoting.

**hippodrome** A modern sports arena.

**hip roof or hipped roof** A roof that slopes upward from all four sides of a building.

**hirsute** In botanical terms, hairy with coarse, stiff-like, or beard-like hairs, often bent or curved. It is coarser than villous, but less firm and sharp than hispid, and not pungent (penetratingly painful).

**hispid** In botanical terms, bristly; beset with stiff hairs.

**historic district** An area related by historical events or themes, by visual continuity or character, or by some other special feature that helps give it a unique historical identity. May be designated a historic district by local, state, or federal government and given official status and protection.

**historic preservation** Preservation of landscapes or structures because of the value of understanding the past.

**hm 1.** Abbreviation for **hectometer(s). 2.** Abbreviation for hollow metal.

**hoary** In botanical terms, grayish or whitish in color.

**hod** A container for carrying mortar or bricks.

**hoe 1.** A tool with a small metal plate at the end of a long handle at nearly a right angle that is useful in weeding, making furrows, etc. See also garden hoe. **2.** A **backhoe** or **trackhoe.**
hoes  A tool with a thin blade on a long handle used to dig or cut weeds, or to cultivate or loosen the soil.

holding bed  A location where plants are temporarily stored until planting them permanently.

holiday  In construction, an area skipped in painting, coating, staining, or otherwise finishing a surface.

hollow masonry wall  A masonry wall of two withes having a separation of air between them. The walls are usually connected by metal ties extended between the two withes.

homeowner's association  A nonprofit organization operating under agreements through which each lot or home developed or other described land area is automatically a member and each lot is automatically subject to a charge for a proportionate share of the expenses for the organization's activities such as maintaining, managing, and preserving common property and landscaped areas held in common.

homogeneity  Being homogeneous.

homogeneous  Of a similar nature or kind or of a uniform structure throughout.

homomorphous  A botanical term meaning each with the same form.

homosporous  Producing only one kind of spore, which produces both male and female.

honeydew  A sticky secretion deposited on leaves from sap-sucking insects. It often becomes a nuisance when there are masses of insects infesting trees as it drips from them.

hook bolt  A bolt with a hook on an end.

hopper  A bin with a funnel shape for holding construction materials such as sand, gravel, or green concrete.

hopscotch  A game usually played by children where players throw an object into successive spaces outlined in a figure on the ground and then hop through the continuous adjacent spaces, picking up their object on the way back. This is repeated so that players continue through each space of the figure. The figure is usually drawn on the ground with chalk in a rudimental fashion by children, but the standard figure has 10 spaces and measures 12 ft 6 in long by 5 ft wide.

horiz.  Abbreviation for horizontal.

horizon  1. In soil science, the reasonably distinct layers of soil or a land's underlying material in a profile as observed, studied, or found in a vertical section of land. Horizons are created by differentiation of particles, chemicals, organisms, or moisture movement within the soil profile. They are usually distinguishable by their change in color or texture. Each layer or horizon is determined not only by color and texture, but also by soil structure type, pH, roots, and organisms. The master soil horizons are the A horizon, B horizon, and C horizon. See also soil horizon and subhorizon. 2. In the landscape, this refers to the apparent line where sky meets the earth or objects upon it.

horizontal  A term used in describing a plant form common to ground cover plant materials; their growth spreads laterally across the ground.
horizontal control

horizontal control  In surveying, this is established horizontal positions that have been accurately located.

horizontal cordon  A pattern in espaliered plants with branching being horizontal and usually on opposite sides of the center plant stem. These horizontal branches in some plant types can run for significant distances.

horizontal cordon espalier

horizontal split case pump  A centrifugal pump with the distinctive feature of the pump having two separate cases for the motor and the pump. It is mostly used for large water needs at 700 gpm or above.

hormone  A growth-regulating substance much like vitamins, with effects on different portions of plants and their growth characteristics. Minute amounts usually have dramatic effects that can be favorable or unfavorable.

horn and hoof meal  Ground hooves and horns of animals, usually from slaughterhouses. It is a slow-release fertilizer with an NPK ratio of about 14-1-0.

horticultural oil or dormant oil or superior oil  A highly refined oil that is sprayed on plants to smother or disrupt membrane functions of insects or their eggs. The type used on plants in leaf is different from that used on deciduous plants that are dormant. The type used on dormant plants is more often called dormant oil. Sulfur products used on plants within a few weeks can combine with this product to make a phytotoxic substance.

horticultural species  A plant species that is not indigenous to an area of concern.

horticulture  The science or art of growing or cultivating ornamental plants, vegetables, flowers, and fruits.

hose bib  A water outlet valve operated by turning a handle and having male threads at its point of outlet for attaching it to a garden hose.

hose thread  A thread size used for a common garden hose that is 12 threads per inch in the popular 3⁄4 in size.

host plant  Any plant that furnishes sustenance for another plant or animal. Any plant that a bug or disease thrives on. Generally this term describes a plant that commonly supplies sustenance. For example, cabbage plants are host plants to the harlequin plant bug; and wheat and corn are hosts to chinch bugs in the South.

hotbed  1. A low enclosure for protection of tender plants, growing vegetables, out of season, or forcing bedding plants. They are useful where temperatures drop below freezing. 2. A planter heated from below.

hotcaps  Small, tent-like devices used to shield young plants from wind or frost.

hot-dip  A surface obtained on ferrous metal by dipping it in molten zinc to form a protective coating.
hothouse  A heated greenhouse capable of growing tropical plants.

hot wire  An electrically charged wire that is ungrounded and usually identified by black or red insulation, but may be other colors.

housed joint  See dado.

house trap  A sewer pipe with a low sweep bend for keeping a collection of water and preventing the sewer gases from accessing the interior of a structure through the pipe.

hovel  An open-sided shelter for farm produce or livestock.

hp  1. Abbreviation for horsepower. 2. Abbreviation for high pressure.

HPT  Abbreviation for high point.

hr.  Abbreviation for hour.

ht.  Abbreviation for height.

hub  The flared end of a pipe made large enough to accept the end of another pipe of the same size in forming a joint.

humectant  A moisturizing agent.

humid climate  A climate in which precipitation averages more than 40 in per year.

humidity  The wetness of the atmosphere or dampness of air. See relative humidity.

hummock  A clump of vegetation raised up within a wetland.

humus  A dark brown or black material derived from living things in its last stage of decomposition. This material is full of nutrients for plants. It is mostly found in the soil's A horizon.

humus layer  The humus layer of the O horizon made up of highly decomposed organic matter. See Oa layer. This is a residue as the decomposable components of the soil have been affected by physical and chemical processes.

hvy.  Abbreviation for heavy.

hw  Abbreviation for hot water.

HWY  Abbreviation for highway.

hyaline  In botanical terms, transparent or nearly so.

hybrid  With regard to plants, this term was historically used to describe a plant bred from two plants, each of which were of the same genera, but were of distinctly different species. Plants with parents of different genera were appropriately called bigeneric or trigeneric hybrids. Plants of the same genus, and species, but of a different variety were termed crossbreeds. But more recently geneticists are accepting the term hybrid for any individuals with parents that differ genetically in at least one gene. Under this definition plants that were formerly defined as crosses or as crossbreeds are now also defined as hybrids.

hybrid controller  A sprinkler controller that combines both mechanical control features, and digital control features.

hybrid solar energy system  A solar energy system that uses a combination of different types of energy collection or distribution systems such as an active solar energy system, a passive solar energy system, or a conventional energy system.

hybrid system  A term used to describe a solar heating system that combines active and passive techniques.

hydathode  An epidermal plant structure (often ending a vein) that exudes water.

hydrant  A device for directing water to flow out from a main water line through a hose, valve, nozzle, etc.

hydraulic conductivity  The ability of water to be transferred through a soil.
hydraulic control

A reference in phytoremediation to control of groundwater through plant transpiration also known as phytohydraulics. It has the ability to contain groundwater-borne contaminants and prevent them from underground migration.

hydraulic gradient 1. The change in elevation (slope) of a groundwater surface from one point to another horizontally. 2. The change in water’s head pressure per unit of distance in a given direction within geologic strata or within a flowing water system.

hydraulic hammer An attachment for a tractor with a heavy point that impacts under pressure and is used to break up rock, concrete, etc.

hydraulics The branch of science that analyzes and utilizes the effects of water and other liquids in motion.

hydraulic sprinkler system or hydraulic system In the beginning of automatically operated sprinkler valves, hydraulic tubes were used to operate valves by change in pressure instead of wires. This refers to such a sprinkler system with a hydraulic control of valves.

hydraulic test A test under pressure for any leaks in a plumbing line.

hydric Associated with, characterized by, or necessitating a considerable amount of moisture.

hydric soil A soil having experienced wet conditions much of the time and having been developed under those conditions. They have developed anaerobic conditions, and usually have organic content.

hydrograph 1. A graph of a stream or pipe outfall or discharge rate over time. 2. A record of the rise and fall of water levels during a given time period.
**hydrograph method** A way of forecasting stream flow by using a hydrograph to depict the changes in runoff of a drainage basin throughout a rainstorm.

**hydrologic cycle** The ongoing circulation of water between ocean, atmosphere, and land.

**hydrologic equation** The proportion of the amount of surface runoff on a piece of ground to the precipitation amount minus evapotranspiration loss, plus or minus changes in groundwater or soil water.

**hydrologic response** The properties, distribution, and circulation of water.

**hydrology** A science of properties, distribution, and circulation of water underground, on the surface, and in the air.

**hydrometer method** A method to determine clay content of a soil by dispersing the soil particles in water and drawing off samples at determined time intervals.

**hydromulch** A mixture of mulch with water or other ingredients in a machine that shoots the mixture through a hose, pipe, or nozzle. Other ingredients of the slurry may include seed, fibers, tachifier, fertilizer, or other ingredients. Reference may be made to it in a slurry state or after dried in place.

**hydromulcher** This refers to a machine capable of mixing and distributing hydromulch over the ground.

**hydromulching** The action of applying hydromulch.

**hydrophyte** A plant adapted to water or bogs.

**hydropneumatic pressure system** A water supply system where the pressure in a tank or piping system is kept at a specified pressure and the pump begins operation when the pressure drops below an acceptable predetermined pressure. Pressure within the system controls the pump operation. This eliminates the need of a controller in an irrigation system to start the pump when any valve in the system is in operation.

**hydropneumatic pressure system**

**hydrostatic barrier** The use of plants to control movement of groundwater. In phytoremediation this is used to control the flow of contaminants.

**hydrostatic head** Pressure expressed as the number of vertical feet necessary for a column of water to exert pressure.

**hydrostatic pressure** The pressure exerted by water, especially standing water due to gravity.

**hydrostatic test** Usually refers to testing a closed pipe system under a required amount of fluid pressure while not allowing any movement of the fluid within the system. Any liquid movement or drop in pressure indicates leakage from the system. In irrigation work, if there are any leaks while performing this test one can often find the wet spots in the soil, allowing
hydrozone
easy location of the leak for repair. (Compare with operational test.)

hydrozone A portion of a landscaped area having plants with similar water needs that are watered by one irrigation valve, or a set of valves with the same irrigation schedule.

hygroscopic Absorbing moisture from the air; plants taking up and holding moisture from the air. They sometimes swell, shrink, or change in position with the humidity.

hygroscopic water 1. Water bound tightly by soil solids at potential values lower than minus 31 bars. 2. Water tightly held by soil particles. It will not move with the influence of capillary action or gravity, and is normally unavailable to plants.

hypertufa A concrete mix utilizing some organic matter to promote the growth of moss and algae on its surface for an old or antique effect. Used to make planting containers, sometimes formed to resemble stone. It is made of various materials based on the basic mixture of one part each of Portland cement, peat moss, builder's sand, and water. The materials are molded over a form and dried.

hypo- A Greek prefix often used in botanical terms meaning beneath.

hypogynous A botanical term referring to the perianth and stamens being attached directly to the receptacle. (Compare with epigynous, perigynous.)
I.A.  Abbreviation for Irrigation Association.
IAA  Abbreviation for indole-3-acetic acid.
IAL  Abbreviation for International Association of Lighting Designers.
IB  Abbreviation for I-beam.
I-bar  Steel or iron bar with a cross section resembling an I.
I-beam  A metal beam with a cross section in the shape of an I.
ICBN  Abbreviation for International Code of Botanical Nomenclature.
ICE  Abbreviation for the Institution of Civil Engineers, London.
ice dam  Accumulation of snow and ice at the eaves of a sloping roof.
iconic  Of or relating to architecture.
ID, id  1. Abbreviation for inside dimension. 2. Abbreviation for identification. 3. Abbreviation for inside diameter.
ide or idus  See golden orfe.
IEE  Abbreviation for Institution of Electrical Engineers, London.
IEEE  Abbreviation for Institute of Electrical and Electronics Engineers.
IERI  Abbreviation for Illuminating Engineering Research Institute.
IES  Abbreviation for the Illuminating Engineering Society of North America.
igneous rock  Rock formed from the cooling of molten magma (molten material from the earth), having a temperature in excess of at least 1000F, which then cools to a solid.
illuminance  The brightness of something luminous.
imbricate  In botanical terms, overlapping as with fish scales, snake skin, or roof shingles; arranged in a tight, shingled spiral.
immarginate  In botanical terms, without a leaf margin.
immature soil  Earthen material in a soil profile characterized by not having discernable horizons, much resembling the parent material.
impact  1. In ecology or environmental terms, to have a significant or major influence or effect for change. 2. In construction terms, to strike forcefully.
impact fee  A payment of money imposed by a government agency on development activity as a condition of granting development approval or a building permit to assist in payment for the planned facilities needed to serve new dependent growth and development activity. Impact fees generally do not include a reasonable permit fee, application fees, administrative fees for collecting and handling impact fees, the cost of reviewing calculations, or the administrative fees required for appeal.
impact head or impact sprinkler  A sprinkler head that irrigates with a stream of water impacted by an arm that bounces off the stream and is returned by a spring. The impact action turns the head. Impact heads usually allow adjustment of arcs without nozzle change but
require nozzle change for adjustment in water quantity output. They are noisier than a gear-driven head.

**impact load** The weight and effect of a momentary contact to a structure of another body.

**impact resistance** The capability of a material or product to sustain a hard, sudden blow or shock without damage or failure.

**impact wrench** An air-driven or electrically driven wrench delivering regular impulses of successive torques to remove or tighten items by rotation.

**imparipinnate** In botanical terms, pairs of leaflets on opposite sides along a central stem, with a single leaflet at the end.

**impeller** In a pump, a rotating wheel receiving water from its center with vanes causing fluid to be forced outward to the housing (valute) in which it is encased, creating pressure and flow.

**imperfect flower** A flower that does not have both female (pistil) and male (stamen) parts.

**impermeable** A term applied to soil or pavements not allowing the easy draining of water through them.

**impervious** Not penetrable by water or other fluids; often used to describe pavements or surfaces that prevent most water from percolating through them or even being absorbed by them, such as asphalt, concrete, etc.

**impervious surface** Any surface covered or hardened so as to prevent or greatly impede the percolation of water into the underlying soil.

**impervious surface ratio** A ratio derived by dividing the amount of the site that is covered by any man-made material that substantially reduces or prevents the infiltration of storm water by the total horizontal area of the lot.

**impetus** The span of a roof or arch.

**imposed load** The load on a structure or member of a structure not including its own weight (the dead load).

**impost** A sometimes decorative masonry unit or course at an end of an arch.

**impoundment** A body of water confined by a dam, dike, pipe, floodgate, or other barrier.

**impregnation** In the lumber industry, wood having preservatives, fire retardants, etc. forced into them under pressure.

**impressed** A term used in botanical descriptions to indicate something sunken, such as veins.

**in (″)** Abbreviation for inch.

**in²** Abbreviation for square inch.

**inarch** A method of grafting sometimes referred to as approach grafting in which a strong-rooted sapling is planted adjacent to the bottom of a tree with need of assistance (understock), and the end of the sapling is grafted into the understock plant. This method of grafting is used to improve the health of damaged trees (especially those damaged at their base), assist trees with weak root systems, or give support to a weak lower crotch in a tree.

**inbreeding** In reference to plants, a situation describing pollen of the same plant fertilizing its own pistils.

**incan.** Abbreviation for incandescent.

**incandescent daylight lamp** An incandescent lamp with a glass bulb colored a blue-green to absorb part of the yellow and red light and give off a whiter light. Its efficiency compared with a normal incandescent light drops by about 35%.
incandescent lamp or incandescent filament lamp  An electric light source made of a glass bulb from which a light is emitted by electric current heating a metal (usually tungsten) filament.

incandescent lighting fixture  A luminaire (complete light apparatus) that makes light by passing electricity through a tungsten filament that glows.

incarious  Grayish or whitish in color.

incense cedar  A moisture-resistant wood with a fragrant resinous odor.

incentive zoning  The awarding of bonus credits to a development in allowing more intensive use of land if public benefits are included in a project. Such benefits may include preservation of greater than the minimum required open space, provision for low and moderate-income housing, or plans for public plazas and courts at ground level.

inch, (in) (″)  English or U.S. length measurement equal to 0.083 ft, or 6.453 sq cms.

inchtworm or looper  Any of a number of small, hairless caterpillars, usually of small moths that defoliate trees and shrubs. They are often noticeable either inching along (moving by a looping movement made in alternating the clasping of a surface with the front and back prongs), or lowering themselves by small threads.

incipient decay  Lumber in the early stages of decay not yet affecting its strength.

incised  In botanical terms, cut rather deeply and irregularly. (Compare with ciliate, pectinate, cleft, lobed, dentate, denticulate, serrate, serrulate, double serrate, entire, crenate, crenulate, parted.)

incline  A sloping surface that is somewhere between horizontal and vertical.

incomplete fertilizer  A fertilizer with only two of the three components (NPK) of a complete fertilizer, such as 10-6-0 or 0-6-8.

incomplete flower  A flower that is missing any of the following: a pistil, stamen, calyx, or corolla.

incrustation  1. The depositing of materials on the interior of pipes or equipment from chemicals in the water. 2. A decorative surfacing of better materials applied over more common or less aesthetically pleasing materials.

indehiscent  A fruit that remains closed at maturity, or a plant that does not naturally release its seed; not splitting.

indemnification  One person or company agreeing to assume liabilities and hold harmless another for certain items or acts.

indemnify  An agreement to hold harmless an individual, group, or entity from liabilities or losses.

indent  A gap left by leaving out a stone, brick, or block in a course of masonry to allow for bonding of future masonry.

indenter bar  See deformed bar.

independent programming  A feature of some automatic controllers that allows them to turn on one set of valves or heads separately at
indeterminate

completely different times and days from another set of valves or heads.

indeterminate  1. A stem that continues to grow without being limited by a terminal inflorescence.  2. A sequential flowering beginning with the lateral or basal flowers, and continuing to the upper or central flowers.

indigenous  1. Originating, living, occurring, or growing naturally in an area.  2. A term used to describe plants that are native, or natural to an area, site, region, or environment at some point in time. Opposite of exotic. See also native plant.

indirect expense Overhead expense not directly chargeable to a specific project.

indirect lighting Illumination distributing 90 to 100% of the emitted light upward to a surface so as to provide reflected light rather than direct light.

indirect luminaire A luminaire emitting 90 to 100% of its total light above a horizontal plane.

indirect solar water heating system A solar water heating system utilizing a closed circulation loop through a heat exchanger. The fluid flowing through the solar collector is isolated from the water to be heated.

indirect sunlight Light from the sun that is not direct, but diffused or reflected. This term usually refers to the light needed to sustain a plant when direct sunlight may damage it. Most often used in reference to indoor plant locations.

indirect waste pipe A drainpipe with an air gap between it and the rest of the drainage system, preventing siphonage backward.

indole-3-acetic acid A naturally occurring auxin produced in the apical meristems of roots and shoots.

indumentum A descriptive botanical term referring to a plant part having a dense, hairy covering.

indurated In botanical terms, hardened.

indusium The thin covering over clustered sporangia of a fern sori.

industrial waste Waste in water from industrial uses.

inert Inactive, deficient in active properties, or lacking the anticipated biological or chemical action. This term is often used in reference to seed or fertilizer material that is just excess filler without the properties desired by the user.

inferior ovary In botanical terms, an ovary that is below the calyx leaves.

infertile  1. Soil that lacks nutrients necessary for healthy plant growth.  2. Plants that do not flower, do not bear fruit, or do not have functional reproductive organs.  3. Anything infertile or unproductive.

infill Development or redevelopment of land that has been bypassed, remains vacant, or is underused in the continuing urban development process.

infiltration  1. A gas or liquid passing into or through a substance such as soil by penetrating its pores or interstices.  2. The movement or seepage of water from the surface to the subsoil or groundwater. Its rate is normally expressed in terms of inches (or mm) per hour.  3. Water entering an excavation, hole, drainpipe, or sewage pipe, etc. from surrounding earth.

inflated In botanical terms, turgid and bladdery.

inflexed A botanical term that means bent inward.

inflorescence A botanical term that refers to the arrangement of flowers on the stem or the flower cluster as a whole.
**inflow**  1. Water flow entering a sewer pipe from sources other than seepage from surrounding earth. See also infiltration.  2. Water in a sewer system, other than waste water, that enters (including sewer service connections) from sources such as, but not limited to, roof drains, cellar drains, catch basins, drains from naturally wet areas, manhole covers, cross connections between storm sewers and sanitary sewers, cooling towers, and surface runoff.

**influent** Water, waste water, or other liquid flowing into a water body or treatment unit.

**informal** Often used to describe a design, plant, or a garden that is more natural appearing than contrived, more free-flowing than rigid, more asymmetrical than symmetrical, more oriented to interest or variety than to formality and repetition. See also formal plant or formal gardener.

**ingress** An access or entry point or entrance.

**initial set** A partial hardening of mortar, cement, etc. This is usually a point at which it is hard enough to walk upon it without causing damage, hard enough to allow one to get on boards to finish its surface, hard enough to substantially resist penetration of a weighted test needle, or hard enough not to be affected by touch. This term is obviously variable, but the consensus is that it is descriptive of a partially hardened concrete.

**inlet** An opening for intake.

**in-line pump** A pump mounted directly within a pipeline that is often supported by the pipe and usually mounted vertically.

**inner court** An open space surrounded by walls, buildings, structures, etc.

**inorganic** Anything not originating from plants or animals.

**inorganic fertilizer, chemical fertilizer** Any fertilizer not of plant or animal origin. They generally supply readily available nutrients, but are not long-lasting (except those that are coated). See slow-release fertilizer.

**inorganic nitrogen** Nitrogen combined with other elements, not in animal or vegetable form. Calcium nitrate is an example.

**in place** Constructed or located where it is designed or desired to remain.

**insecticidal soap** A mixture (sometimes homemade) that is effective on most soft-bodied insects by removing or making ineffective the coating on them that assists in their retaining moisture, causing them to dehydrate.

**insecticide** Certain chemicals and compounds capable of killing or repelling particular insect pests.

**insectivorous** A term describing plants that consume insects for nourishment.

**insertion** In botanical terms, the place or mode of attachment of an organ to its support.

**inside diameter (ID)** With regard to pipes, the greatest distance inside the pipe from one wall to another.

**inside micrometer** A device for accurately measuring the inside dimension of a pipe.

**inside thread** The threads (angled circular slicing) on the inside of a pipe or device.

**in situ** In landscape architecture, land use planning, phytoremediation, or landscape construction, an activity taking place on-site and not at another location. It is usually in reference to remediation of pollutants in or on the ground.

**insul.** Abbreviation for insulation/insulated.

**insulated flange** A coupling that prevents electrical charges from continuing in piping or devices. When connecting pipes, this prevents or interrupts the electrical transmission path that otherwise would be facilitated. This type of...
connection assists in preventing damage from electrolysis.

**insulation**

1. In electrical systems, a material not conducting electricity. Wire is often covered (sheathed) with this to prevent shorting to ground or harm to those who may come into contact with it. 2. Material used to prevent infiltration of heat or cold (thermal transfer).

**intake door** An opening for water (or another fluid or gas) to enter a tank, pipe, etc.

**intake rate** or **infiltration rate** The measurement of the speed by which water is absorbed into the soil.

**integral waterproofing** A term for waterproofing of concrete by an additive during mixing.

**integrated pest management** A preventive management of pest activity and infestation by providing proper waste management, structural repair, maintenance, control techniques (biological, ecological, mechanical, etc.), and application of pesticides.

**intercepting chamber** A manhole.

**intercepting sewer** A sewer that receives flow from branch sewers.

**interception** With regard to precipitation, the amount of rainfall or snow intercepted by vegetation before it reaches the ground.

**interceptor** A device that collects debris, preventing its entering a drainage or sewer system.

**interface** The common boundary or surface, often a plane, between two bodies or materials.

**interflow** Water from rainfall and snow melt that moves laterally through soil and seeps into stream channels. In forested areas, this is the long-term source of water in streams.

**intergeneric** In botanical terms, a hybrid between genera.

**intergeneric hybrid** A hybrid of two different but closely related genera. See also bigeneric hybrid.

**interior** A spatial term used in landscape ecology to describe the part of patches or corridors wide enough to have a significantly different environment from that near the edge. In this area, wind or air currents, sun or shade, organisms, or processes common to the edge no longer have a significant influence. This can be the inner portion away from the edge of a lake, city, wooded area, grassland area, polluted area, etc.

**interior lot** A building lot having a street on only one side.

**interior-type plywood** Plywood composed of glue not suited to durability when exposed to water, and thus not intended or promoted for exterior use.

**intermittent stream** Natural stream channels that carry water part of the year but are otherwise dry.

**internal drainage** In soil science, the relative rate of saturated water flowing through a soil profile.

**internal grip** A reference to the type of attachment on the inside of a pipe for a machine to pull the pipe underground.
internal manual bleed  A feature that allows an automatic valve to open manually (without a controller) by releasing water from above the diaphragm to the downstream side of the valve. It is useful during installation and maintenance operations.

International Code of Botanical Nomenclature (ICBN)  An internationally recognized code intended to promote uniformity and stability within botanical nomenclature. The code provides a method and record for naming taxonomic groups, avoiding names that could cause error, ambiguity, or confusion. These difficulties are a significant detriment, plaguing communication and understanding in the use of common names. The code is adopted by the International Botanical Congress, and is updated from time to time. The code adopted in 1993 by the 15th congress in Yakahama, Japan, was known as the Tokyo Code. The most recent publishing of this dictionary was adopted in 1999 at St. Louis, Missouri, by the 16th International Botanical Congress.

internode  In botanical terms, the part of a stem between two nodes, or joints.

interpolation  The process of determining or plotting the elevation and location of unknown points on a site, map, or drawing from the location of points of a known elevation.

interspecific hybrid or interspecies hybrid  To hybridize by producing plants from two separate varieties within a species.

interstice  A narrow or small space between objects such as brick or stone in a wall, or the minute space between soil particles.

intrinsic permeability  A measure of the relative ease with which an earthen material can transmit a liquid. It is a property of the material independent of the nature of the liquid and the force causing movement.

introduced  A term descriptive of a plant moved to a location where a plant of the same variety is not found. It could be moved across a neighborhood, town, county, mountain range, river, continent, or ocean. It appears that the only truly non-introduced plants are those that are growing where another identical plant type once grew. But, then, one wonders when the first plant of that type was introduced to that location.
introduced species

Any species not presently (or previous to some arbitrary date) found native to a particular site or area.

introrse In botanical terms, turned or facing inward or toward the axis of the flower or growth. (Compare with extrorse.)

intuitive design Quick and ready insight or knowledge about design without rational or burdensome thought.

invasive A term used to describe plants that vigorously spread, propagate, have rapid unchecked growth, or invade a surrounding landscape area. Any plant tending to spread prolifically.

invert The bottom inside elevation of a pipe, channel, culvert, etc. at a selected point along its length, at its entrance, or at its exit.

invitation to bid A written or verbal request or invitation from an owner, general contractor, etc. for a proposed price, bid, work, or materials.

involucrate In botanical terms, with an involucre.

involucre In botanical terms, a whorl or set of bracts around a flower, umbel, or fruit. It usually describes bracts overlapping at the base surrounding the flower or supporting it.

involute In botanical terms, rolled inward from the edges, usually toward the upper surface.

IP, ip Abbreviation for iron pipe.

IPM Abbreviation for integrated pest management.

IPS, ips 1. Abbreviation for international pipe size. 2. Abbreviation for iron pipe size. 3. Abbreviation for inside pipe size

IPT, ipt Abbreviation for iron pipe threaded.

IR Abbreviation for inside radius.

iron A micronutrient found in soils, necessary for plant growth and chlorophyll synthesis. A deficiency causes iron chlorosis. As soil alkalinity increases, the iron in soil becomes less soluble and less available to plants.

iron cement A cement including cast-iron fillings used in repair of cast-iron parts.

iron chelate An iron fertilizer bound with a metal ion not easily converted to a form unavailable to plants. It is also known as an iron metal-organic complex fertilizer. Iron is a necessary micronutrient for plants to develop chlorophyll. Without it, the leaves of plants yellow. Iron is sometimes present in a soil, but bound and not available to plants. Chelated iron is available to plants immediately.

iron deficiency See chlorosis.

iron fence See wrought iron fence.

iron pipe size The dimension of an iron pipe from the farthest points (opposite sides) on its outside surface. Other types of pipe, plumbing, or sprinkler components often carry this designation so that one may know they can be joined easily when the nominal IPS is called out.

irregular flower A flower with petals sometimes dissimilar in form or orientation. (Compare with zygomorphic.)

irrigation The application of water to germinate seed, or sustain plant material growth or life by means other than natural rainfall.

irrigation cycle One complete operation of each station on a program of an automatic controller.

irrigation efficiency The care in irrigation to provide minimum water use for maximum results. It is effected by distribution uniformity and management practices such as run times.
irrigation head  A device in an irrigation system attached to pipes for distribution of water in the system.

irrigation schedule  A combined legend and table on an irrigation plan referencing symbols on the plan to identify the parts they represent. It usually includes the symbol of the part, the name of the part, the manufacturer, its size, its type or materials makeup, and remarks about how it is installed, where it is installed, etc.

irrigation system  A method, apparatus, piping, ditching system, watering system, etc. designed to convey, transport, and distribute water to plants.

irrigation water  1. Water used in an irrigation system whether potable or dirty. 2. Untreated or unclean water used for irrigation purposes.

island  1. Any land, designed and constructed or naturally occurring, that is completely surrounded by water. 2. In landscape ecology, any patch completely disjointed from a similar patch. 3. In traffic design of roadways and parking lots, a raised planting completely surrounded by pavement and usually surrounded by a curb. They are placed to guide traffic, provide aesthetically pleasing surroundings, separate lanes, limit paving, preserve existing vegetation or other features, etc. See also center island, corner island, drive island, end island.

isolation joint  An expansion joint or any joint where the two materials or portions separated by the joint do not touch.

isometric drawing  A type of three-dimensional drawing with all principal planes parallel to corresponding axes where vertical lines stay vertical and horizontal lines are on an angle (often 30°).

isotropy  In water hydraulics, the condition in which all significant water properties are independent of direction.

ISR  Abbreviation for impervious surface ratio.

ITE  Abbreviation for Institute of Transportation Engineers.
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jackhammer  A heavy hammer driven by air and standing about waist high with pointed or chisel bits. It forces its bit up and down with the full weight of the machine upon it. It is useful in breaking up concrete, rock, etc.

jack rafter  Any rafter shorter than the rest in a roof.

jackscrew  A jack that raises by twisting a large rod with threads.

jamb  A vertical member on the side of a door, window, etc.

Japanese beetle  A small, metallic green and brown beetle (Popillia japonica) introduced into the United States from Japan. It is highly destructive, feeding on grass roots and decaying vegetation as a grub and then as an adult eating foliage and fruits.

jardiniere  A large decorative pot or stand for plants.

JB, jb  Abbreviation for junction box.

jealous glass  Glass that is not transparent.

jerry-built  A description of poor construction.

jetting  With regard to pipe laying, shooting water under pressure to settle and compact soil around a pipe, etc.

jetty  An artificial, narrow land (rock, concrete, stone, etc.) projection or barrier to water, extending above the water surface and out into the water body. They are usually approximately perpendicular to the shoreline and are placed in twos, approximately parallel to each other. At some distance from the shore, they often turn to form a narrow entrance for watercraft to enter their protected area. They are generally used to change the natural littoral drift, protect inlet entrances from clogging with excess sediment, or to protect a harbor (dock, boats, etc.) or shore area from waves created by boats, winds, or water currents.

jib  A crane.

jitterbug  A compactor that jumps up and down.

job site  The area of construction.

joggle joint  Interconnecting pavers or masonry units with shapes other than square or rectangular.

joint  With regard to plants, the points on woody plants from which the leaves arise.

jointed  In botanical terms, composed of joints, or having joints.

joint compound  In drywall construction, a compound used for finishing joints, etc.

jointing compound  A material used on threads of pipe to assist in sealing.

joint shingle  A wood shingle attached by nailing edge to edge rather than overlapping shingles.

joint venture  A coalition of two or more persons or companies combined for a project.

joist  A small wood or metal structural member of a deck, ceiling, floor, roof, etc., usually arranged parallel to one another, that directly supports the decking, planking, floor, ceiling, etc. and that in turn is supported by beams, girders, walls, etc.
**joist anchor**

A metal tie for anchoring joists to a wall or larger structural member.

**joist hanger**  
A metal connector plate cut and bent to accept a joist end while also being flush against a timber and having holes to accept bolts, screws, or nails to attach joist ends to timbers (beams, stringers, etc.).

**journeyman**  
An experienced, reliable worker who is competent in a trade and is an employee.

**juglone**  
A substance found in the roots of black walnut trees that is harmful to some plants (i.e., roses, azaleas, rhododendrons).

**junction box**  
In electrical wiring, a box housing connections of conductors (wire splices). In sprinkler irrigation work, the splices must be waterproof. Various devices can enclose and protect the splices, but the most common is a grease cap.

**jute**  
A fiber made of durable plants, used to manufacture erosion control matting, carpet backing, etc.

**jutty**  
A jetty.

**juvenile**  
A young individual plant. It may differ from mature plants by its soft growth, vigorous increase in size, foliage shape, foliage size, or whether flowers or fruits are present. Cuttings from juvenile plants generally root faster than from mature plants.

**juvenile form**  
A plant with a leaf that is so different on young plants that to compare a mature plant to a young one it is not apparent they are the same species. An example of this is English ivy as it has markedly lobed or angular leaves in youth, and is vine-like without any flowers, but in maturity it has flowers, leaves that are ovate or heart shaped, and erect portions of stems.
k-  Prefix for kilo, or 1000.

K  The symbol for potassium. This is the third percentage listed on a complete fertilizer bag.

kainite  A slow-acting chemical fertilizer containing 12 to 22% soluble potash and about 20% magnesium. It may be harmful on clay soils.

kame  A small, cone-shaped hill or ridge of gravel and sand deposited when glacial ice sheets converged.

Kc  Abbreviation or symbol for the crop coefficient in irrigation auditing.

KD  Abbreviation for kiln-dried.

keel  In botanical terms, a projecting ridge on a surface, like the keel of a boat; the two anterior petals in the bean family.

keeper  See strike plate.

kelp  A plant that grows in the ocean and is sometimes used as an organic fertilizer. It has an NPK ratio of about 1-0.5-9.

kennel  1. A shelter or enclosure for a dog or cat. See also dog run. 2. A facility boarding and breeding cats or dogs.

kevel or cavel or cavil  A stone mason's ax for shaping stone.

key  A joint, indentation, hole, slot, channel, etc. that another member or material (wood, steel, concrete) fits into in order to hold it in place and prevent movement.

key fruit  A dry, indehiscent, winged, and often one-seeded fruit also called a samara.

key valve  A valve operated by a key.

keyway  A channel or slot in masonry or concrete between portions built at different times. This affords a stronger, more stable bond between the portions.

kg  Abbreviation for kilogram(s).

kicker  A piece of lumber or wood attached to another piece or to a frame to take a thrust force for it or steady it.

kickout  The failure of an excavated vertical surface, shoring, or a braze.

killing freeze  A description of temperatures below 32°F (0°C) that remain there for several hours, killing unprotected annuals, and other plants not hardy to freezing temperatures. Each plant type differs as to its hardiness or survivability when temperatures fall below the point of water freezing. Young plants or very old plants may be more susceptible than others of the same type. The lower the temperature drops, the more plant types may not survive. If plants have some protection or a different microclimate (more sun, near a warm building, or protected from wind) they may survive while other plants of their type without some protection do not. For new plants that are marginally hardy, planting before temperatures begin to drop in the fall may make it more likely they can harden off and sustain colder temperatures in the winter.

killing frost  Any frost that kills plants. See also hard freeze and killing freeze.

kiln-dried or hot-air dried  A term often used to describe lumber dried in a kiln. See kiln-dried lumber.
kiln-dried lumber

kiln-dried lumber Wood cut to particular dimensions and placed in a kiln (heated enclosure) to remove moisture. This produces a straighter product of true size better at holding nails, and not likely to shrink, split, or warp. Lumber is usually marked as follows: S-GRN for green unseasoned lumber with a moisture content of 20% or higher; S-DRY for lumber with a moisture content of 19% or less; MC 15 for lumber that is dried to 15% or less, etc.

kilogram (kg) The metric weight measurement of 1000 g or 2.2046 lb.

kiloliter (kl) The metric volume measurement of 1000 l or 1.31 c.y.

kilometer (km) A metric length measurement equal to 1000 m or 0.62 mi.

kilovolt An electrical force equal to 1000 V.

kilovolt-ampere Electricity equal to the product of amp and voltage divided by 1000.

kilowatt (kw) Electrical power equal to 1000 Ws, or about 1.34 hpr.

kingdom In taxonomy the five broad categories containing all living and extinct things. The kingdom of plants is called Plantae. The next category or unit of differentiation is the division. See also taxon.

king post A vertical board or timber in a truss extending from its ridge to a beam below.

kiosk 1. A small structure with a roof and at least one open side, usually found in a garden, a park (for weather protection), or in a busy pedestrian area (for selling items). 2. A small structure that cannot be occupied, with closed sides or faces, standing in a pedestrian mall, at a historic site, etc. that posts or shows information, directions, maps, posters, notices, and announcements.

kip A unit of weight measurement equal to 1000 lb or 4448 Ns.
for interest and for assisting in keeping water clean. These fish can become over 1 ft long when they reach maturity and are often highly prized for their various colorations and size.

**ksi** Abbreviation for kilopounds per square inch.

**kV** Abbreviation for kilovolt.

**kVA** Abbreviation for kilovolt-ampere.

**k-value** The time rate of heat flow through a material of a particular dimension from one of its faces to the other.

**kw** Abbreviation for kilowatt.

**kWh** Abbreviation for kilowatt hour, which is a unit of energy equal to 3.6 megajoules.

**kyanize, kyanise** The preservation of wood by steeping it in a mercuric chloride.
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1. Abbreviation for liter(s). 2. Abbreviation for linear.

L.A. Abbreviation for landscape architect.

labiate In botanical terms, bilabiate, or having the limb of a tubular corolla or calyx (as with mint plants) divided into two different sized portions with one overlapping the other.

labor and material payment bond A monetary guarantee by an insurance company to an owner that a contractor will pay for all labor and materials of a contracted work or, in the event that the contractor does not, then the surety will pay for those debts holding the owner harmless financially and the contractor responsible to pay the debts back to the bonding company.

labyrinth 1. A maze sometimes made of hedges in gardens. These garden features are comprised of convoluted paths outlined by hedges, usually above eye level, and with the usual design goal to make negotiating them to their entrances or exits difficult and confusing.

lacerate A descriptive botanical term referring to a plant part that appears torn or irregularly cut or cleft.

lacebug See lacewing.

laced valley or woven In roofing, the interlacing of roofing materials at a valley (inside angled intersection).

lacerate A descriptive botanical term referring to a plant part that appears torn or irregularly cut or cleft.

lacewing An insect with large, translucent wings with dark veins, long antennae, and brilliant eyes. They are serious plant pests as they creep on undersides of leaves, sucking their juices. They generally fly at night and are fond of azaleas, chrysanthemums, rhododendrons, and photinias.

laciniate In botanical terms, slashed or cut into deep, narrow lobes or usually unequal segments.

lacquer A liquid, usually enamel, applied to surfaces where it dries to a glossy finish.

lacrosse A goal game played on a lawn where players throw and catch with long-handled devices. The playfield space required is 330 ft long and 180 to 210 ft wide.

lacustrine Pertaining to or growing around lakes.

lactiferous A botanical term meaning bearing a milky latex.

ladder A device used to climb up or down having slender steps (rungs) between two rails.

ladybird See ladybug.

ladybug Small, rounded, usually brightly colored, beetles of the family Coccinellidae that feed on other insects. They feed on these insects both in the larval stage and as adults. They often help control small sucking insects such as aphids on plants.

lag bolt A metal, threaded, pointed bolt with an expanded flattop portion, flattened to accept a wrench for tightening. Similar to a wood screw, but can be tightened with more force and generally of a larger size. The shank of this bolt differs from the shank of a machine bolt or carriage bolt in that the threads of this bolt start from a pointed base and are wider apart with a greater angle to their rise for piercing and grasping wood or a similar substance. Threads on the
shank may extend the entire length or for only a portion of its length.

lagging 1. Thermal insulation of pipes, tanks, ducts, etc. 2. In excavation, the use of boards placed side by side along an excavated bank of earth.

laitance The fines (fine particles) and water in excess on a concrete surface that is usually the result of too much working of the surface. This material is weak and will usually crack off in the future. See also spalling.

lake sand Rounded instead of sharp sand particles.

lamina The flattened portion of a leaf that does not include the petiole, often called the leaf blade.

laminar Thin and flat, often describing a leaf blade.

laminar flow This term usually refers to the flow of water along or near a hard surface or solid surface.

laminar flow emitter In drip irrigation, an emitter that regulates water flow (usually into droplets) having a small narrow path, causing loss of pressure due to friction as water travels the path. Examples of laminar flow emitters are spiral paths, capillary tubes, and microtubes. Elevation differences, friction loss in pipe distribution, small particles that plug the small laminar flow tubes, and temperature differences (changing water viscosity and flow) can affect the output of these emitters. Used with proper application, they can be reliable, and are inexpensive. See also emitter.

laminate A material made of two or more layers bonded together as in plywood, etc.

t lamp A manufactured light source often referred to as a tube or bulb. It does not include any other elements associated with a light fixture such as the reflectors, attachments to wiring, bulb holder, ballasts, or decorative portions (luminaire).

lamppost An upright support of a luminaire (light fixture).

lanate A botanical term meaning woolly.

lanceolate In botanical terms, lance-shaped, or narrow and long.

land 1. The earth's surface not under water.

land clearing Any activity that removes the entire vegetated ground cover of an area. This term does not generally refer to agricultural harvests, mowing, trimming, pruning, or removal of vegetation to maintain it or other nearby vegetation in a healthy, viable condition.

land cover 1. Materials such as vegetation, mulches, and concrete that cover ground. 2. Land uses covering a general area of land (i.e., agricultural, commercial, suburban). 3. The vegetative cover of land.

land degradation 1. The loss in capacity of a land to produce crops or biomass for livestock. 2. The pollution of land or reduction of its ability to sustain life. With regard to land's reduction of ability to sustain life, this term is often relative to life forms most prized; while
some life forms are decreased, sometimes others are increased.

**land development** Any improvement to a land. In most government jurisdictions, it applies only to buildings, roads, utilities, walks, parks, etc. in creating an urban or suburban area.

**land evaluation and site assessment (LESA)** A numerical system for assessing the quality of farmland. It is generally used to select tracts for agricultural protection or to determine lowest quality farmland to allow development. This information is useful to nursery operations, topsoil, acquisition, sod farms, etc.

**landfill** 1. The collection of garbage, refuse, and trash buried under layers of earth. 2. Managed waste disposal sites that bury debris.

**landform** A feature of the earth’s surface.

**land grant university** A university or college designated by its state legislature or congress to receive grants from the Morrill Acts of 1862 and 1890 in teaching agriculture, military tactics, and the mechanical arts. They each established an extension service for assisting local agricultural efforts, etc.

**landing** A larger space between runs of stairs for resting, or intersection with other paths.

**landmark** An item on the land of special interest or note.

**landscape** 1. An area planted within urban surroundings, near a building, near pavements, or as a park, etc. 2. The landforms of an area. 3. In landscape ecology, a mosaic where a group of contiguous ecosystems is repeated in similar form for an area miles wide with recognizable boundaries of the land or the elements thereon. Examples are desert landscapes, swamp landscapes, cultivated landscapes, suburban landscapes, and forested landscapes. 4. Improving, covering, or repairing the ground in any way including construction of pavements, structures, irrigation systems, or planting, seeding, grading, etc.

**landscape architect** 1. A professional licensed to perform services in landscape architecture. 2. A professional performing landscape architecture by designing changes in land and features thereon for human enjoyment and by planning effective placement of structures, vehicular and pedestrian ways, plantings, earthwork, drainage facilities, buildings, land uses, etc., and producing construction documents for the building of such. Concerned with stewardship of natural, constructed, and human resources in providing environments that serve useful, aesthetic, safe, and enjoyable purposes.

**landscape architecture** A profession encompassing both the natural and built environments. It involves a multidisciplinary design work composed of some understanding of soil science, civil engineering, landscape ecology, architecture, horticulture, arboriculture, botany, irrigation systems, land planning, transportation planning, environmental issues, art, drafting, etc. Those adequately trained in this profession have a well-rounded knowledge of the natural and built environment useful in managing multidisciplinary developments or land planning efforts.

**landscape buffer** An area of landscaping separating two distinct land uses, or a land use and a public right-of-way intended to mitigate or soften differences between them.

**landscape construction** Work in constructing such items as (including but not limited to) walls, paths, sprinkler systems, drainage systems, outdoor lighting, water features, trails, paths, driveways, paving, decks, and patios. These are professionally designed by landscape architects and constructed by landscape contractors.
landscape contractor

landscape contractor A construction business principally engaged in the decorative or functional alteration of grounds, or elements thereon or buried therein. They contract and perform construction of landscape elements including but not limited to walls, paths, sprinkler systems, drainage systems, outdoor lighting, water features, trails, paths, driveways, paving, decks, and patios. That which is designed by a landscape architect is brought to existence and fruition by a landscape contractor.

landscape design The drawings, models, or action of laying out structures, land activities, recreational facilities, vegetation, land cover, erosion protection, watering methods, etc.

landscape ecology The study of interactions among organisms and their environment usually on the scale of a landscape.

landscape element 1. Any item within a landscape. 2. In landscape ecology, a relatively homogeneous spatial element when viewed from the air. It can be a patch, a portion of a matrix, a corridor, etc.


landscape fabrics Various plastic or fibrous materials, usually on rolls, used to cover the ground in control of weeds, erosion, or for increased soil stability. Most of them are staked into place and covered with mulch to keep them from moving. Some are also buried in trenches at the edge (especially on slopes) to further ensure their remaining in place.

landscape improvement An improvement to real estate by landscape work.

landscape planning The decision-making, technical, and design processes associated with the assignment, configuration, and compatibility of land uses and their operations.

landscape planting area An area on a site or a site plan that is devoted to the growing of shrubbery, trees, grass, or other plant material. They are usually delineated by surrounding impervious surfaces, areas unsuitable for plant growth, or property lines.

landscape rake A long-handled tool with a fan-shaped, thin, flat-fingered portion for dragging over the ground in gathering up leaves or light debris.

landscape waste All debris from landscape areas including but not limited to grass, shrubbery cuttings, leaves, tree limbs, fruits, and other materials accumulated as the result of the care of lawns, shrubbery, vines, and trees.

landslide Historic or present earth mass movement characterized by surface flows of rock, soil, or debris on slopes. They most often occur with heavy rain, snow melt, earthquakes, excavation, or earth filling.

land survey A survey of land establishing or reestablishing lengths and bearings (directions) of boundary lines.

land tie A deadman.

land tile Porous clay tile pipe laid with butt joints that allow water in or out, and draining land or dispersing water.

land trust A private, nonprofit land conservation organization formed to protect farm land, forest land, natural areas, historic structures, recreational areas, etc. Land trusts generally accept donations of land for conservation easements. They usually offer the public education about the need to conserve land.

land use The use (past, present, or future) of land (i.e., agricultural, industrial, residential, natural, recreational, commercial, etc.).
**land-use plan** A map showing existing or future uses of land areas. When compiled by a city it will usually include designations such as commercial, industrial, agricultural, single-family residential, multifamily residential, etc.

**land use planning** Making plans for the uses of land that will over a long period best serve the general welfare of people together with facilitating the ways and means to accomplish them.

**land-use survey** A gathering of information to produce a map of existing land uses.

**lane**
1. A portion of a road accommodating a single line of vehicles and usually painted with lines to define its limits.
2. A narrow road or path usually bounded by a vertical element (shrubs, trees, fence, buildings, etc.) on one or both sides.

**lantern flies** See leafhopper.

**lantern skylight** A small skylight.

**lanuginous** In plant identification and description, a botanical term meaning woolly or cottony.

**lap**
1. To overlap at least a portion.
2. The length to which structural members, sheeting, etc. overlaps.

**lap adhesive** An adhesive used to seal the overlaps of a jacket around an insulated pipe.

**lap cement** An asphalt adhesive used between overlaps of rolled roofing.

**lap joint** The area of overlapping materials. This is usually in reference to rigid materials such as wood or steel overlapped and secured together to afford support to one or both pieces.

**lapies** Usually a deeply trenched bedrock beneath the soil surface that has been affected by limestone, gypsum, or other soluble rock.

**large knot** A knot in lumber greater than 1½ in (3¾ cm) in diameter.

**larry** A hoe useful in mixing mortar that has a hole or holes in it.

**larva** A stage of some insects when they are active, immature, wingless, and have been hatched from an egg. They usually live by eating plant material.

**latch** A device with at least two separate parts mounted on two adjacent disconnected items (objects) that facilitates an interconnection between its parts, by movement of a portion of it to fasten the two items (objects) together, but not lock them together.

**latch plate** The thin metal piece protecting the area of a door around a latch.

**lateral**
1. In botanical terms, born on the side of a structure or organ.
2. A lateral line.

**lateral bud** A bud on the side of a stem or branch and not at an end of either.

**lateral force** A force or load usually acting in a horizontal direction. Examples of these forces are earthquakes, wind, and pressure exerted by soil or water against a wall that retains it.

**lateral line or lateral pipe** A pipeline in an irrigation system that distributes water from...
valves to sprinkler heads or points of discharge. Any pipe downstream of an irrigation valve.

lateral sewer A portion of a sewer line that has no other sewer discharging into it.

latex An emulsion of minute, dispersed particles of rubber or plastic material in water obtained by polymerization and often used for coatings and adhesives.

latex paint A paint of latex with pigments and other binders.

lath 1. In landscape work, a structure for partial covering overhead to reduce or prevent damage to plants from excess sunlight or frost. 2. A 3 to 4 ft long thin (½ in or less) stake used most often in surveying to mark the location or an offset to another shorter survey marker stake. Also sometimes used with plastic caution tape strung between them at their tops to alert pedestrians not to stray onto landscaping that may have newly planted sod, wet conditions, etc.

lathe A machine that rotates a piece of wood or metal for shaping.

lath house Structures with partially open roofs or sides giving plants some shade, and protection from wind. They are also often used to get plants adjusted to weather after moving them from indoors or a distant area of variant weather.

Latin name The botanical name (scientific name) of a plant usually composed of genus, species, and sometimes variety or strain, cultivar, etc. A plant may have several common names, but a plant may only have one botanical name (genus and species). Plants requested by Latin name are more likely to be the plant desired. Common names are often confused with different plants, as sometimes different plants have the same common name and some plants have more than one common name, especially from one region to another. See also plant classification and taxon.

latitude 1. An amount of variation allowed. 2. With regard to surveying, the north and south directions.

latrine A toilet.

lattice A diagonally crossed network (forming a net pattern) that is usually made of metal, plastic, or wood strips that is useful as decorative screening or for other ornamental construction. It can often be purchased in preconstructed sheets of 4 × 8 ft.

lattice fence A fence made with lattice to afford some privacy yet allow some light and air to flow through.

lattice girder or lattice beam A web of diagonal pieces arranged like latticework between horizontal members comprising a beam.

latticework A construction with lattice or in the fashion of lattice.

lavatory 1. A toilet. 2. A water container for washing that has an open top and drainage piping. 3. A room with a basin for washing hands and face, as well as having a toilet.

lawn In landscape, a grassy area kept substantially free from other plant material, and usually kept mowed for aesthetic purposes or for recreational use. Typical lawn grasses are bluegrass (Poa), Bermuda grass (Cynodon), bent grass (Agrostis), St. Augustine grass (Stenotaphrum), wheatgrass
(Agropyron), blue grama grass (Bouteloua), buffalo grass (Buchloe), fescue (Fescue), ryegrass (Lolium), and zoysia grass (Zoysia).

lawn croquet  A game played with mallets, different colored balls, and hoops for passing balls through on a lawn. The size is 75 by 40 ft. (See also British croquet.)

lawn mower  A machine that cuts grass evenly to a desired height. See also reel mower and rotary mower.

law of reflection  A law that holds true of reflected sound, light, and radiant heat stating that the angle of incidence (reception) is equal to the angle of reflection.

lax  A term sometimes used in botanical descriptions referring to a plant part appearing loose.

layering  In gardening, the practice of propagation of a plant by developing roots on a branch before removing it. It is generally more successful than the cutting method of propagation. The two methods of layering are ground layering and air layering.

layout  A plan showing a scheme for an arrangement of objects and/or spaces.

lb  Abbreviation for pound(s).

LCM, lcm  Abbreviation for loose cubic meter.

L&CM  Abbreviation for lime and cement mortar.

LDG, ldg  Abbreviation for landing.

leachate  Fluids associated with decomposing waste in a landfill.

leaching  A process of liquids flowing through or contacting the surface of a solid and mobilizing constituents from the solid through the actions of physical transport and dissolution. This process washes out soluble products such as calcium, salts, ammonium, chloride, nitrates, etc. Soils are sometimes given abundant water to facilitate the removal of materials in solution by the passage of water seeping through soil. This process can leach out harmful soluble agents such as salts. But in leaching out harmful chemicals one may also lose essential nutrients such as nitrogen, as it tends to move through the soil with water.

leaching cesspool  An excavation in the ground that is covered and lined for receiving domestic sewer discharge, surface waters, storm system water, or drainage system waters designed to retain any organic matter or solid materials while allowing the water or liquids to seep through the side and bottom surfaces.

leader  1. A downspout. 2. With regard to trees or shrubs with a single trunk, the central stem. It especially refers to the top portion and is often referred to as the central leader.

leader head or conductor head  A widened portion of a water drainage leader (or downspout) top where runoff is collected or received into the leader.

lead pipe  A pipe made of about 99.7% lead.

lead wool  A fibrous material made with thin strands of lead used as caulking in pipe joints.

leaf (plural: leaves)  That part of a plant that manufactures food for a plant from elements
leaves obtained from air, soil, etc. through the process of photosynthesis with the influence of light. Leaves are appendages of stems of various lengths and shapes. Most leaves are flat and thin, but their size and shape are both considerably variable, sometimes on the same plant.

leaf blight See blight.

leaf blister Any of several diseases causing blister-like deformities on plants.

leaf blotch Diseases caused by fungi, looking much like leaf spot, except that this damage is irregular and generally larger.

leaf bud A bud on a plant that will produce a leaf.

leaf burn A drying of a leaf that starts at the edges because of excess light, chemicals, strong or drying winds, or lack of water. See leaf scorch.

leaf curl A descriptive symptom of a condition caused by fungi, environmental conditions, insects, or bacteria. Curled leaves can also be caused by herbicide sprays drifting from nearby areas.

leaf cutters Any caterpillar that feeds by neatly cutting out parts of leaves.

leaf-cutting bees These insects damage leaves of plants as they cut portions of leaves and sometimes flowers to obtain nest-building materials. Though they are a nuisance to gardeners and landscapers, they are also beneficial in pollination. They are particularly efficient at pollinating alfalfa. Plants particularly susceptible are rose and bougainvillea.

leafhoppers A sucking insect sometimes called a plant hopper, or lantern fly. They are any of numerous fast-moving greenish or brownish insects of the family cicadellidae that suck the juices of plants from the underside of leaves causing white stippling on the upper leaf surface. They sometimes spread virus diseases. They can be controlled by insecticides.

leaflet This is one of the divisions or blades of a compound leaf. The fleshy portions of a compound leaf arising from the same petiole are completely separated into these portions of leaf and are found on the same petiole, which may also be divided.

leaf miner Any of various small insects (moths or dipteran flies) that lay eggs on leaf surfaces and whose larvae burrow into and eat the parenchyma of leaves resulting in an unsightly serpentine effect on the leaf.
leaf mold  Decaying leaves often used as an amendment to soil.

leaf rake  A long-handled tool with a fan-like piece attached for dragging leaves or such into piles. The fan shape is usually made of thin, flat, stiff, and bendable bamboo, metal, or plastic strips.

leaf rollers  A moth (lepidopteran) having larvae that damage plants by rolling in a leaf to make a nest. It prefers oak or fruit trees. They have a number of insects that usually hunt them and keep populations down, but when found, remove the leaf and destroy it. If infestations are heavy, chemical sprays can effectively control them.

leaf scar  The mark left on a branch, stem, twig, etc. when a petiole becomes detached and the leaf falls. It is very noticeable on some plants.

leaf scorch  The partial or complete desiccation of a leaf due to lack of water supply to the leaf. This may be caused by lack of irrigation, frozen roots, damage to roots, drying winds, etc. Precautions can be taken by planting shade-loving plants in shade, using drought-tolerant plants in areas of heat or low irrigation, watering plants adequately, adding mulch around plants to prevent evaporation, and by controlling insects and diseases.

leaf skeletonizer  Any caterpillar that eats the fleshy portion of leaves so that a skeleton-like leaf is left.

leaf spot  See anthracnose.

leaf tiers  A term given to caterpillars that feed on leaves and tie them together with silky threads.

lean concrete  Any concrete with low cement content.

ledger  In framing, a horizontal element of lumber supported by a post, wall, etc. and having joists attached to it.

ledger board  A horizontal board joined by vertical supports, as in fence construction.

ledger strip  A strip of wood nailed along the bottom of a beam to assist in supporting joists.

leggy  Plants with stems unnaturally long from lack of light, high temperatures, excessive nitrogen, etc. Their lower areas usually have few leaves.

legume  A family of plants with roots that contain nitrogen-fixing bacteria (e.g., rhizobium). This family includes some herbs, shrubs, and trees. Important food and forage plants belonging to this family include clovers, beans, and peas.

leguminous  Pertaining to legumes.

lemma  In a grass flower spikelet, the lower of two bracts enclosing the flower. It has its back at the outside of the spikelet.

lens  Glass or plastic enclosing the bulb of a luminaire, allowing light to be transmitted through it.

lentic  Having to do with wetlands, ponds, or lakes that are not flowing waters.
lenticel

A group of loose corky cells formed beneath the epidermis of woody plants, rupturing the epidermis, and admitting gases to and from the inner tissues and atmosphere. They appear as many regularly spaced, slightly raised spots or elongated bumps on the woody portions (especially smooth bark) of some plants. Betula nigra is an example of a plant with visually pronounced lenticels on its bark.

lenticular In botanical terms, lens-shaped, both sides convex.

lepidote A botanical term that means scaly or covered with small scales.

LESA Abbreviation for Land Evaluation Site Assessment or Agreement.

letter of intent A letter indicating one will enter into a contract with another.

levee 1. A mound of sediment along a riverbank deposited as a result of periodic flooding. 2. A dike to contain the waters of flood irrigation. 3. A spot on a river for landing boats. 4. Any man-made embankment constructed to prevent flooding. They are most often made of earth and are meant to contain, control, or divert the flow or rising of water or protect property and lives.

level 1. Any instrument used to measure whether a surface is horizontal, level (perpendicular to a line pointed to the center of the earth), or sloped. They are of two types: handheld and mounted. A handheld level is a surveying instrument usually comprised of a telescope with a bubble. A mounted level is a surveying instrument usually comprised of a telescope with a bubble used to level it on a tripod support, on which it rotates in shooting elevations and determining slopes, etc. 2. A spirit level. 3. The position of a line or plane when perfectly horizontal (perpendicular to a line drawn to the earth’s center).

leveling 1. In landscape work, making the ground evenly smooth (almost always with some slope for drainage), usually in preparation for planting, irrigation work, placement of mulch, etc. 2. The act of moving or securing an object or structure to a position as described under level (3).

leveling rod or leveling staff A rod with measurements marked upon it for measuring differences in grade elevation.

l.f. Abbreviation for lineal feet.

LFT Abbreviation for linear foot.

lg. 1. Abbreviation for long. 2. Abbreviation for length. 3. Abbreviation for large.

lgth In the lumber industry, abbreviation for length.

LH Abbreviation for left hand.

liability insurance Insurance that protects the insured against physical or financial injury to the person or property of someone else.
liana  A botanical term referring to a climbing or woody vine.

license  A written permission given to engage in an activity, as required by law or agency rule.

lien  See mechanic's lien.

life-cycle cost  The cost of a material, or piece of equipment, structure, etc., including its initial cost and maintenance costs during its lifetime.

lift  1. A layer of compacted fill material. This earthen material is used in filling operations placed at various thicknesses to facilitate some end such as a degree of compaction. A compacted, stable fill is comprised of lifts of a certain thickness (as necessary for various materials and aggregates to facilitate compaction) that have each been compacted. 2. A scaffold frame above another scaffold frame. 3. Concrete poured between two construction joints. 4. A portion of vertically formed concrete poured at one time. 5. An amount of grout or mortar placed at one time in a structure such as a wall. 6. A bench in a multilevel excavation. 7. A forklift.

liftgate  A gate opening by moving it vertically, as opposed to a gate that swings open on a side edge.

lifting  Digging plants up for storage or for transplanting.

lift latch or thumb latch  A bar on a door (small or large) that must be lifted at one or both ends to allow the door to open.


lightbulb  See incandescent lamp.

light globe  Most often this refers to an incandescent lamp.

lighting  1. Various methods, equipment, etc. used to provide light; illumination. 2. The coverage, distribution, and intensity of any artificial light. 3. Any devices supplying artificial light.

lighting fixture  An electrical device that holds a lamp, usually has a lens, and often is decorative.

lighting panel  An electrical box containing fuses or circuit breakers protecting branch circuits serving lighting fixtures.

lighting unit  A lighting fixture. Also a luminaire.

lightning arrester  A device protecting electrical wiring and devices from the affects of lighting.

light pole  Any pole holding aloft a light source. They are usually made of metal or wood and contain a hollow portion where wires or pipes can be concealed.
light shade

Filtered shade or shade during part of the day.

light soil A term used loosely without specific definition to describe soils that are easily worked and not compacted, are mostly sandy (having little clay), full of lightweight organic matter, or made up of large particles. This term does not refer to its color or weight.

lignite Wood, wood-like, or resembling wood.

lignification The process of making something woody. This takes place by the depositing of lignin.

lignin The woody cell walls of plants and the material between them that bonds them. The woody portion of plants.

ligulate In botanical terms, furnished with a ligule.

ligule A botanical term literally meaning a little tongue. It is often applied when describing the flattened part of the ray corolla in Asteraceae and to the appendage on the inner (upper) side of a leaf at the junction of the blade and sheath in many Poaceae and some Cyperaceae (grass-like plants).

limb 1. A large branch of a tree. 2. The expanded part of a sympetalous corolla above the throat. The expanded portion of any petal or leaf.

lime 1. With regard to soils, CaO, calcium carbonate, or its application. It comes in several forms from limestone-derived materials and is beneficial for increasing pH (neutralizing acidic soils), for making clay soil more granular (less sticky) and porous, for assisting sandy soils in retaining water and becoming more compact, as well as for improving soil nutrient availability. In acid soils, it will assist in breaking down humus and making available more phosphorus and potash otherwise not available to plants (unless applied too heavily). 2. A fruit of Citrus aurantifolia.

lime concrete Concrete made from mixing lime, sand, and gravel.

limestone A sedimentary rock of calcite or dolomite useful as building stone or crushed-stone aggregate.

limit of disturbance One or more specified areas on a lot or parcel within which all disturbance of land such as construction of structures, driveways, parking, roads, landscaping, water surfaces, decks, utilities, walks, or improved recreation facilities are to be located. Some agencies omit areas restored with natural vegetation from being part of the limits of disturbance.

limnetic The portion of a wetland void of emergent vegetation because of deep water. Here light does not penetrate to the bottom of the water.

lineament 1. Straight features in the landscape, usually in reference to revealing some feature of the subsurface such as a geologic change or fault. 2. A distinguishing or characteristic feature of the land.

linear In botanical terms, a leaf that is narrow and flat with the margins parallel.

linear pit A trench large enough for planting trees together in a linear alignment along a street, walk, promenade, etc. where they will share rooting space. It is useful to provide extra rooting space and stability for the tree structure where the space would otherwise be limited by
urban features (walls, foundations, curbs, pavement, etc.) or other materials unfavorable to rooting.

**line level** A small spirit level (bubble level) enclosed in a metal or plastic case with hooks that can be hung on a string. When the string is pulled tight the bubble indicates proximity to level by its proximity to being centered. This is useful in determining grades for drainage, checking bottoms of excavations, the slope of a pipe or ditches, or in construction or placement of objects and structures, etc.

**line of sight** or **line of collimation** 1. A line seen through a surveying instrument when looking toward an object or point. 2. A direction of observation by one looking at an object, especially in the landscape. 3. A visual path from a particular vantage point.

**liner** A small, propagated, immature plant usually made available by nurseries, to grow in containers to a larger size more suitable for sale. They are often grown in flats or trays with small planting soil cups.

**lintel** A horizontal member above an opening that usually carries weight of materials and loads above it.

**lip** In plant identification and descriptions, a projection or expansion of a plant part.

**liquefaction** The change that comes about in some granular material (earthen material) from a solid state to a liquid state in an earthquake due to vibrations and shaking.

**liquidated damages** Any amount specified to be paid by a contractor to an owner as compensation if a contracted work should extend its completion beyond the date agreed upon at the time of signing the contract for the work.

**liquid fertilizer** Plant nutrients applied in a water solution.

**liquid limit** A term used in reference to a soil condition where, with any more water added to the soil, the soil would change from a plastic to a liquid.

**liquid manure** A liquid fertilizer made by soaking manure in water and then removing the solid portions.

**liter (l)** The metric measurement of 1 l, 61.02 c.i., 0.908 dry quarts, or 1.057 liquid quarts.

**litmus** An organic chemical strip of paper useful for indicating acidity or alkalinity. It becomes red when placed in something having pH values below 4.5 and blue for pH values above 8.3.

**litmus strip** See litmus.

**litmus test** A procedure, situation, or experiment that reveals information or truth. See also litmus.

**litoral** See littoral.

**litter** Waste materials such as bottles, glass, cans, scrap metal, plastic, garden rubbish, junk, paper, disposable packages or containers, and all other similar materials, and any other substance that is a nuisance to the public, or that creates a public health, fire, or safety hazard.

**litter layer** The Oi layer within the O horizon of a soil profile. It is comprised of undecomposed and recognizable organic matter such as leaves, sticks, and other living organism residue. If it is present, it is the surface layer.

**littoral, litoral** 1. The shoreward zone of a lake or wetland. 2. The area where water is shallow enough in a lake or wetland to allow emergent vegetation. 3. Growing on or near a shore. 4. The zone on a shore between high and low water marks.

**littoral transport** Movement of sediment along a coastline.
**live load**

1. Any load on a structure that is not permanently existing as a force on the structure.
2. The weight load expected or existing on a structure, including people, furniture, equipment, and appliances. It does not include the influence of wind, earthquake, etc.
3. Any and all loads imposed on a building, deck, bridge, or other structure due to use or occupancy.

**live stake**  A live, woody, long-stem portion of a plant, usually without any branches, roots, or leaves still attached, pounded, or placed into the ground as a planting procedure. If suitable plant material is used, and they are prepared and placed correctly, they will root and leaf out. In the illustrations, two types of stakes are shown. One is pounded into the ground. The others are of small diameter and are planted by punching a hole with a prong on a tractor or by excavating and backfilling.

**living unit**  A dwelling providing living facilities for one family including provisions for living, sleeping, eating, cooking, and bathroom facilities.

**load**  1. A force (especially by weight) or system of forces, applied to a structure, a structural member or foundation, etc. of a structure.
2. The power delivered to an electrical device or piece of equipment.

**loader**  A motorized machine of various sizes having a front bucket and arms for scooping earth or materials, lifting them, transporting them on wheels or tracks, and dumping.

**loading dock**  A raised area (dock) that a truck or train can be backed up to being about the same elevation as the vehicle or trailer bed elevation to be unloaded. This allows for easier unloading or loading.

**loam**  The textural class name for soil having a moderate (or relatively even) amount of sand, silt, and clay. It is comprised of 7 to 27% clay, 28 to 50% silt, and 23 to 52% sand. This is the ideal soil for most plants, and the term loam is used to describe soil rich in organic matter, not easily compacted, and able to drain well. It is mellow with a slight gritty feel but fairly smooth and a little plastic-like. When it is squeezed while dry, it forms a cast that will not break with careful handling, but when squeezed while moist can be fairly readily handled without breaking.

**loamy sand**  A soil textural class comprised of 0 to 15% clay, 15 to 30% silt, and 70 to 90% sand.

**lobe**  In botanical terms, any projection or division by indentation (especially a rounded one)
of a leaf, etc., especially when not extending more than halfway to the midvein or base.

**lobed** In botanical terms, a plant part, especially a leaf, with cuts or indentations usually less than halfway to its base or **midrib**. (Compare with *cilialate*, *pectinate*, *cleft*, *entire*, *dentate*, *denticulate*, *serrate*, *serrulate*, *double serrate*, *incised*, *crenate*, *crenulate*, *parted*.)

**locknut** 1. A **nut** with a design (various types) that creates friction against the bolt it is fitted to, or against the surface it is tightened to, causing resistance to rotation and loosening. These types of nuts are made so as to not loosen without extra force when they are tightened. 2. A nut used against another nut to tighten and hold fast each nut and prevent loosening.

**lock washer** A **washer** with various designs for binding against a bolt head and the surface it is forced against, causing resistance to removing the bolt by rotating.

**locule** A **compound** ovary of a plant.

**locust** Coarse-grained, strong wood of a locust tree. It is hard, decay-resistant, and durable; often used for posts.

**lodicule** One of the tiny scales in the inflorescence of grasses.

**loess** A wind-deposited accumulation of uniformly sized, **silty** material, or any silt deposits usually of a buff or yellowish brown color thought to have been accumulated by wind.

**logo** A stylistic design, emblem, or representation used for identifying or representing an object, firm, development, etc. Many developments have logos designed by **landscape architects**. It may or may not contain words, letters, or numbers.

**longitudinal section** A drawing of a subject as if viewed from a **plane** that intersects the object lengthwise.
**long-radius**

**long-radius or sweep radius or sweep elbow**
A term for a bent pipe portion or fitting changing a pipe’s direction with a large sweeping radius assisting in avoiding pressure loss to resistance, improving flow characteristics, or facilitating easier pulling of wire through it.

**longshore transport** Movement of sediment parallel to the coastline.

**long ton** The weight of 2240 lb (1016 kg).

**looper** See inchworm.

**loose cubic meter** Material not in a compacted state and measuring one cubic meter in volume. Usually refers to soil as it has a significant difference in volume between its loose and compacted states (difference in volume depends on type of soil with variations according to presence of sand, rock, organics, etc.).

**loose material** Soil or rock in a blasted, broken, friable, or loadable state.

**lopper** A long-handled pruner with jaws that either bypass each other or cut against an anvil jaw.

**lost-head nail** A nail with a small head intended to be pounded beneath a surface and lost to view.

**lot** A contiguous parcel of land used or set aside for use as the site of one or more buildings or other definite purpose.

**lot coverage** Usually refers to a measure of intensity of land development by examining the land area of a site that is impervious.

**lot frontage** That part of a lot contiguous (in control) with a street, easement, etc.

**lot line** The defined property boundary on the land.

**louver** An assembly of sloping, overlapping blades or slats often used in overhead structures outdoors to allow some sun to reach a surface below and prevent some (or all sun at a particular time of day) from reaching that surface. They are also used in fences to allow light and air while providing some screening. See also abat-vent.

**low bid** In analyzing a number of bids submitted, this is the one that proposes to perform the required work or provide the materials at the lowest price compared to the other bids.

**low-carbon steel** Steel comprised of less than 0.20% carbon.

**low-density concrete** Concrete with an oven-dry weight of less than 50 pounds per cubic foot (800 kg/m³).

**lowest responsible bidder** or **lowest responsive bid** or **lowest qualified bidder** The bidder with the lowest price that meets all requirements of the bid, which may include licensing, bonding, experience, proper forms, correctly filling out forms, and so on.

**low-flow irrigation** See micro-irrigation.

**low hazard** According to the National Standard Plumbing Code, a situation in which a backflow of water in a system would be a nuisance or objectionable, but not a health hazard.

**low-head drainage** The drainage flow of water left over in pipe and equipment through a low elevation sprinkler head (or heads) after a valve is turned off.

**low-pressure mercury lamp** A mercury-vapor lamp that obtains no more than 0.001 atmosphere during operation.

**low-voltage lighting** This is usually an outdoor lighting system with luminaires that operate on low voltage converted from single phase (120 volts) or sometimes supplied by solar photovoltaic collectors with batteries for storage.

**low-voltage wire** In irrigation systems using solenoids on valves, operated by low-voltage...
electricity (24 volts drawing 2.3 to 10 amps), the wire associated with such a system is referred to as low-voltage wire.

LPS   Abbreviation for low-pressure sodium.
L.S.  Abbreviation for lump sum.
LT, lt On drawings, abbreviation for light.
LULU  Abbreviation for locally unwanted land use. This phrase is often used with regard to proposed development projects heavily opposed by local residents.

lumber   Parts of logs (woody portions of trees); any wood that is split or sawed. It is prepared for use in construction, building, etc., and is usually thought of as smaller than timbers and larger than wood pieces.

lumen    A unit of luminous flux. One footcandle is a measure of one lumen per square foot on a surface.

luminaire  A complete light fixture for attachment to electrical wiring including the bulb or tube for production of light, any reflectors, housings, and any decorative embellishments.

luminance  The luminous intensity of a surface.

luminosity  The ration of light expressed in lumens per watt.

lump-sum agreement  A contract to complete work for a set amount agreed upon before the work begins.

lunate  In botanical descriptions, crescent-shaped.

lustrous  In botanical descriptions, shiny or shining.

L.V.  Abbreviation for low voltage.

lyrate  In botanical terms, lyre-shaped. It can be an obovate or spatulate pinnatifid leaf with the end lobe large and roundish and the lower lobes small.
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M, m  1. Abbreviation for thousand. 2. Abbreviation for male. 3. Abbreviation for man-hour. 4. Abbreviation for meter(s). 5. Abbreviation for mile(s). 6. On drawings, an abbreviation for bending moment. 7. A mix of masonry mortar having 1 part cement, ¼ part hydrated lime, and an amount of water equal to 2 to 3 times the sum of their volume of cement and lime. It is for highly compressive and lateral loads, able to withstand frost action, and useful in below grade applications. See also mortar type S and N.

m³ Cubic meter(s) or 1.307 cubic yards.

machine bolt A metal bolt with a flattened end, threaded for accepting a nut with like threads, and the other end having a flat top and flattened sides (square shaped or hexagonal shaped) to accept a wrench for tightening. It is flat on the underside of the head, and its head has no indents for accepting a screwdriver. Threads on the shank may extend the entire length or for only a portion of its length.

macrescent In plant identification and descriptions, withering and persistent.

macroclimate A fairly uniform weather history over a large geographical area.

macronutrient Any of the three (nitrogen, phosphorus, potash) most essential nutrients for plant growth. These nutrients are usually listed (showing percentage of each) on fertilizer bags in the order NPP.

macrophyte Macroscopic (visible to the eye without assistance) vascular plants.

macropore A space or void between structural portions of soil that can contain water when soil is saturated, but is large enough or of a particular composition to allow water to freely drain by gravitational force and to become filled with air when at field capacity (there is moisture in the soil, but it no longer freely drains). Their minimum size is approximately 0.03 mm. (Compare with mesopores and micropores.)

maculate In plant identification and descriptions, spotted or blotched.

maggots Larvae of a variety of flies.

magnesium A whitish-silver metallic element common (eighth most common on earth) in soils and a necessary micronutrient for plants. It is found in chlorophyll molecules of plants as it assists in an electrochemical role during photosynthesis and also assists the plant structurally.

magnesium sulfate A colorless crystalline substance found in nature or manufactured and otherwise known as Epsom salts; used in making cements and fertilizers. It is approximately 10% magnesium and 14% sulfur.
magnetic bearing

magnetic bearing  A line referencing from local magnetic north as found on a compass and changing over great latitudinal distances.

magnetic declination  The angle, usually expressed in degrees, from magnetic north to true north.

magnetic north  The direction a compass that points from a specific location to magnetic north. This direction is not the same as true north. True north may be found if one knows the magnetic declination angle for a location.

mailbox  A box used to facilitate mail delivery.

mailbox

main connection  The point where a sprinkler system is connected to the city or public water line.

main line  A pipe line in a sprinkler system that distributes water from a source to valves. Also known as a pressure line. (Compare with lateral line.)

main sewer  A sewer line into which sewer branches dispense materials.

maintained  Preserved in a condition or state of quality equivalent to that which was designed, constructed, or used in the past.

maintenance  Upkeep of land, structures, plants, machinery, equipment, systems, etc. It includes but is not limited to mowing, weeding, tilling, pruning, sweeping, and replacement of defective parts in a manner that does not alter the basic design.

makeup water  In irrigation, water supplied to compensate for losses by evaporation and leakage.

male  A pipe fitting or device that either has outside threads or is an unflared pipe end, or a device with a protrusion of the appropriate size for acceptance into a female socket (glued, threaded, or compression tightened, etc). This is
the normal method for connection of pipes or devices.

**male thread**  Pipe threads on the outside of a pipe or device. (Compare with **female thread**.)

**mall**  A plaza, walk, or system of walks, often lined with trees and designed for pedestrian uses.

**mallet**  A short-handled wooden or plastic headed hammer.

**malm**  A calcereous soil with much chalk as fine particles.

**management allowed depletion (MAD)**  With regard to scheduling of plants or landscapes, the maximum amount of plant-available water (expressed as a percent) that is allowed to be removed from the soil before irrigation occurs.

**manganese**  A micronutrient necessary in soil for plants to grow that in excess can also cause their ill health. It is seldom lacking in soil (except alkaline soils) and becomes more soluble, more available, and more likely to cause toxicity as soil acidity increases. If acidity is 5.5 or below, plant toxicity due to manganese is likely in many plants. In alkaline soils, manganese availability is reduced as is solubility of materials containing this nutrient.

**manganese steel**  A very hard, brittle steel with 11 to 14% manganese and 1.5% carbon.

**manhole**  1. A concrete vault, usually with a heavy cast-iron lid, capable of being driven over by vehicles. Manholes provide access for maintenance of sewers, water line devices, electrical equipment, etc. 2. An access hole through which a person can gain access to an underground or enclosed structure. It usually is round with a heavy cover made of cast-iron. They are used for entering a utility vault (usually underground) or something similar.

**man-hour**  1. One worker toiling or persisting at a task for one hour. 2. The work accomplished by a worker in one hour. 3. A unit of measurement for scheduling or estimating costs of work and various tasks by using an average of the amount of work that one person can complete (on average) in one hour.

**manifold**  A series of valves placed together with associated fittings and connections.

**manlift**  A mechanical device used for lifting workers and materials, either on a boom that hydraulically extends, or on scissor lifts.

**Manning formula**  A formula used to determine the velocity of flows of streams or pipes useful in engineering sizes of channels and pipes.

**mantis** or **mantid**  See praying mantis.

**manual angle valve**  A valve for adjusting, turning on, or turning off a flow. This type of valve is configured with its water outlet oriented 90° from its water inlet. It delivers water on a 90° angle from the direction of water entering it.
manual bleed

On an automatic valve that is normally closed, a small device on the valve which if turned enough will allow a bit of water to escape, triggering the valve to open and allowing water to flow through the valve into the downstream piping. The small amount of water that escapes (bleeds) through the bleed valve to the outside water system while in operation is how it got its name. This is useful on an automatic sprinkler valve as it allows one to open the valve and operate sprinklers without accessing the automatic controller. It is useful when testing the valve for operation because of lack of response from sprinkler controller operation, or when repairing sprinklers and flushing lines.

manual drain  A drain valve of various styles and types, useful in a sprinkler system where it is manually opened or closed (by hand or with a valve key) to allow water to drain from a pipe. It is useful at low points on sprinkler pipes in temperate climates to prevent damage to pipes, fitting, etc. from freezing when full of water. (Compare with automatic drain.)

manual operation  Operated by hand instead of automatically. Sprinkler controllers have this option. Some sprinkler control valves are operated only by hand, but nearly all today are automatically operated with an option for manual operation (hand operation) by opening a bleed valve or by unscrewing some other part of the valve such as a solenoid.

manual system or manual sprinkler system  A sprinkler system that requires manual operation by turning on and off valves by turning a handle, knob, etc. by hand or with a sprinkler key.
**manual valve**  A valve (ball, angle, etc.) operated by hand or with a key that will allow one to turn on, or off, or adjust the flow of water. They were common in the operation of sprinkler zones before automatic valves became available. They are still used as drains on irrigation systems, allowing one to drain the system by opening the valve to prevent freezing. A manual **sprinkler system** is operated by these valves. Before **sprinkler systems** had the option for automatic operation, most sprinkler systems used **manual angle valves** that have a cross handle on top allowing one to slide a **sprinkler key (manual valve key)** over its intersection point and turn the valve off (closed) or on (open) while standing. These valves were usually brass and many are still in operation. They are still commercially available and used occasionally, usually as a necessity where there is no electrical service, or in replacement of existing manual valves.

**manual valve key**  A key as described in **manual valve** for turning off and on a particular type of sprinkler valve.

**manure**  Generally the refuse from stables, turkey farms, and cattle yards, including both animal excrements and straw or other litter. It may be too high in nitrogen or ammonia until composted.

**marble**  A hard metamorphic rock or **limestone** that can be sawn into slabs, takes a high polish, and is often veined or irregularly colored by impurities. It is often used in statues, benches, cladding of structures, etc.

**margin**  In botanical terms, the edge of a **leaf** or **leaflet**.

**marginal**  In botanical terms (especially in describing leaves), the edge or around the edge.

**marginal plants**  Plants that grow partially submerged or in shallow water.

**marginal shelf**  An underwater shelf created for **marginal plants**.

**maritime**  In botanical terms, plants growing near the ocean or the seacoast and so influenced by salt water.

**marker**  1. A term (derived from Magic Marker) for felt-tipped pens of various colors and widths often used in coloring drawings especially before computers became so useful in this work. 2. A plaque, monument, sign, flag, stake, or label that identifies a historic site, a surveyed line or corner, or a significant natural feature, etc.

**marl**  A naturally occurring soil amendment of **lime** with **clay** or with **silt** sometimes used in place of lime to raise the **pH** of **acid soils**. It is not as effective as lime unless applied in greater amounts to the soil.

**marsh**  A wetland dominated by monocotyledons (cattails, grasses) or other herbaceous **emergent** plant material.

**masking tape**  An adhesive-backed paper tape used in masking areas before painting.

**masonry**  1. Anything constructed with mortar holding pieces (clay, stone, brick, glass) together. 2. The art and craftsmanship of placing and building structures with stone, brick, concrete block, etc.

**masonry anchor**  1. A metal device with an opening for accepting a threaded bolt or screw to firmly anchor elements to masonry. It is placed in masonry when masonry is formed, or it is drilled and pounded into masonry afterwards. 2. A metal piece nailed to wood backing or mortared into a masonry back wall for attaching face masonry (brick, stone, etc.).
masonry cement

Cement used in mortar.

masonry course
A horizontal row of masonry units in a wall.

masonry drill
A rotating, electrically powered drill with a bit suitable for making holes in masonry.

masonry nail
A hardened-steel, small nail with a fluted shank used for fastening items to masonry.

masonry unit
A natural or man-made building unit of stone, burnt clay, etc.

mason’s hammer
A heavy-headed hammer with one face for pounding and the other side of the head shaped much like a chisel.

masonwork
See masonry.

mass balance
A balanced input and output of product in an ecological system or area.

mass movement
See landslide.

mass retaining wall
A gravity wall.

mass transfer
In phytoremediation, the conveyance of liquids, gases, or solid materials from one location to another, such as from groundwater to plant or from soil to plant.

mast arm
A piece of a lamp pole between the luminaire and the pole. It attaches to the pole and holds the luminaire (light fixture) over an area to illuminate it.

master plan
See comprehensive plan.

MASTERSPEC
A proprietary example or model of specifications for construction work produced by the American Institute of Architects and often used by the construction industry as a base for modifying to a specific job.

master switch
A single switch controlling supply of electricity to an entire site, project, structure, or building.

master valve
In irrigation, a valve that turns off water to the main line until irrigation is to occur and then turns water off at the conclusion of irrigation. With an automatic irrigation design using a master valve, one must make certain that a controller has a wire connection point for a master valve in order to operate it automatically.

mastic
1. A thick, putty-like substance used to seal between loosely fit concrete pieces, such as segments of a manhole placed atop another. It often comes in preformed thick strips covered with a protective paper or plastic strip that is stripped away as it is applied.
2. A coating used on thermal insulation to make it more durable, especially to weather conditions.

matchboards
Boards that have a formed, raised bump along the length of one edge and a corresponding groove along the other length of edge. This allows them to be placed together (one inserted into the other) side-by-side to make a tight, strong fit. Also called tongue-and-groove, or dressed and matched boards.

matched precipitation
In irrigation, sprinkler heads under the same water pressure having flow rates proportional to the area of coverage. The area of coverage is dependant upon arc, radius (or length of throw), or pattern. In matched precipitation, one quarter-circle head...
will allow to flow (gpm) one quarter the water that a full-circle head will allow to flow (gpm). This is usually achieved by using the same head with nozzles appropriately selected. In order for this matching of nozzles to be useful and assure matched precipitation over an area of irrigation, sprinkler heads must be placed to achieve head-to-head coverage. This condition assists in obtaining a more uniform and even distribution of water without wet and dry spots. For water conservation, this is important because when precipitation rates are not matched, one must water longer to assure adequate water to areas receiving less water.

**matched precipitation rate** 1. A system or zone in which all heads have similar precipitation rates and are spaced with head-to-head coverage. 2. Sprinkler heads and nozzles matched with flow rates proportional to the area of coverage. See matched precipitation).

**matched roof boards** Boards used in roofing that are matchboards.

**matched siding** See drop siding.

**material safety data sheets** According to OSHA, detailed information prepared by a manufacturer or importer of a chemical that describes the physical and chemical properties, physical and health hazards, routes of exposure, precautions for safe handling and use, emergency and first aid procedures, and control measures.

**mat foundation** A thick, reinforced concrete slab used instead of wall or column footings or foundations to support and distribute the load of a structure to a soil having low-bearing capacity.

**matrix** 1. Within a landscape mosaic, the background of ecosystems or land uses characterized by a large area within a mosaic with high connectivity. 2. With regard to mortar or cement, the material in which aggregate or sand is embedded.

**maturation region** The area of a root characterized by the formation of root hairs arising from the root epidermis or from the cortex. This area becomes the absorption zone and is highly structured, accommodating the flow of water, nutrients, and vascular tissues. The water and nutrients are transported to the other parts of the plant from this region.

**mature soil** A soil containing A horizon, B horizon, and a C horizon.

**maturing** The process of hardening mortar, plaster, concrete, etc.

**maturity** 1. A plant that has reached its maximum size. 2. Organic matter that has reached a point in decomposition in which it will not inhibit plant growth by robbing nitrogen through further decomposition.

**matutinal** In plant identification and descriptions, of the morning or opening and functional in the morning.

**maul, mall** A heavy-headed, short-handled hammer made of wood. See also mallet or beetle.

**MAX, max.** Abbreviation for maximum.

**maximum acceptable pressure** The highest pressure that the weakest component can withstand without damage, or without premature wearing and eventual failure of the component.

**maximum demand** 1. The greatest flow of water (or waste discharge) for all the fixtures, heads, outlets, etc. in a pipe system. This is usually for a specific time or the time of most use (most water flow). 2. The most electricity
maximum diameter solids

required or expected in a system usually for a specific time.

maximum diameter solids  With regard to pumps, the largest solid the pump can pass without clogging, or jamming.

maximum run time  The amount of time a sprinkler can operate on a particular soil and vegetation type before it exceeds its infiltration rate into the soil. Each soil has a basic intake rate, and when exceeded, the extra water must run off the surface. This rate is expressed in inches per hour (clay, 0.10; silty clay, 0.15; clay loam, 0.20; loam, 0.35; sandy loam, 0.40; loamy sand, 0.50; sand, 0.60) can be divided by the precipitation rate and multiplied by 60 (to convert to minutes) for the maximum amount of time that sprinklers in an area with a specific soil type should be run to avoid runoff.

maximum size of aggregate  With regard to concrete, the largest aggregate particles within the mix in sufficient quantity so as to affect the mix. This is usually determined by sieve size. It is common to allow about 5 to 10% of the concrete’s weight to be made of this size.

maximum working pressure  The maximum pressure at which piping materials and devices are safe to use.

maze or planting maze  A fanciful planting scheme designed with a much contrived tortuous path between hedges with dead ends and many splits in the path making it difficult for one to find a way through the area on the path.

mbf  Abbreviation for thousand board feet.

m.b.m., MBM  In the lumber industry, abbreviation for thousand board measure (feet).

MC, mc  1. Abbreviation for moisture content.  2. Abbreviation for metal-clad.

MC asphalt  Abbreviation for medium-curing asphalt.

mcf  Abbreviation for thousand cubic feet.

MCM  Abbreviation for thousand circular mills.  See wire size.

meadow  An area predominated by grasses or forbs and often associated with wildflowers. They are mostly thought of as openings in woods or forests, and have few if any trees within their area. Some seed companies have a seed mix they call by this name with plants common to such areas.

meager lime  With regard to lime for mortaring, a low-purity lime containing 15% impurities or more.

mealybugs  Scaly insects of the family Pseudococcidae having a white powdery covering. They have an oval-shaped body, with soft white plates that have the white cotton-like covering. Unlike most scales, these bugs can move, but very slowly. They can cause stunting or death of plants by sucking plant juices. One may find that if they have infested for a time there can be a black, sooty mold growing on the honeydew they secrete. Ants often feed on the honeydew. Spray plants off every two weeks or so to knock them off or use an insecticidal soap. Indoors they can be controlled by wiping with a cotton swab soaked in rubbing alcohol. Natural predators are ladybugs and lacewings.

meander  A bend or loop in a water course; or a water course that bends and turns.

mean gradient  Average slope.

measuring chain  See chain.

mechanical connection  Attachment of two or more elements with fasteners such as bolts, rivets, or screws, instead of with glue, or welding.
mechanical controller  A sprinkler controller that has manual switches, dials, knobs, pins, etc. for setting irrigation control. (Compare with digital controller.)

mechanical joint  With regard to pipe connections, a joint tightened with nuts and bolts. Some incorrectly refer to any pipe not glued at its joints as a mechanical joint.

mechanical pencil  An instrument that clamps down its narrow, cylindrical drawing material when in use and can allow the drawing material's extension as it is used up in drawing or writing.

mechanic's lien  A legal encumbrance placed upon a property by a contractor or one supplying goods and services that requires contracted labor or materials not paid for by an owner to be paid in full before the property is free and clear for sale to anyone. Mechanic's liens can be used to force the sale of a property to satisfy the lien and pay the debts.

median  That portion of a divided highway separating lanes of traffic that is raised, landscaped, or left natural.

medio-variegated  A term descriptive of leaves having a lighter center than the color of the margin.

medium-duty scaffold  A scaffold capable of carrying a working load not in excess of 50 lb/sq ft (245 kg/sq m).

medium sand  Sand with particles 1/15 to 1/6 in.

medullary ray or pith ray  Horizontal tissues or tubes extending from the pith of a tree to the outer portions of the stem or trunk. These spaces are used to store and transport food.

megagram  The measurement of 1,000,000 grams.

membrane  1. In construction work, a water-resistant or waterproof material or combination of materials used in water features, on flat roofs, around the outside of foundations, etc. 2. In botanical references, a very thin covering or sheet separation.

membranous  In botanical terms, a texture of a membrane that is thin, rather soft, and more or less translucent.

memorial park  A cemetery.

MER  Abbreviation for mechanical equipment room.

meristem  Plant tissue that divides to produce new cells. Shoot or root tips have meristematic regions at their tips.

meristematic region  The area of the root characterized by cell differentiation and little absorption.

mesh  In construction work, usually a fabric of steel.

mesic  1. Characterized by, relating to, or requiring a moderate amount of moisture. 2. A temperate or moist microclimate that is not xeric or hydric.

mesocarp  In the fruit of some plants, the middle layer of the pericarp.
mesopores

The pores in soil filled with water between field capacity and wilting point. See also micropores and macropores.

mesotrophic Used in reference to a moderate amount of nutrients in water.

metal halide lamp A lamp that uses an electric current to produce a light from a metal vapor such as mercury or sodium.

metal leaf A thin coating of silver, gold, etc. to improve the appearance of a material.

metallophytes Plants that preferentially colonize in soils rich with metals.

metal-organic complex See chelate.

metastability See conditional stability.

meter, metre (m) An International Standard measurement unit of length equal to 39.37 in or 10 dms.

metes and bounds Description of property (land parcels) using measurements of distances and bearings in delineating and establishing edges, boundaries, or limits.

methyl bromide A chemical soil sterilant often sold in cans under pressure. This is a dangerous gas that must be used and handled with care.

metric ton (t) A metric weight of 1000 kilograms, 1,000,000 grams, 1.102 U.S. tons (short tons), or about 2205 pounds.

metropolitan planning organization A local government having legal jurisdiction over a city area for land planning, transportation, and land uses.

metropolitan statistical area An area established by the Bureau of Census for a county with a central city or adjoining central cities totaling 50,000 or more in population, and the surrounding suburbs that are strongly linked economically and socially.

Mg Abbreviation for megagram(s).

mg Abbreviation for milligram(s).

mgph Abbreviation for thousand gallons per hour.

mh, m.h. 1. Abbreviation for manhole. 2. Abbreviation for metal halide. 3. Abbreviation for man-hour.

m/hr, m.h. Abbreviation for man-hour.

mi² Abbreviation for square mile(s).

micro- A Greek prefix, meaning small, or male, often used in botanical terms.

microclimate A reference to a fertilizer that is hardened into the shape of a stake so that it may be forced into the ground. It decomposes, and some materials leach, acting much the same as a fertilizer tablet. Any change in climatic conditions such as wind, sunlight/shade, temperature, humidity, etc. in a relatively small, distinctly different area or locality, as affected by man-made or natural elements such as buildings surrounding a city street, a hill protecting from wind or hot late afternoon sun, plants affording shade, a water body affording an increase in humidity, etc. Microclimates are created on each side of a
building facing a different direction, or in areas protected by trees, or in a building's courtyard.

**microclimate factor** \( (K_{mc}) \) In irrigation auditing, a factor used to compute water needs. The average landscape has a factor of 1. A landscape with shade or wind protection is less than 1. A landscape surrounded by buildings, paved surface, fences, etc. will have a factor higher than 1 with higher water needs.

**micro-irrigation or low-flow irrigation or low-volume irrigation** A term used in reference to application of irrigation water at very low rates. The flow from each emission device is usually measured in gph (gallons per hour) rather than gpm (gallons per minute). Advantages of this irrigation over rotary or spray irrigation are water conservation (reduction in evaporation, loss to wind, less runoff, only essential areas covered), pipe size and strength requirements are reduced, weed growth between plants is reduced, system operation does not interfere with normal use of the land, reduced liability (no water on walks and driveways), less erosion on steep slopes, and no spray is allowed on building or fences when irrigation occurs at their base. Disadvantages are that they are high maintenance (small passageways may become clogged, filters must be cleaned), limited application (not for lawns and some plants), filtration and pressure devices are required, surface pipes or emission devices are subject to damage, no visible water leads to lack of user confidence, and users may not notice any poor operations.

**micronutrient** 1. A trace element. 2. An organic compound required for biological growth in relatively low quantities compared to the major growth nutrients. Example of micronutrients are molybdenum, copper, boron, cobalt, iron, iodine, manganese, zinc, and chlorine. Many commercial fertilizers contain micronutrients. They may or may not be listed on a package with the macronutrients. If they are applied in excess, some can be toxic.

**microorganism** An organism (plant or animal) such as bacteria, algae, fungi, or viruses too small to be seen with unaided vision.

**micropores** The smallest pores or gaps in a soil identified as those that, after rain, are still filled with water when a soil reaches wilting point. They are small enough and the water is held tight enough that it cannot be drawn out by plant roots. (Compare with mesopores and macropores.)

**micropropagation** The propagation of plants using tissue in a test tube or other container.

**micro-spray, microspray** Distribution of water to plants by very small spray devices on low pressure.

**micro-sprinkler** A sprinkler operated at low pressure, with a small distribution pattern.

**midge** Tiny two-winged flies sometimes called punkies or no-see-ums. Their larvae can cause plant galls as they tunnel into tissue.

**midrib** The midvein or the middle or main rib of a leaf or leaflet.

**mildew** A whitish fungal growth appearing on decaying organic matter or on plant material, etc. See also powdery mildew and downy mildew.

**mild steel** An iron made with a minimal amount of carbon (0.15 to 0.25%) that is often used in tanks and other areas where rust resistance is important.

**mile (m)** A measurement of 5280 ft.
milky disease

A bacterial infection that kills Japanese beetles and grubs that may be applied to lawns to control them.

mill construction

Heavy timber works.

milligram (mg)

The metric weight measurement of 0.001 grams or 0.015 grains.

milliliter

The metric measurement equal to 0.001 l or 0.061 in³.

millimeter (mm)

The metric length measurement of one thousandth of one meter (0.001m), or 0.039 of an inch.

milling

1. The processing of stone, or applying various cutting or shaping techniques to finished stone. 2. The process of dressing a surface of metal with rotary cutters to produce a desired surface.

millipede

A cylindrical, hard-shelled myriopod 1 to 2 in long and coiled when at rest and having two pairs of legs on each body segment. They generally only feed on dead or decaying material.

mill run

Ungraded and uninspected products from a mill.

millwork

Wood products made at a wood-planing mill ready for use as moldings, cabinets, door frames, etc.,

min.

Abbreviation for minute or minimum.

mineralization

The conversion of an element from an organic form to an inorganic state as a result of microbial decomposition.

mineral soils

Soils in which the mineral component predominates.

mineral spirit or petroleum spirit

A flammable thinner obtained in petroleum distillation often used in paints and varnishes.

mini-excavator

A small trackhoe useful for digging in small areas and for trenching.

minimalist design

A type of design where the use of decorative elements, including ornamentation and color, is kept to a minimum.

minimum acceptable pressure

The lowest water pressure satisfactory for operation at the
most hydraulically remote fixture or component in a piping system.

**minor change** A change in construction work not involving an adjustment in the **contract sum** or **contract time**.

**misalignment sensing probe** A device mounted in the casing of a pump **impeller** that monitors its wear and separation so that when it is worn it can be replaced before serious damage occurs.

**MISC, misc.** Abbreviation for miscellaneous.

**mission tile** A curved, red-clay roofing tile laid in courses, with adjacent tiles having their convex side laid alternately up and down. See **Spanish tile**.

**mister** A device delivering a very fine spray or almost fog of water.

**mite** A small arachnid that sucks plant juices. There are many varieties causing disease with a variety of symptoms on plants. Most are difficult to see with the unaided eye, but the damage is visible in striped leaves and small webs, especially on undersides of leaves.

**miter box** A channel with grooves for guiding a handsaw at the proper angle in making a miter joint.

**miter joint** An angled joint where two members meet.

**miter, mitre** A beveled end or edge.

**mitigation** Any option that will decrease the impact (negative or positive) of an action or occurrence on the natural or human environment. This is a practice that ameliorates environmental impact by replacement, restoration, or enhancement of functional values. In changes on the land, this refers to efforts to prevent, avoid, minimize, compensate for, or replace damaged land, water, air, plants, wildlife, economic impacts, social impacts, etc.

**mitigation banking** With regard to wetland mitigation, accumulating acreage credits through replacement enhancement, restoration, or preservation of wetlands to be applied toward compensation for filling other wetlands as may be required by government agencies.

**mixed bud** A bud that produces both flowers and leaves such as with a leafy branch having one or more flowers.

**mixer** See **concrete mixer**.

**mlf** Abbreviation for thousand linear feet.

**mm** Abbreviation for **millimeter(s)**.

**moat** A broad, deep, usually water-filled trench surrounding a property or area.

**model** 1. A usually three-dimensional representation at a small scale of a full-scale project for purposes of study or to illustrate construction. 2. A pattern of something intended to be reproduced. 3. In land analysis, any method of problem solving.

**moderately well-drained soils** Soils in which water is removed somewhat slowly, therefore, the soil profile is wet for a small but significant portion of time.

**modification** 1. A written amendment to **contract documents**. 2. A **change order**.

**modulus of rupture** A measure of the load-carrying capacity of a beam being expressed as the ratio of the bending moment at rupture to the section modulus of the beam.

**modulus of toughness** The amount of energy per unit volume absorbed by a structural material when subject to shock or impact without fracture.

**moellon** Filling between stone facing walls made of stone rubble.

**mold** A fungus on dead or living material.
molding

molding  In construction of structures, long decorative pieces added at edges, corners, etc. as an embellishment.

mole  1. A long, metal, bullet-shaped, enclosed tube with an internal manner that is driven by forced air through a connected nose. It is used to hammer its way under pavements to provide paths for pipes, wires, etc. 2. Burrowing insectivores (family Talpidae) with tiny eyes, concealed ears, soft fur, short forelegs pointing outward, flattened hands, and claws for digging. They primarily eat earthworms, larvae, and bugs, but will occasionally eat roots and nibble on greens. Tunneling near the surface can sever roots, heave plants, and damage lawns. Their tunnels are usually about 5 to 11 in underground and exits frequently are a raised saucer of earth with a depressed center where a hole may be visible. Trapping seems to be the most effective way of preventing damage from moles.

molybdenum  A micronutrient necessary for plant growth. It allows the reduction of nitrates in plants. Symptoms of a lack of it in plants are interveinal chlorosis, stunting, and general plant paleness. It may be lacking in soils that are highly acidic (low pH). Raising the pH with lime generally assists in making it available unless it has been leached out.

moment  A commonly used term for the more descriptive expression of bending moment. It is the force applied to a body tending to cause the body to rotate about a point or axis line. It is equal to the product of the force and the perpendicular distance of the point from the line of action of the force.

momentum  The product of the mass of a body and its velocity.

monkey wrench  A wrench with one fixed jaw and another movable jaw for grasping round objects.

monoa mm onium phosphate  A fertilizer with 11% nitrogen and 48% phosphorus (11-48-0).

monocarpic  Plant material that only flowers and fruits once and then dies. Some plants of this description live for many years.

monocot  A shortened name for monocotyledon.

monocotyledon or monocot  An angiosperm (division of flowering or seed plants) with seeds that have one cotyledon when they begin growth, and parallel veins in their leaves. See also taxon, plant classification, and dicotyledon.

monocious  Having both female and male reproductive organs on the same plant (stamens and pistils) in separate flowers. Examples are begonias and pines.

monolithic  1. Shaped from a single block. 2. Characterized by massiveness. 3. Concrete cast in a single piece.

monomial  With reference to a scientific name (botanical name), this means simply giving one portion of the name identifying a plant, usually the genus name. See also binomial and trinomial.

monomorph ic  A botanical term that means all alike in form.

monotypic  Botanically this describes something of a single species or genus.

montmorillonite  A common clay mineral that swells and becomes soft and greasy when wetted.

monument  1. An object marking the corners, boundaries, or elevation of real property or es-
establishing the location of a survey station. 2. A stone, pillar, megalith, structure, building, etc. built in memory of the dead (as in a cemetery) or in commemoration of an event.

**monument sign** A relatively low sign with elements, features, and design causing it to appear as if it belongs to the landscape more than to the sky.

**moraine** The material (sand, gravel, cobble, boulders, etc.) carried and deposited by a glacier.

**mormon board** A metal plate attached to the teeth of a backhoe or trackhoe for grading soil smoothly without teeth marks in the soil.

**morning glory** See bindweed.

**mortar** A moldable mixture of cementitious material (cement, lime, sand, or water) used to secure masonry units, stone, brick, etc. after it hardens in place. It is used to cement items together, making them act as one masonry unit. Mortar must be of high quality when used outdoors to avoid moisture entering walls, low masonry strength, cracking, or disintegration of masonry. The best of mortar types for outdoor use are type M, S, and N. (Type O is not recommended for outdoor use.) Most mixtures generally have 1 part by volume of Portland cement, ¾ to 1 part by volume of hydrated lime, and a water amount not less than 2¼ to 3 times the sum of the volumes of cement and lime used.

**mortar bed** A thick layer of masonry mortar for setting a member or unit into.

**mortise** A hole, notch, or recess cut into a timber or other material.

**mortise-and-tenon joint or mortise joint** A joint between two members formed by fitting a tenon at the end of one member into a mortise in another member.

**mosaic** A repetition of patches, corridors, and matrix forming a pattern on a large area of land.

**mosaic diseases** Plant virus infections molting foliage and stunting plants.

**mosquito** Any of two-winged flies (Culicidae) with females able to puncture the skin of animals and suck blood. They are sometimes the carriers of serious diseases. They lay eggs on the surface of still water. The wiggly larvae live in water, and are eaten by fish. Prevent infestation by draining standing water or stocking with fish.

**moth** An insect much like a butterfly, but with wings usually proportionately smaller and usually with a duller color and stouter body. Their larvae eat plants.

**mother plant** A plant that is pollinated to create a hybrid seed.

**motor grader** A machine (usually diesel powered but sometimes towed) with a large blade usually mounted toward the middle of the machine used to move, scrape, or spread earth materials. Its adjustable blade makes leveling much easier.
mottled

A term used to describe spotted or discolored portions of leaves.

mound

A berm; an area of raised ground.

mounded

1. A description of an area of ground with an earthen mound or mounds.
2. A descriptive term for ground covers (and some low horizontal shrubs), and grasses (or grass-like plants) that have a mounded form. In ground cover, mounded forms may be quite prostrate, but at the point of each plant center, the foliage is mounded higher. This form in grasses usually indicates a mounding form made of weeping foliage. The upper leaves cover the lower leaves. (Compare with tufted, upright grasses, upright divergent grasses, upright arching grasses, arching.)
3. Any material or debris in a pile or heap.

mountable curb

A low curb with a flat slope designed to be crossed easily by a vehicle.

moving lane

Any traffic lane where traffic movement is the primary or sole function. (Compare with parking lane.)

mow

1. To cut down or cut off plants, especially grass, to an even height.
2. The hay storage area in a raised portion of a barn.

mucronate

In botanical terms, tipped with an abrupt short point. (Compare with retuse, cuspidate, aristate, acuminate, acute, emarginate, obtuse.)

mucronulate

A diminutive of mucronate.

mud

1. Soil mixed with sufficient water to make it pliable.
2. Masonry mortar.

mudflow

The movement of a mass of weak, water-saturated soil downslope.

mulch

1. A top dressing material spread over a planting bed, or around the base of a tree,
usually made up of organic material (pine needles, shredded bark, hay, straw, grass clippings, etc.). Other materials used as mulch include crushed brick, crushed stone, river rock, cobble, and shredded newspapers. Mulch can be used to protect seed, plants, rhizomes, or bulbs from extremes in heat or cold, or from erosion. It can also be used to prevent weed germination, and when used for this purpose it is often placed over a weed barrier fabric. It may also be used for its aesthetic qualities, for moisture retention in the soil, to promote soil granulation, and to prevent the soil surface from becoming crusty. It is advantageous to pile mulch up around some herbaceous (or herbaceous-like) plants, but piling mulch against woody plants, tree crowns, or over the root collar is detrimental to the health of the plant. See root collar and earthing up. Organic material used in mixture with soil to produce a more favorable growing medium for plants. Roots growing from a soil mix into a surrounding soil usually face difficulty because of the soil interface where there is a change in soil consistency. Mulch also creates a soil more favorable to water retention, which can be helpful in retaining water for plants or detrimental in holding excess water because of the soil interface, promoting root rot.

mulching mower A lawn mower that cuts and then continues to chop lawn clippings as one mows, producing smaller pieces capable of decomposing faster in the lawn and assisting in preventing buildup of thatch.

mule A hybrid plant that is sterile.

mull A layer of forest soil rich in humus made of both organic matter and minerals.

multicapital A botanical term, many-headed.

multistem Plants that have several stems arising from the ground rather than one single stem.

municipal services Community services traditionally provided by local government entities such as water, sewer, roads, parks, schools, fire protection, police protection, etc.

muriate of potash or potassium chloride A chemical fertilizer with 48 to 62% potassium and about 15% sodium chloride. The salts can be damaging in some soils and to some plants. See also potassium chloride.

muricate A botanical term, beset with small, sharp projections, or a rough surface made of many sharp points.

mushroom compost A by-product of the mushroom industry that may be used as an amendment to soil, but should not be mixed at more than 50% by volume as it may contain toxic levels of accumulated salts. Leaching may be necessary.

mutant A plant with an inheritable change different from its parents that occurs in the genetics of the plant without external influence. It may be taller, shorter, more compact, hardier, hold its leaves longer, have larger flowers, a different colored flower, leaf, etc. These changes cannot be the result of soil conditions, disease, temperature, etc., but are actual changes in the genetics of the plant.

mutation In horticulture, a change in plant genes that produce offspring differing from the parent plant.
**muticous**

**muticous**  A botanical term, blunt without a spine.

**mxm.**  Abbreviation for male by male, which describes a nipple or other plumbing or irrigation device with outside threads on both of its ends.

**mycelium**  The mass of hyphae (branched filaments) produced by many fungi. This does not include the spore-bearing parts or organs of fungi.

**mycorrhiza**  A fungus that attaches to roots for a beneficial association. It unsheathes and attaches to roots with hyphae without apparent harm to the plant. Indeed with many plants it actually increases the effective diameter of the root and its absorptive surface. There is usually an enhanced nutrient and water absorption ability for the host plant. This is a symbiotic relationship where the fungus can decompose organic matter or absorb energy and nutrients for the plant in a manner that the plant cannot. Mycorrhiza also produces hormones having beneficial effects for the host plant. In return the mycorrhiza receives a steady supply of photosynthetic energy from the host plant.

**myd**  Abbreviation for thousand yards.

**Mylar**  A thin, transparent plastic with a rough enough surface to be used for drafting or drawing upon.
N, n  1. Abbreviation for north. 2. The symbol for nitrogen. This is the first percentage listed on a complete fertilizer bag. 3. Abbreviation for nail. 4. A type of exterior mortar having 1 part by volume Portland cement, 1 part by volume hydrated lime, and water in the amount of 2¼ to 3 times the volume of cement and lime. It is mostly used for residential construction, masonry veneers, and interior construction. See also mortar types M and S.

NA, na  1. Abbreviation for not available. 2. Abbreviation for not applicable.

NAA  Abbreviation for naphthalene acetic acid.

NAAMM  Abbreviation for National Association of Architectural Metal Manufacturers.

nab  The strike plate for a door bolt.

NAHB  Abbreviation for National Association of Home Builders.

nail  1. A slender, usually sharp, pointed fastener designed to be pounded into material for attachment of something. It holds better to material if it is pointed, but splits wood less if it is blunt. Those made of aluminum, stainless steel, or hot-dipped-galvanized steel are weather resistant. Those coated with zinc, cement, or other materials, or with spirals or rings formed in them, hold to the object they are pounded into much tighter. 2. The act of pounding the fastener described in (1).

nailable concrete  Concrete with lightweight aggregate, or sometimes also containing sawdust, into which nails can be driven easily.

nail claw  An essentially straight, steel bar with a hooked, curved, or claw-like end with a flat tip and a slot in it. The slot is for fitting over a nail head and allows the nail to be pulled from material into which it has been driven. It is also useful in tearing apart structures, walls, etc. during demolition or remodeling. The flat tip can be driven between attached boards and used to pry them apart.

nail plate  A metal plate fitting over two joining wood members having holes that allow nails to be driven through to secure the attachment of the two members.

nail punch  A short, tapered, strong, steel tool with a slightly broadened top used to pound nails flush with a surface, or below a surface, or for marking a metal to start a drill bit in place.

nail stain  A stain caused on a surface, which usually bleeds downward from the nail because the nail used was not weather resistant.

nailing strip  A wood strip, attached to a surface as a base for attaching another material with nails.

naked  A botanical term, a plant lacking various organs or appendages.

naked flooring  The framework of flooring before floorboards are laid.

nanometer  A measurable length of light wavelengths equal to $10^{-9}$ m or 10 angstroms (Å).

naphthalene acetic acid  A synthetically produced auxin.
**naphthenate**

**naphthenate** A drying agent in paints that also includes lead, cobalt, calcium, or manganese salt.

**napiform** A botanical term that means turnip-shaped.

**natatorium** A swimming pool.

**National Electrical Code** A nationally (U.S.A.) accepted guide to safe installation of wiring along with its associated equipment.

**National Electrical Manufacturers Association (NEMA)** A trade group of electrical manufacturers providing standards of electrical construction and dimensional uniformity of equipment.

**National Electrical Safety Code (NESC)** Electrical rules prepared by the NEMA and approved by ANSI.

**National Historic Landmark** A historical marker or place of significance often with a structure, sign, kiosk, or expanded facilities explaining its significance to tourists.

**National Register of Historic Places** A U.S. government organization that maintains information on structures, objects, districts, and sites of national, state, or local historical significance.

**National Resources Conservation Service (NRCS)** A U.S. government agency, formerly known as the Soil Conservation Service (SCS) within the Department of Agriculture, providing leadership and administering programs to help people conserve, maintain, improve, and sustain natural resources and environment. It provides statistical information, maps, technical assistance, and funds soil conservation and farmland protection programs. NRCS has offices in all states and in most rural counties.

**National Trust for Historic Preservation** A nonprofit private organization chartered by the U.S. Congress to encourage preservation of historic buildings, objects, and sites in America. Address: 1785 Massachusetts Avenue, NW, Washington, DC 20036.

**native plant** 1. A plant that can be found growing and reproducing without human assistance in an area. 2. A plant that was found growing and reproducing in an area before recent (usually a point in time specified) human assistance in becoming established. Humans by nature have always moved seed from one location to another in clothing, food, domesticated animals, or their belongings, hence the necessity of specifying a time period.

**native species** Any species of living organisms that are found existing and reproducing naturally in a specific area. The difficulty is that nature rarely makes boundaries the same for living organisms, while most boundaries of states, counties, etc. are arbitrary in relation to ecosystems.

**native vegetation** Any indigenous plant adapted to soil and climatic conditions of an area.

**natural-cleft** A term used to describe stone split (cleaved) parallel to its stratification for an irregular, somewhat flat, surface.

**natural convection** Air or water movement due to differences in density resulting from variations in temperature causing movement or circulation.

**natural drainage** The flow of water over undisturbed existing surface topography of the earth.

**natural environment** The area surrounding a living organism including the area surrounding and influencing humans, but in most cases not including anything influenced by humans. This
is because many believe humans are influenced by natural environment, but do not consider humans to be part of the natural environment. All organisms influencing the environment would include humans.

**natural erosion** The amount of erosion expected on undisturbed land, usually between 0.18 and 0.30 tons of earth per one acre per year. (Compare with accelerated erosion.)

**natural features** In terms of land, conditions produced by nature such as surface land forms, geology, slopes, vegetation, water, drainage patterns, aquifers, recharge areas, climate, microclimate, floodplains, aquatic life, wildlife, views, and landscape ecological patterns of patch, corridor, or matrix.

**natural finish** An application, varnish, water-repellent preservative, sealer, etc. that does not significantly affect the original color or grain, but often enhances and preserves the material to which it is applied.

**natural grade** The elevations and contours or land forms of the undisturbed natural surface of the ground of a site or land area.

**naturalize** Allowing a plant to reseed or spread with whatever random natural causes may affect its propagation and distribution in the landscape.

**naturalized** A plant that is thoroughly established and growing in an area, but originating from another area.

**natural open space** Land or water that is essentially unimproved.

**natural sand** A sand that is not crushed, but is the result of natural disintegration and abrasion of rock.

**natural species** Any species of organism naturally found in an area. They may also include nonnative species of vegetation or wildlife that are adaptable to the climatic conditions of an area and are currently found living and propagating in an area without human assistance.

**natural stone** Rock from its native occurrence in the ground, not man-made imitation of rock as sometimes used in masonry.

**natural ventilation** Air movement within a greenhouse or building facilitating moving out stale air by natural forces, rather than by fans.

**natural wetland** A wetland that occurs naturally, without construction.

**NBC, nbc** Abbreviation for National Building Code.

**NCM, ncm** Abbreviation for noncorrosive metal.

**necrosis** A plant part that is dead and discolored.

**nectary** A descriptive botanical term referring to a plant’s nectar-secreting gland that is usually a small pit or protuberance.

**needle** The slender, narrow, needle-like leaves of coniferous plants.

**needle leaf shape**

**needle cast** This disease of pine, fir, and spruce trees is caused by several fungi. Infected trees look scorched. It usually starts on lower branches with needles falling or sometimes leaving them with only green tips. Eventually it can kill the tree. Prevention is aided by avoiding poor drainage areas, and good air circulation around trees.
negative environmental impact

negative environmental impact Consequences in a realm involving interrelated or interdependent living things and their surroundings having influences of a detrimental nature, or being influenced in a detrimental way. It is most often used in the context of an anthropomorphic (human) cause of detrimental environmental changes, and focuses on the effects of those changes. However, what is viewed as a negative impact upon one element or organism may be a positive impact to another. See environmental impact.

negative impact See negative environmental impact.

negative-slump concrete A concrete mix having a zero slump before and after the addition of water. See also slump test.

NEMA Abbreviation for National Electrical Manufacturers Association.

nematicide A pesticide used to control nematodes.

nematode A microscopic, thread-like transparent worm that feeds upon living and dead organic matter. Some are parasites that infest roots, bulbs, and leaves. These are the most abundant animals in the soil. They cause problems for arborists, agriculturists, nurseries, greenhouses, and new plantings. They are parasitic, in most cases living inside plant roots and usually deforming them. They extract cell contents, form knots, and galls on the roots of the host plant.

nemoral Of or pertaining to woods or groves.

neon lamp A cold-cathode glass tube lamp filled with gas. Some use neon gas and some have filters to control color. They are often used for sign lettering, etc.

neoprene A synthetic rubber with high resistance to sunlight and oil. It has been used for roof membranes, flashings, liners for water features, etc.

NEPA Abbreviation for National Environmental Policy Act.

nerve In botanical terms, a vein (nerve), especially a prominent longitudinal vein, of a leaf or other organ in a plant.


net acreage Gross acreage less any selected or necessary deductions of acreage in zoning land-planning computations.

net area or net volume The area or volume calculated with the omission of any portions not relevant, essential, or included as part of the area of concern.

net cross-sectional area With regard to masonry units, the gross cross-sectional area of a section through a unit not including empty cores or cellular spaces.

net cut With regard to earth-moving activities, the required cut of earthen material minus the required fill (if any) of material needed for a specific project or site.

net fill With regard to earth-moving activities, the required earthen fill minus the required cut (if any) of a specific project or site.
net positive suction head (NPSH)  See net positive suction head available.

net positive suction head available (NPSHA)  The amount of pressure available for causing water to flow from its point of suction to the pump. It is calculated by taking the atmospheric pressure in feet at the elevation where the pump will be placed (33.9 ft at sea level) and then subtracting the following from it: the static height (in feet) of liquid below the pump centerline; the suction pipe friction loss (in feet of head); the entrance loss (in feet of head); the suction side miscellaneous loss (in feet of head); and the vapor pressure of water (at 60°F, 0.2563 psi $\times 2.31 = 0.59$ ft of head; this amount is almost insignificant but varies with temperature).

net positive suction head required (NPSHR)  The head pressure necessary for a pump to be able to draw water from a source. It is usually indicated in feet. In selecting centrifugal pumps for irrigation or water features, it is helpful to know that as their flow or capacity increases, their NPSHR also increases. Pump performance curves charts supplied by manufacturers give the necessary NPSHR for the pump with variations in impeller diameter, etc.

net precipitation rate (NPR)  A measure of the amount of water in a specific area of a sprinkler irrigation system that actually reaches the landscape. The net precipitation rate is the gross precipitation rate minus the losses to wind, evaporation, or interception, that occurs between the sprinkler nozzle and the landscape surface. It is necessary to use field catch cans (catchments) to obtain this information. It may be calculated by multiplying the average catch volume, in cubic inches (or convert milliliters to cubic inches by multiplying by 3.66) and dividing it by the product of the amount of time sprinklers were run multiplied by the catch can (catchment) opening area in square inches.

net section  A term used for the area of a cross section through a structural member including deductions for any holes in the area of the section. (Compare with gross section.)

net-veined  In plant identification and descriptions, veins forming a network.

network  In landscape ecology, an assemblage of interconnected corridors.

neutral  With regard to horticulture, any substance or compound, natural or man-made, that has a pH of 7.0.

neutral flower  In plant identification and descriptions, a flower with neither stamens nor pistils.

neutral soil  A soil that has a pH value of 7.0 and so is neither acidic nor alkaline. Soil having a pH range from 6.6 to 7.3 is thought by many as neutral. In actuality, truly neutral soil has a pH of 7.0.

neutral wire  The ground wire (grounding conductor) in an electrical system. It completes the return path of electricity to the source.

newel  1. The post around which a circular staircase winds. 2. A taller post at the top or bottom of stairs assisting in supporting a handrail and often decorative.

new town  Large planned communities with a pedestrian-friendly development pattern, and with open space connections and preservations. They generally are made up of community centers, housing, offices (or other employment opportunities), retail, recreation, open space, and public facilities.

NFC  Abbreviation for National Fire Code.

NFPA  Abbreviation for the National Fire Protection Association.
NGR stain

NGR stain or non-grain-raising stain A liquid wood stain free of water with a base of alcohol or another solvent.

NIC Abbreviation for not included in the contract.

niche 1. The area and materials needed by an organism for survival considering its habits and environment. 2. A recess in a wall, usually masonry, that is often semicircular in plan view and sometimes contains an urn or sculpture.

nickel A silver-colored metal alloy used with steel to assist in making it more resistant to corrosion and rust.

nickel steel Steel made up of 3 to 5% nickel and 0.2 to 0.5% carbon.

nicotine sulfate A broad spectrum botanical pesticide restricted in the United States because of its toxicity.

nidged ashlar or nigged ashlar Stone having a surface with a sharp pointed tool.

NIMBY Abbreviation for the phrase, not in my backyard. This phrase has been used in reference to those who do not want a particular activity or thing near where they live or spend time.

nippers Hand cutters with jaws at the end used for cutting wire or thin metal rods.

nipple A piece of pipe with threads on both ends for connecting threaded fittings or equipment.

nit A unit of luminaire equal to 1 candela per sq m.

nitrate of ammonia Also known as ammonium nitrate, a chemical fertilizer that has 32.5 to 34% immediately available nitrogen. It must have ventilation or it can catch fire or explode. It cakes easily in storage.

nitrate of lime or calcium nitrate This chemical fertilizer contains 15.5% immediately available nitrogen, and it slightly decreases soil acidity.

nitrate of potash or potassium nitrate This chemical fertilizer contains about 13% immediately available nitrogen, and 44% water-soluble potash.

nitrate of soda or sodium nitrate This compound chemical fertilizer contains about 16% immediately available nitrogen, and slightly increases alkalinity.

nitrification In soils, the formation of nitrates and nitrites (forms available to plants) from ammonia (or ammonium compounds of organic materials) by microorganisms. Also, transformation through oxidation of ammonia nitrogen to nitrite or nitrate forms.

nitrogen In fertilizers, the first percentage listed on a label. This is the nutrient most used by plants. They consistently need this nutrient to sustain growth. This nutrient is supplied in nature through dead plant and animal material decomposing and leaching into the soil.

nitrogen deficiency A plant lacking the essential growing element of nitrogen. This can be recognized by smaller leaves, yellow leaves, and slow growth.

nitrogen fixation The change of nitrogen into a compound useful to living things. There are three natural ways nitrogen may be made into a useful form fixed with other substances: (1) It is
taken from the atmosphere at the time of lightening strikes by its electrical energy and changed to nitric oxide and nitrogen dioxide. It dissolves and comes to the earth as rain in a diluted form.

(2) Certain legume-type plants through cooperation with bacteria (rhizobia) are able to convert atmospheric nitrogen into nitrogen compounds.

(3) There is a metabolic assimilation of atmospheric nitrogen gas into ammonia or nitrogen compounds by soil organisms such as Azotobacter chroococcum and Clostridium pasteurianum.

nitrophoska A compound chemical fertilizer containing approximately 12% nitrogen, 12% phosphorus, and 21% water-soluble potash.

nm Abbreviation for nanometer.

nocturnal With reference to plants, usually a flower that opens at night and closes during the day; or any plant part active or functional only at night.

node 1. In conceptual planning of outdoor spaces, a point of special interest or concentrated attention. This term is often used in landscape architectural planning of conceptual spaces. It assists in determining where to place a statue, or a plant of dynamic visual quality, or an area where people will gather. In corridor planning, it identifies a spot where paths, roads, trails, etc. intersect, creating interest and conflict for users. 2. In electric wiring, a junction with several conductors intersecting and connecting. 3. In framing, a point where members of a truss intersect. 4. In botanical terms, the points on a stem where leaves are attached (or have been attached).

nodose In botanical terms, knotty or knobby; used especially in describing roots.

nodule A swelling in a leguminous root containing symbiotic bacterium (bacteroids, rhizobium), assisting in fixing nitrogen. See also nitrogen fixation.

noggin piece Filling between joints such as between logs in a cabin.

no-hub pipe A pipe (usually cast-iron) fabricated without hubs or bell ends, joined to another section of pipe by a stainless steel or rubber fastener or coupler.

noise pollution Continuous, annoying, or episodic excessive noise.

nomenclatural synonym A name based on the same type plant specimen as another name (a plant with two common names).

nomenclatural type In plant identification and descriptions, the individual specimen or other material on which a name is based, and to which the name is permanently attached.

nomenclature To call a name. It is most often used in landscape work in reference to the botanical names given to plants. See botanical name and Latin name.

nominal diameter A term used to call the size of a pipe, bolt, rivet, reinforcing, steel bar, or rod, not necessarily equal to the true diameter.

nominal dimension A measure of a masonry unit with a dimension including the thickness of a mortar joint, in the United States, not exceeding ½ in (13 mm) added for the joint.

nominal pipe size See nominal size.

nominal size 1. A reference to a piece of lumber's measurement before drying, seasoning, or planning for a smooth surface. A 2 × 4 does not actually measure 2 in by 4 in for this reason unless it is in its rough sawn state. See dressed size. 2. A comparative reference to pipe size that is not actual dimensions. Pipes of the same nominal size have different wall thicknesses due to their material and pressure rating or schedule, but the outside diameter is the same in order to accept the same size fittings. The outside dimension of the pipe in actuality is often different
from the nominal size. For example, a \( \frac{1}{2} \) in PVC pipe will have an outside dimension of 0.840 in and all \( \frac{1}{2} \) in PVC fittings will snugly fit that size. Also, a 2 in class 200 pipe will fit into the same fitting that a schedule 40 two-in pipe will fit into even though they have different wall thicknesses.

**nominal strength** The strength of a structural member before the reduction by any strength-reduction factors.

**noncombustible material** Any material that will not ignite, burn, or support combustion when subject to fire or heat.

**nonferrous** Containing no (or very little) iron.

**nonpoint source** Water pollution that does not originate from one point such as a pipe outfall.

**nonpotable water** Water that is not fit for human consumption and has some form of contamination or lack of treatment.

**non-return valve** A valve that allows fluid to flow in only one direction. See also backflow preventer.

**nonselective herbicide** An herbicide that kills all plants that it contacts. It does not selectively allow any plant type to live. See also selective herbicide.

**nonslip concrete** Concrete having a rough surface.

**nonstaining cement** Cement used in masonry work containing less than a specified amount of water-soluble alkali.

**nonstaining mortar** A mortar with a low free-alkali content.

**nonvolatile memory** A feature in irrigation controllers that retains programmed information in an electronic memory during a power failure, without the need for a battery.

**NOP** Abbreviation for not otherwise provided for.

**normal-weight concrete** Concrete with a unit weight of approximately 10 lb/cu ft (2400 kg/cu m), having aggregates of normal weight.

**Norman brick** A brick with nominal dimensions of \( 2\frac{1}{2} \) in \( \times \) \( 4 \) in \( \times \) \( 12 \) in (8.5 cm \( \times \) 10.2 cm \( \times \) 30.5 cm).

**north arrow** An arrow of direction on a plan view that indicates the direction of north. It is commonly found with or near the indication of scale for the drawing. The direction of north by tradition should point up or to the right where possible. It is traditionally found in the lower right corner of drawings. It is usually identified with “North” or an “N” designed into or on it.

**north elevation** 1. A drawing, usually to scale, showing the north-facing portion of a structure or element as it would be seen standing to the north of it and looking south to view it.

2. The elevation of a portion of ground, paving, or structure situated north of the remainder of it.

**northern elevation** See north elevation.

**northern exposure** 1. A slope that from top to bottom slopes downward toward the north. In the northern hemisphere, it receives less light, and in the southern hemisphere, it receives more light.

2. The north-facing portion of a structure.

3. The area to the north of any nearly vertical surface that has a changed microclimate effected by it with regard to heat, cold, or brightness of sunlight or shadow.

**northern grasses** Cool season grasses.

**no-see-ums** See midges.

**nosing or nose** The protruding front edge of a stair tread extending in front of a riser, usually rounded.

**no-slump concrete** Fresh concrete with slump of less than \( \frac{1}{4} \) in (6 mm). See slump test.
notice of completion A written document verifying that a project is complete and ready for occupancy.

notice to bidders A notice in the bidding requirements informing prospective bidders of a project and explaining how to submit a bid.

notice to proceed A notice given (usually a written directive) by an owner, general contractor, etc. to a contractor, subcontractor, etc. to proceed with the beginning of work of a contract.

noxious Harmful or destructive to living things. Most weeds deemed noxious are in reality simply obnoxious, except to the extent they are harmful in using resources that could be used by more useful or pleasing plants.

nozzle 1. In irrigation, a small, usually interchangeable, emission device for water spray and stream patterns that is part of an irrigation distribution device such as a sprinkler head. They usually provide a spray pattern for a sprinkler head as water under pressure passes through them. The water spray patterns they produce vary in the distance they throw the water, the size of water droplets or streams produced, the application rate of water distributed over the area of coverage, and the evenness of coverage over the distribution area. They are usually not integral, and the head and various nozzles may be selected for inserting or attaching to the sprinkler head to change the water distribution patterns. 2. A device at the output of a decorative fountain producing water spouting forth in a particular shape, style, or form. 3. A device used on the end of a hose, usually with an adjustment for various spray widths, and fineness or coarseness of water spray.

NPK The abbreviation often found on fertilizer bags, etc. for the three necessary components of a complete fertilizer. They are always in the order of nitrogen, phosphorus, and potash and are usually followed by the percentage of each found in the fertilizer.

NPL, npl Abbreviation for nipple.

NPS, nps Abbreviation for nominal pipe size.

NPSH Abbreviation for net positive suction head.

NPSHA Abbreviation for net positive suction head available.

NPSHR Abbreviation for net positive suction head required.

NRCS Abbreviation for National Resources Conservation Service.

NRS Abbreviation for nonrising stem.

Ns Abbreviation in regard to pumps for specific speed.

NTS, nts Abbreviation for not to scale.

nt wt Abbreviation for net weight.

nude See naked.

nuisance With regard to real property, generally a condition that damages (physically or by sight, sound, etc.) a property or persons.

nursery In the landscape industry, a facility, area, or establishment propagating, cultivating, or growing plants for sale, transplanting, harvesting,
nut

or other use. It may be open land, or greenhouses of trees, shrubs, flowers, or other plants.

**nut** 1. In botanical terms, a one-seeded fruit with a hardwood-like outer cover that does not spontaneously split. It is larger than an achene.

2. Edible, hard-shelled, usually one-seeded fruits (exceptions are peanut, etc.).

3. A short, metal piece with inside threads just larger in diameter than the bolt or threaded rod it screws onto. It may be twisted down the bolt shaft by hand and may have a rough surface for tightening by hand (thumb nut); but for more dependable torque tightening, most have a shape allowing a wrench to turn and tighten them.

**nutrient** Elements and components necessary for growth and development of an organism. In arboriculture, any chemical or substance that provides a raw material necessary for growth of plants. Macronutrients essential for plant growth are nitrogen, phosphorous, and potassium. See also micronutrients.

**nymph** 1. A larval form of some insects (grasshoppers, mayfly, silverfish, etc.) that resembles the adult form, but lacks fully developed and useful wings and genitalia.

2. In classical mythology, a divinity of nature represented as a beautiful maiden. These are sometimes the inspiration or object of a sculpture.

**nymphaeum** A room for relaxation decorated with plants, sculpture (sometimes nymphs), or fountains.
oak  A strong, hard, heavy, wood.

oak moth  A lepidopteran insect that is pale brown or tan. Their larvae are caterpillars that eat foliage and are about an inch long. When full sized, the larvae have bulbous brown heads and olive green bodies with black and olive or yellow stripes. They mostly attack oak trees, and are only a significant problem when populations are heavy enough to defoliate trees. They will usually only have populations of this size for 2 to 3 years and then diminish in number. They are most active in climate zones 7 to 9 and 14 to 24.

oak root fungus  The Armillaria fungus causes this disease, breaking down root tissue, and girdling plants. It not only affects oak, but about 700 other species of plants. Infected plants' leaves turn yellow, wilt, and die. In fall or winter, clumps of mushrooms may appear at the plant crown or on soil near the plant. Planting resistant plants and avoiding sites with poor drainage will help prevent this disease.

Oa layer or Oa horizon  The humus layer within the topsoil. It is highly decomposed organic residue. Here the decomposable components of the soil have been affected by physical and chemical processes until decomposition is essentially complete. At this stage nitrogen can be supplied from this horizon for plant growth instead of robbed for decomposition of materials.

obcordate  A leaf that is inversely heart-shaped with the notch being at the apex (heart-shaped with small end basal). Compare with cordate.

obelisk  A tall, four-sided shaft tapering to a pyramid at the top.

oblancoate  In botanical terms, leaves with the broad end near the tip and tapering or narrowing to the base from the tip.
oblique

In botanical terms, slanting of unequal sides. (Compare with leaf base descriptions of cuneate, obtuse, cordate, auriculate, sagitate, hastate, truncate, attenuate.)

oblong

In botanical terms, plant parts that are much longer than wide (usually two to three times), have parallel edges, and are more or less elliptic.

obovate

In botanical terms, inversely ovate, or the broad end toward the tip, shaped like an upside down egg.

obovoid

Pear shaped.

obrotund

Usually referring to a nearly round leaf shape.

observatory

1. A room, lookout point structure, or place with a wide view. 2. Any place used for observing the sky and studying stars, etc.

obtuse

In botanical terms, a plant part that is blunt or rounded at the end or tip. It is especially used in describing blunt or rounded leaf tips. (Compare with leaf tip descriptive terms: retuse, cuspidate, aristate, acuminate, acute, mucronate, emarginate. Also, cuneate, attenuate, cordate, auriculate, sagitate, hastate, truncate, oblique.)

oc

Abbreviation for on center; a measurement from the center of an element to the center of another element.
occupancy  In land and structure issues (usually according to building codes or planning ordinances), the use of land or buildings.

occupancy permit  An allowance given by an agency for the right to use land or buildings after complying with their requirements. In the landscape industry, on new building sites there is generally pressure to finish landscaping as it often holds up this permit.

Occupational Safety and Health Act  A federal law in the United States that regulates the activities of employers and employees to protect their health, safety, and welfare.

Occupational Safety and Health Administration  Those employed by the federal government in regulating, inspecting, penalizing, and enforcing the rules and regulations as set forth in the Occupational Safety and Health Act.

OD, od  Abbreviation for outside diameter. This refers to the actual diameter measured to the outside of the tube, cylinder, or pipe unless it is preceded by the word nominal. Piping outside diameter dimensions are usually given to three decimal places.

odd-pinnate  In botanical terms, pinnate with an uneven number of leaflets and always having a terminal leaflet. (Compare with even-pinnate.)

odiferous  A term descriptively used for a plant with a strongly offensive or unpleasant smell.

Oe layer or Oe horizon  The fermentation layer within the O horizon in some soil profiles being comprised of recognizable organic material physically disintegrated into pieces and decomposing.

offset  1. A small new plant starting the base of a perennial or at the end of a stem from its base. Only some perennials propagate this way. Examples are hen-and-chicks (Echeveria) and strawberries. 2. A bend in a pipe. 3. A line parallel or following another, but being a constant distance away.

offset digging  Trenching with a ditching machine whose boom is displaced from the center of the machine to one side. This allows digging near fences, walls, curbs, etc.

offset screwdriver  A screwdriver having a head 90° to the shaft.

offshoot  A lateral shoot from the main stem of a plant.

off-type  Used in identifying a seedling or plant that is different in one or more traits from the cultivar it was derived from.

ogee (OG)  A double curve, made by combining a convex and concave line, much like an S shape.

OH, oh  Abbreviation for overhead.

ohm  The unit of measurement for electrical resistance or impedance equal to a constant current of one ampere producing a decrease of one volt.

O horizon  The layer in a soil profile that may be present above the mineral soils (A, B, C, horizon-
Oi layer

...dominated by fresh or partly decomposed organic material and humus. It may be further divided into subhorizons. See also Oa, Oe, Oi horizons.

Oi layer or Oi horizon The litter layer sometimes present at the surface of a soil profile and a portion of the O horizon. It is comprised of undecomposed organic matter such as leaves, sticks, and other living organism residue.

oleoressinous varnish A varnish made of a drying oil and a hardening resin.

olericulture The culture of vegetables.

oligotrophic Water quality without sufficient nutrients for plant growth, but having abundant dissolved oxygen.

Olmsted, Frederick Law (1822–1903). Considered the foremost American landscape architect, but also an ecologist before the word existed. He headed the profession for a time and was largely responsible for establishing its status in the United States. He was an engineer, but worked first as a surveyor and tried framing before 1850 when he toured Europe, and was influenced by English Landscape Gardens. In 1858 he and Calvert Vaux won a design competition for New York’s Central Park. He greatly assisted in establishing the profession of landscape architecture.

omnivore An animal that eats plants and animals.

on center Usually refers to a distance between the center points or lines of two items of the same type (i.e., plants, joists, posts, etc.).

on-grade Items at ground level or on the ground.

on-site Within the limits of a project or development.

opaque Not allowing visible light to pass through. Not able to see through.

O&P Abbreviation for overhead and profit.

open bidding Allowing bids from all parties desirous of bidding on a project.

open burning The burning of any matter in the open that emits its fumes or smoke directly into the atmosphere without passing through a stack, duct, vent, or chimney.

open cut An area where earthen material has been removed so that the denuded surface is open to the sky and vulnerable to precipitation that can cause erosion.

open floor A floor or deck with its joist visible from below.

open-graded aggregate An aggregate containing little or no small particles or having relatively large voids after compaction.

open impeller In a pump, an impeller without shrouds or discs to enclose the impeller veins. This type of pump is most useful in liquids that contain suspended solids.

opening of bids The opening of envelopes containing bids (if so enclosed) and reading them. If in a public opening, then the bids are read aloud as each one is opened.

open riser The distance between treads on a stair not having a solid portion between them.

open sheeting or open sheathing or open timbering In an excavation, planks or boards not butted together and having space between these boards expected to hold the earthen wall in place. This type of stabilization or protection is not suitable where there is groundwater or loose or very sandy earth.

open solar energy system A solar energy collection system with a storage tank open to atmospheric pressure.

open space Usually refers to green space within an urban or suburban setting, but it may also sometimes be used for paved plaza areas, etc.
Generally, it is any land or area not covered with buildings, roads, parking lots, or pavements, etc., whether a constructed or a natural landscape. It usually refers to a park, recreational area, or natural area. Various governing jurisdictions define this term differently.

**open string**  A board along the outside edge of stairs that extends down their length and is cut on its upper edge to fit the risers and treads. The steps’ side edges are then open to view when viewing from the side. See also **closed string**.

**open-timbered**  A structure with its timber work exposed.

**open woods**  A forest or woods where the trees are not so heavily canopied as to prevent sunlight from having a beneficial effect on the forest floor.

**operational pressure**  The pressure within a system in operation.

**operational test**  Checking an irrigation system under normal water pressure while allowing its operation to determine if the water distribution devices receive enough water and pressure to perform to their designed activities. In sprinkler irrigation, one should check for proper length of coverage from the head, the proper arc coverage, and any fogging of heads (caused by excessive pressure).

**opposite**  In botanical terms, being directly on the other side, or straight across, as with leaf or branch attachments on some plants. (Compare with alternate.)

**optical fiber cable**  A communication comprised of glass or plastic fibers with protective cladding, strengthening material, and an outside cladding. Lasers or diodes transmit light through these fibers. They are better for communication cables because they do not have electromagnetic interference problems or grounding problems, they are small in diameter, lightweight, and have a large transmission bandwidth. These may be encountered when digging underground, and it is important to locate them before digging commences as they are extremely expensive to repair and more expensive to pay for any necessary costs associated with losses of service. (Damaged large lines have been known to be expensive enough to put a reputable excavation or landscape company into bankruptcy, even with insurance.)

**orbicular**  In botanical terms, a circular outline; usually in reference to a leaf or leaflet with a nearly circular shape.

**orbital sander**  An electrically powered machine with a circular spinning wheel covered...
orchard

with sandpaper, used for flattening or smoothing surfaces by sanding.

orchard A group of fruit or nut trees; also used in reference to any tree harvested for its food value (i.e., sugar maple trees, etc.).

order 1. A ranking in the plant classification system (taxonomy) that is a subcategory of a class, and ranks above a family, which is a subcategory of it. See also taxon. 2. The broadest category in soil classification.

ordinance A law or regulation adopted by a local governmental or jurisdictional authority. Ordinances often have regulations for project landscaping, drainage, removal of vegetation, etc.

organic 1. Derived from living organisms. 2. Chemical compounds that contain reduced carbon bonded with hydrogen, oxygen, or a variety of other elements. Organic compounds are usually volatile, combustible, or biodegradable. They may include proteins, carbohydrates, fats, and oils.

organic fertilizer A fertilizer derived from living or once-living organisms. It may be from their remains or a by-product of their living functions. Examples are manure, cottonseed meal, bonemeal, etc. If packaged, they will usually identify the percentages of complete fertilizer ingredients. They are generally slower to release their ingredients than chemical fertilizers. They may have other helpful or harmful ingredients, and may also improve soil texture. Harmful effects can be an increase in pH, or addition of salts (as with some manure).

organic gardening Growing, cultivating, and otherwise caring for plant material by natural means without chemical fertilizers, pesticides, or insecticides. It makes use of only natural organic fertilizer, soil amendments, and pest controls. Many believe this is best because it reduces risks (associated with chemicals) to people, animals, and beneficial insects in the garden. It also minimizes impact to the environment. With edible plant products, this is preferred by many as they feel it produces the healthiest food possible.

organic material See organic matter.

organic matter Material originating from a living organism. This is the source of humus and is a natural soil improvement for plant growth.

organic nitrogen Organic compounds bound with nitrogen.

organic silt A silt soil having high organic content. These soils do not stay compacted well, and swell with water. They may be suitable growing medium, but are not suitable for underlying paving or structures.

organic soils Soils in which the organic component predominates the soil.

organism A living thing.

organophosphate An organic derivative of phosphoric acid (or those similar to it) that is often used in pesticides (malathion, etc.).

orientation 1. The direction a person, structure, or any upright feature with a face is directed, or facing. 2. The direction from which something accepts or intercepts sunlight, drainage, wind, etc. 3. The action of situating and placing a structure or any item in relation to the sun or the points of a compass.

orifice The hole on any irrigation device such as nozzles and emitters from which water emerges. The shape of the orifice in a nozzle and the angle of any baffle that the water strikes against determine the angle and density of spray.

orifice emitter In drip irrigation, an emitter of water droplets having a small hole (orifice) that controls the amount of water emitted. Elevation differences and friction loss in pipe distribution can affect the output of emitters. Those with
built-in pressure regulators can assist in overcoming some difficulties with pressure change over distance. See also emitter.

orna. Abbreviation for ornamental.

ornament In design of a construction project, color, shape, etc. added as aesthetic attraction or embellishment. These adornments are not usually structurally essential.


ornamental grasses Grasses and grass-like plants not utilized to sustain foot in a landscape as a lawn nor utilized for revegetative value, but rather chiefly for their ornamental qualities such as form, texture, color, or inflorescence.

ornamental ironwork Twisting, bending, cutting, or welding iron into shapes for pleasing aesthetics of an iron tubing or rod design.

ornamental tree A tree valued for its ornamental character (i.e., flowers, bark color, leaf type, colorful fruit, etc.).

ornithophilous Plants that are pollinated by birds.

orographic Mountainous terrain and its effects upon plants, soils, precipitation, wind, shadows, etc.

orthostate 1. A stone taller than it is wide. 2. A stone in the lower portion of a stone wall that is taller than the courses above it.

OSHA 1. Abbreviation in the United States for Occupational Safety and Health Act. 2. Abbreviation referring to those involved in the enforcement of the Occupational Safety and Health Act, usually employees of the Occupational Safety and Health Administration, Department of Labor.

osmocote A slow-release fertilizer coated with resin and used in soil mixes or on the soil surface to provide nutrition.

osmosis Materials in soils that become dissolved possess an osmotic pressure due to dissolved ions. Differences in these dissolved ions cause movement of a solvent (a dissolved mix in homogeneous solution) through a semipermeable membrane such as a cell of a root into a solution of higher solute (a dissolved solution) concentration that tends to equalize the concentrations of solute on both sides of the membrane. This is the process by which roots gain nutrients and water. See osmotic pressure.

osmotic pressure The pressure produced by the action of osmosis. Water moves from a solution with low osmotic pressure to a solution with high osmotic pressure. This pressure must be higher in a root cell for water to pass from the soil through the root cell membrane into the root. One of the causes of higher osmotic pressure in soil than in root cells is the excessive presence of salt in the soil. When the osmotic pressure in the soil exceeds that in the root cells, water may actually be pulled from the root into the soil, which harms or kills plants. See fertilizer burn.

ostiole A small entrance.

ostiolum A small opening or door.

ounce (oz) An English or U.S. weight of 16 drams, or 437.5 grains, or 28.35 grams.

outbuilding 1. A separate accessory building not physically connected to a principal building. 2. A smaller building on the same site as a house or larger building, but smaller than the house or main building.

outfall 1. The place of ultimate deposit of drainage or sewage waters from a conduit, drain, gutter, paved area, or stream. 2. The dropping,
outflooding

outflooding  Flooding that occurs when a river or stream overflows and allows water outside of its banks.

outlet  In an electrical wiring system, a point where a plug can be inserted to obtain electrical current to operate power tools, a controller, or other electrical devices. 2. See outfall.

outlet box  A component in an electrical wiring system that is a metal or plastic box housing one or more receptacles or outlets for connection to fixtures that use electricity to operate.

outline lighting  An arrangement of lamps or tubes outlining certain features such as the shape of a structure.

out-of-plumb  Not vertical.

outrigger  A beam near the ridge of a roof that extends beyond the end wall of the structure.

outrigger scaffold  A scaffold supported by brackets fastened to the wall of a structure.

outside caliper  A type of caliper gauge designed to measure the outside diameters of round or cylindrical objects such as tree trunks.

outside foundation line  A line at the outer surface of a foundation wall.

ova  A botanical term meaning the female germ cells of a plant.

oval  In botanical terms, elliptical. It can describe a plant part, or especially, the shape of a tree’s head. (Compare with round, columnar, fastigiate, weeping, broadly spreading, upright spreading, pyramidal.

oval-head wood screw  This screw has various indented shapes in its head for accepting a tool (screwdriver) to drive (turn) it into wood. Its head is larger than the shank and is rounded at its top edges with a flat underside immediately around its shank. Its shank has either a threaded taper from the underside of its head surface to its more slender pointed shank, or it is a slender shank of a constant diameter continuing to its threads where it then tapers with threads to its point.

ovary  The ovule-bearing lower part of a pistil enclosing the ovules (of angiosperms) that ripen into a fruit. It is the expanded basal of a pistil.

ovate  In botanical terms, shaped like the section of an egg with the broader end basal. These
leaf shapes are broadest near its base and taper toward its tip.

oven dry weight  The weight of soil after all moisture is removed in an oven at a temperature of 221°F (105°C).

overburden  1. The weight or thickness of earthen material over rock or over a specific stratum. 2. An undesirable top layer covering a useful material wanted for construction.

overcloak  Sheet-metal roofing overlapping the adjacent sheet underneath.

overdesign  Excess capacity planned for. This is important to consider in irrigation design, as water pressure and landscape areas change over time.

overdraft  With regard to aquifers, an aquifer having more outflow than inflow.

overexcavate  The process or act of removing more ground material than is necessary or normally necessary for a particular task. It may be used in reference to a foundation, a utility trench, or grading, but is most commonly used to describe the amount of soil to be removed beyond the minimum to place a plant in a hole.

overflow  The water flowing out of a tank, bowl, detention basin, pond, etc. after it has reached a particular level.

overgrown  An area where plants have become too large for the space they were intended to occupy.

overhaul  1. The transport of excavated material farther from the distance for which it has been agreed that there are no hauling charges. 2. The complete renovation or repair of a landscape, machine, or any item.

overhead  In business, any costs not directly attributable to a job for materials, operations, or labor.

overhung impeller pump  A centrifugal pump with an impeller mounted at the end of a shaft overhanging its bearings.

overland flow  Runoff or stream flow.

overload  1. Weight on a structure exceeding its designed weight load capacity. 2. Excessive electrical power in wiring or a device beyond its safe capacity.

overplant  1. Planting or seeding in an area already vegetated. 2. Adding extra seed to assure a good stand of vegetation. Sometimes this will require thinning for survival, depending on the plant type.

overpotted  A condition in which plants are grown in a container too large for their reasonable needs. The soil toward the edges of the pot becomes anaerobic and prevents roots from expanding there. This condition usually spreads so that the plant eventually looks sickly or dies.

overseeding  To seed over an area already seeded, planted, or established with vegetation.

overspray  Water sprayed by sprinklers beyond its intended coverage area.

overwinter  A plant surviving through winter. Sometimes the likelihood of a plant overwintering is improved with assistance by adding mulch to cover the root zone, or covering the plant with glass.
ovoid  In botanical terms, shaped like an egg when looked at in section view.

ovule  An outgrowth of the ovary of a seed plant enclosing an embryo capable of producing a new plant.

owner  With regard to landscape projects, whether design, maintenance, or construction, the person, persons, or organization that possesses (owns) the property that is being changed or is proposed for change.

owner's association  A nonprofit organization operating under agreements through which each lot, home, or other described land area developed is automatically a member and each lot is automatically subject to a charge for a proportionate share of the expenses for the organization's activities such as maintaining, managing, and preserving common property, including landscaped areas held in common.

oxbow  A bend in a river channel that over time becomes isolated from the river's main flow, which may contain water and wetland vegetation.

oxygenating  A term used to describe underwater plants that release oxygen into the water.

oxygen demand  See biological oxygen demand.

oz  Abbreviation for ounce(s)
**P**

**phosphorus**  The symbol for phosphorus. This is the second percentage listed on a complete fertilizer bag.

**packaged concrete**  All the necessary dry ingredients for concrete included in a bag or package allowing one to simply mix the contents of the bag with water to produce concrete.

**packing**  1. In masonry work on stone walls, small stones embedded in cracks and small spaces.  
2. The material around the shaft of a value stem preventing water or fluid from leaking.

**pad**  The flattened stem of a cactus.

**paddock**  A relatively small field usually near a building that is meant to contain animals.

**paenibacillus popillae** or **bacillus popillae**  A biological (bacteria) control for the grub worms of Japanese beetles.

**paint**  A combination of liquid and pigment that adheres tightly to a surface when dried.

**paintbrush**  A tool comprised of long filaments bound together with a handle. The filaments are used to dip into paint, stain, etc. and spread it over a surface.

**pale**  1. Upright, usually pointed, flat, wooden, or round stakes set in a line to form a fence.  
2. An area enclosed by upright stakes set in the ground and forming a fence.

**palea**  The upper of two bracts (the other is the lemma) that enclose the flower of grasses. It is the bract closest to the point of the flower attachment.

**paleaceous**  A botanical term meaning chaffy.

**palisade**  A fence of trees, shrubs, or stakes fixed deeply in the ground in a close row. The French sometimes use this term to distinguish a hedge clipped to form a green wall, or a row of trees with bare trunks and the branches pleached to make a dense canopy. They are often found in formal gardens.

**pallet**  1. A series of planks nailed on larger wood members in a flat platform designed to accept the forks of a forklift. Materials are placed on the platform for easy handling and moving with the forklift.  
2. A piece of wood between brick or masonry unit joints used for fastening wood or other objects to the wall.

**palmate**  A botanical term applied to a leaf with three or more leaflets or divisions or with three or more main ribs (veins) all spread from a common point (as the apex of the petiole) like a hand with outspread fingers.
palmately compound  In botanical terms, a leaf with more than three leaflets arranged with a central point of attachment at the tip of a petiole. (Compare with simple, pinnate, bipinnate, trifoliate.)

palmately lobed or cleft or parted or divided  In botanical terms, the varying depths of a palmate leaf’s divisions that are not cut completely to the base.

palmatifid  A botanical term describing a plant part that is more or less deeply cut in palmate fashion.

palustrine wetland  Wetlands that are not dependent on streams, lakes, or ocean waters.

pane  A small sheet of glass used for placement as a window. Large glass windows are usually referred to as sheets. These panes are often referred to as lights after they are installed. A window may be divided into several lights.

panel board  A group of electrical breaker switches controlling electrical circuits.

paneling  Sheets of material placed as surface treatment on a structure or frame.

panel pin  A very small finish nail.

panicle (inflorescence)  In botanical terms, an open flower cluster like a raceme, but more or less compound (branched).

paniculate  A botanically descriptive term of a plant having flowers borne in panicles.

pannose  A botanical term, densely and closely tomentose.
panorama  1. A wide-range view of an expanse of land area usually wider than one's field of vision and usually requiring turning one's head to comprehend the entire view. 2. A pictorial representation that is wide enough to make it difficult to see and comprehend all at once. 3. An unobstructed and completely open view in all directions. (Compare with vista and view.)

pantile  A roofing tile with a sectional shape like that of an S laid on its side. The tiles are laid by overlapping one another.

pantograph  A handheld drafting instrument used to copy drawings, plans, etc. while increasing or decreasing the scale if desired.

papilionaceous  In botanical terms, butterfly shaped. This is usually applied to a corolla, such as that of the pea.

papilla, papillae  A botanical term used to describe a small, nipple-shaped protuberance.

papillate or papillose  A botanical term, covered with short, rounded, blunt projections.

papillose  In botanical terms, covered with papillae.

pappas  The hairs or bristles of an achene that usually assist in dispersing the seed. Examples are dandelions and milkweed.

paradigm  1. An example that is especially typical or outstandingly clear and understandable. 2. A theoretical framework of a discipline in support of laws, generalizations, and experiments.

parallel  A botanical term referring to plant parts that have a shape nearly equally distant at every part or edge or with markings running in the same direction nearly equally distant.

parallel bar  An instrument providing the benefits of a T-square, but much easier and faster to move up and down a drawing board as it rides on cables with small pulleys at each end of the bar, keeping the bar parallel at any point up or down the cables.

parallel parking  Vehicle parking that is parallel with the direction of traffic flow and adjacent to the traffic area.

parallel venation or parallel-veined  A pattern formed by veins in a leaf where they run essentially the same direction and are often equally spaced apart. They may have several or many more or less parallel main veins.

parapet  1. A low protective wall at the edge of a sudden drop, as at the edge of a terrace, roof, overlook, deck, balcony, etc. 2. That part of a building or a structure where the wall extends above the roof line.

parasite  A pest, plant, or disease that lives on or in organisms of another species obtaining its life support from that organism known as the host. Parasites obtain their nutrients from hosts, but do not provide a useful return to their host plant. This can lead to the deterioration or death of the host.

parcel  In the landscape this is a contiguous land area. It usually refers to a small piece of land with
parenchyma

one owner or a piece of land divided from another piece.

parenchyma 1. The tissue of plants consisting of thin-walled cells capable of division, and being used in photosynthesis, or for storage. This tissue comprises much of leaves, stems, roots, and fruits. 2. An abnormal growth distinguished from supportive tissue.

parent materials The portion of soils weathered from stone or bedrock, including the stone or bedrock itself.

parging A Portland cement plaster applied over masonry.

park Any public or private land set aside and available for recreational, educational, leisure, cultural, scenic, or aesthetic use, or for preservation of open space with vegetation or features. They are most often landscaped and made useful for active recreation or other activities.

park-and-ride lot A parking lot for the temporary storage of automobiles on a daily basis. They are especially provided for commuters to park their automobiles and facilitate persons traveling together to and from work either through carpools, vanpools, bus-pools, or mass transit.

parking bay A single row of contiguous parking spaces without gaps or islands.

parking island See parking lot island.

parking lane A lane, usually located on the sides of streets, designed to provide on-street parallel parking for vehicles.

parking lot An off-street area that is usually paved, for the temporary storage of motor vehicles not in use.

parking lot island A raised planting completely surrounded by pavement within a parking lot and usually surrounded by a curb. They are placed to guide traffic, provide aesthetically pleasing surroundings, separate lanes, limit paving, cool and preserve paved areas with trees, cool automobiles parked beneath their trees, limit heat island effects, preserve existing vegetation or other features, etc. See also center island, corner island, drive island, and end island.

parking space or parking stall A space available for the parking of one motor vehicle.

parking stall See parking space.

parking well A parking area where each parking space has direct access to a street.

park strip Usually the area with open ground available for landscaping between the property
line and the curb, between the property line and the closest edge of the street paving, or between the sidewalk and the road curb.

**parkway** Usually the area with open ground available for landscaping between the property line and the curb or between the property line and the closest edge of the street paving.

**part circle head** A sprinkler head that distributes its water over an area less than a full circle (360°). Most sprinkler heads have adjustments for changing the pattern of the arc to a portion of a circle by twisting or turning a portion of the head, by placing a key in the top of the head and turning it, or by changing the nozzle on the head.

**parted** In botanical terms, a leaf with its edge (margin) having lobes cut more than halfway (according to some sources) or more than three-quarters of the way (deeply cut, according to other sources) from its edge to its base or midrib. (Compare with ciliate, pectinate, cleft, lobed, dentate, denticulate, serrate, serrulate, double serrate, incised, crenate, crenulate, entire.)

**parterre** An ornamental garden with paths between planting beds; usually designed in a pattern.

**parthenocarpic** The ability to produce fruits with seeds without fertilization.

**partial shade** A planting spot that receives filtered sun and not direct sunlight. It may get a little direct sun early or late in the day.

**partite** Divided into a number of parts.

**parts per million (ppm)** A measure indicating minute amounts of materials, usually by weight. For soil, it is the number of units by weight of the substance per million units of oven dry soil (1 pound per million pounds; 1 gram per million grams; etc.). For solutions, it is the number of weight units of substance per million units of solution.

**party fence** A fence separating properties or land parcels at the boundary so that either or both parties may find it useful.

**passage open space** Land that is unimproved, or improved with no designated active recreational use reserved for public or private use and enjoyment.

**passive solar energy system** A system collecting solar energy and utilizing it by natural means instead of mechanical moving devices. Heat is distributed without active devices by radiation, convection, or conduction.

**pasteurization** A process that eliminates harmful organisms. This differs from sterilization, which eliminates all living organisms.

**pasture** A fenced or enclosed outdoor area with plant material suitable for particular animals to graze upon.

**patch** In landscape ecology, a relatively homogeneous nonlinear area (when viewed from the air) that differs from its surroundings.

**patent hammer** A hammer with a head having two sides made of parallel thin chisels so that
it is useful in applying texture to stone or in dressing it with a finish.

**path**  A walkway.

**pathogen**  Any disease of a plant (i.e., bacteria, parasites, fungus).

**patina or patination**  1. A greenish-brown crust that, when exposed over time, forms on bronze and is often thought of as aesthetically pleasing. 2. A green surface forming on copper or its alloys that have been exposed to the atmosphere and weather for a sufficient period of time. This is often a desirable attribute.

**patio**  An outdoor space made of concrete, masonry, or other hard surface for bar-be-ques, outdoor dining, entertaining outdoors, sunning, or other activities. They are common behind houses where people spend leisure time.

**patio furniture**  Any furniture made for outdoor use and intended for placing on decks, patios, plazas, etc.

**patio tree**  A small tree meant to be grown in a container and often placed on a patio.

**pavement light**  A heavy glass set in a paved surface and, while used as a walking surface, allows some light to a living or working space below grade.

**paver**  1. A stone, brick, tile, etc. used in making a pavement surface. 2. A machine that places concrete pavement while moving itself forward.

**pavilion**  In a garden, fairground, or park, a structure or tent, usually open on all or most sides.

**pavilion roof**  A steep roof, usually with a pyramidal shape.

**paving aggregate**  Materials including, but not limited to, crushed stone, gravel, sand, slag, seashells, and vermiculite used in pavements, especially of concrete mixes.

**paving unit**  Any prefabricated part laid or fit together in surfacing the ground.

**PC**  Abbreviation for Portland cement; abbreviation for power connector.

**pcf**  Abbreviation for pounds per cubic feet.

**PE**  Abbreviation for professional engineer.

**pea flower**  A descriptive botanical term referring to a plant’s flower having a shape like a sweet-pea blossom.

**pea gravel**  A fine, rounded, natural gravel of small diameter, about ¼ to ⅜ in (6.4 to 9.5 mm), usually gathered through screening.

**pea gravel grout**  A grout containing pea gravel.
peak annual flow  The most water flow produced by a stream or river during a year.

peak discharge  The maximum flow of a stream or a river.

peak flow  See peak discharge.

peak rate of discharge or peak flow  The maximum rate of storm water flow at a given point in a channel, watercourse, or conduit resulting from a storm or flood. This can be calculated by assuming a flood or storm frequency size or by actual measurements of underwater flow.

pearlite  See perlite.

pear slug  The common name for the larva of a sawfly.

peat  Partially decomposed, fairly stable organic matter formed from dead plants (usually mostly mosses) in areas that have been flooded.

peatland  Land with predominantly peat soil.

peat moss  Partially decomposed remains of several different types of mosses used as a growing medium, or an organic soil amendment. It is spongy, usually slightly acid, and has a high water retentive capacity.

peat pot  A small container made of peat and often used for starting seedlings. It will break down in the soil and may be planted directly into the soil.

pectinate  In botanical terms, divided into narrow and close divisions, like the teeth of a comb. (Compare with ciliate, entire, cleft, lobed, dentate, denticulate, serrate, serrulate, double serrate, incised, crenate, crenulate, parted.)

pedalfer  Soils generally of humid climates where the soil is often or mostly moist from the surface to the water table, forests prevail, and nutrients are frequently washed away. These soils are common in the eastern United States. See also pedocal.

pedate  In botanical terms, palmately divided or parted. It may also mean footed.

pedestal  1. An enclosure with a controller mounted on it that extends from the ground level to the controller and houses wires, etc. 2. A stand or stable, load-bearing base for a column, sculpture, or display item.
pedestal controller

A controller of an irrigation system mounted upon a pedestal manufactured for the purpose of locating the controller closer to eye height. It also houses wiring and, sometimes, electrical components.

pedestal

pedestal controller

pedestrian A human being traveling on foot without assistance of a machine or animal.

pedicel In botanical terms, a stalk that supports a fruiting or spore-bearing portion of a plant, the stalk of a single flower of an inflorescence, or the stalk of each flower in a cluster.

pedicle A pedicel.

pedocal Soils generally of dry climates where the soil is normally lacking water, the prevailing vegetation is composed of grasses and shrubs, and nutrients are often plentiful. These soils are common in the western United States. See also pedalfer.

pedogenesis The development and formation of soil.

pedology Soil science.

pedon The smallest volume that can be called or classified as a soil. It gives the soil profile three-dimensional form. The upper boundary is the soil's surface. The lower boundary is the arbitrary limit of effective rooting depth of perennial plants or horizons exhibiting pedogenic processes, whichever is deeper. The horizontal dimensions are large enough to exhibit natural variability of horizon thickness and continuity. The limits of the soil usually range from 1 to 10 sq m with the actual area determined by the variability of the soil. If the soil is homogeneous, pedon size will be small; however, if the soil is highly variable the pedon may be quite large. A pedon is the unit of soil used for sampling, classifications, and study. Soil classifications are generally made up of many pedons.

peduncle A stalk that bears a flower cluster or a single flower.

pellucid A term used in botanical descriptions that means transparent or translucent.

peltate In botanical terms, shield-shaped; applied to a leaf, whatever its shape, when the petiole is attached at the undersurface of the leaf and inside the leaf's margin.
peltate-palmate  This refers to a palmate leaf venation with a circular shape and a peltate peti-ole location.

pen  1. An enclosure for animals. 2. A permanent writing instrument useful in signing contracts, etc.

penal  A golf hole design style marked by numerous sand and water hazards placed in difficult spots for the playing ability of the average golfer. In this design, shots must be true, and in many cases long, to avoid a high score. See also strategic and heroic.

penal sum  The amount agreed to in a contract that shall be paid the owner as compensation by the contractor, should the contractor not complete the project or not finish the project on time.

pendant  In botanical terms, hanging down from its support.

pendulous  In botanical terms, somewhat hanging or drooping.

penicillate  A botanical term, a plant part with a tuft of short hairs at the end.

pennant  A lightweight plastic, fabric, or other material, suspended from a rope, fixed horizontal element, wire, or string, usually in a series, designed to move in the wind, or simply hang. They display aesthetic designs and color or messages.

penny  In the construction industry, a reference to the size of a nail by weight. One penny is the troy weight of 24 grains, which is equal to 0.05 oz or 1.555 g. Obviously, the higher the number given for this term, the greater the size and weight of the nail.

pennyweight  See penny.

penta-  A Greek prefix, meaning five; sometimes used before other botanical terms to identify the number of parts.

pentachlorophenol  A lumber preservative used to prevent wood from decaying. It is mildly toxic, and dangerous around the mouth and eyes.

percentage fee  Compensation for design work based upon a percentage of construction cost.

percentage of grade  The distance vertically from the horizontal in feet and tenths of a foot for each 100 feet of horizontal distance.
**percentage of possible sunshine**

**percentage of possible sunshine** The percentage of daylight hours in a specific location during which direct sun is bright enough to cast a shadow.

**percent of slope** The steepness of a surface determined by vertical change in elevation from one point on the surface to another divided by the horizontal length. A slope on a 45° angle is 100% slope (1:1). A slope with a rise of 6 ft vertically (change in elevation) and having a horizontal difference between those same two points of 100 ft is expressed as 6% (6:100 = 0.06) slope.

**perched water table** A layer of water-saturated soil that will not drain well even though the soils or material below it are dry. This situation often occurs when too much organic material is put in a backfill mix, the backfill mix is significantly different from the surrounding existing soil, or gravel is placed under the root ball without a drainage outlet from the planting pit. This often causes root rot and death for most transplanted trees surviving the initial transplant shock.

**percolate** With regard to landscape work, the water moving by gravity through pore spaces of earthen material.

**percolation** The movement downward of water through the soil when saturated or nearly saturated.

**percolation test or perc test** A test on a site’s soil to ascertain its rate of absorption so as to determine suitability for a septic drain field or effluent. The test basically consists of digging a hole, adding water, and measuring the rate at which the water level drops.

**perennate** Living perennially from year to year.

**perennial plant** 1. A plant (usually in reference to herbaceous plants) that persists or resprouts year to year for several or many years. 2. A plant whose life cycle is more than two years.

**perennial stream** Stream channels that carry water all year.

**perf.** Abbreviation for perforated.

**perfect** In botanical terms, flowers with both pistils and stamens.

**perfect flower** Any flower containing both female and male reproductive organs.

**perfoliate** In botanical terms, a stem that appears to pass through a leaf base.

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**perforated pipe** A pipe with a hose in it to allow fluids to enter or leave its interior. It is used to distribute water such as in a septic leach field or to gather water as around a foundation.

**performance bond** A legal document in which a surety guarantees to the owner of a project that the work to be performed by a contractor so covered will complete the work as per the contract documents.

**performance guarantee** A security given to a municipality as a guarantee that improvements required as part of an application for development or construction are satisfactorily completed.
**pergola** A garden structure with an open wooden-framed roof, often latticed and covered by climbing plants while shading a walk, sitting area, or passageway.

**perianth** The outside envelope of a flower that protects its reproductive parts during development. In most *dicotyledons*, it is composed of two separate whorls, one being the *calyx* of *sepals*, and the other being the *corolla* of *petals*. In *monocotyledons* the sepals and petals are often indistinguishable and the segments of the perianth are known as *tepals*.

**pericarp** In botanical terms, the ripened and variously modified walls of a plant ovary usually comprised of the *exocarp*, *mesocarp*, and *endocarp*.

**perigynous** The *perianth* and *stamen* are united into a basal saucer or cup (the *hypanthium*) distinct from the ovary.

**periphyton** Microscopic plants and animals that grow on the surface underwater.

**peristalith** Upright stones encircling a burial mound.

**peristyle** 1. A colonnade surrounding an open space area. 2. The space enclosed by a colonnade.

**perlite** A siliceous volcanic mineral rock that is expanded by heat to form lightweight granules approximately 15 to 20 times their original volume. They are lightweight and porous, and useful in making lightweight concrete or in making a soil mix. It can be used in synthetic soil formulas and as a substitute for sand in potting mixes. It has also been used (in a soil mix) on buildings or parking structures in planters as a lightweight soil to reduce weight on such structures. It is sometimes mixed with a heavy soil to assist in improving its structure, and conditioning it for better rooting.

**permanganate of potash** A mild fungicide and disinfectant with little potassium fertilizer value.

**permeability** 1. In soils or rock, their ability to absorb water, or the rate at which they allow water to pass through. Clays are generally least permeable, and any *compacted* soil is less permeable when *friable*. 2. In general, the ability of any substance to allow water to run into or through it; usually refers to preventing excess storm water runoff.

**permeameter** An apparatus used to measure permeability.

**permit** A document issued by a governing agency authorizing a particular work.

**perron** 1. A formal terrace or green space often centered on a gate or doorway. 2. An outdoor flight of steps, usually symmetrical, leading to a formal garden terrace, a gate, or a doorway of a large building.

**persistant** In botanical terms, remaining beyond the period when such parts commonly fall or remaining attached after the normal function has been completed.

**perspective drawing** A drawn representation, by hand or with a computer, using vanishing points to show depth. This type of drawing is use-
ful in showing a project in a three-dimensional representation before construction.

**pervious soil**  A soil with relatively free movement of water through its mass.

**pervious surface**  A surface that allows or encourages precipitation to infiltrate into the ground where it falls or very nearly thereto.

**P.E.S.B.**  Abbreviation for Pre-Engineered Steel Building.

**pest**  In horticultural terms, an insect or animal that causes harm to plants or the landscape (garden).

**pest control**  The action or process of using various methods, devices, or chemicals to kill or repel insects and animals that cause harm to plants or other valuables.

**pesticide**  A substance (most often a chemical) used to control weeds, fungi, insects, and other undesirable pests.

**pest management**  Regulating and monitoring pests and intervening in the natural processes of control only as necessary. The idea of pest control has meant in most cases destroying any and all pests.

**petal**  A modified, usually brightly colored, leaf of the corolla of a flower.

**petaloid**  A descriptive botanical term referring to a plant part, such as stamens, being petal-like.

**petaloides**  A botanical term meaning brightly colored and resembling petals.

**petiolate**  In botanical terms, having a petiole.

**petiole**  The stalk portion of a leaf or a single flower of an inflorescence. It is the nonwoody portion of a leaf that arises from the woody portion and holds the leaf blade or leaflets.

**petiolule**  In botanical terms, a short petiole, or the stalk of a leaflet of a compound leaf.

**petroleum asphalt**  Asphalt refined directly from petroleum.

**PH**  Abbreviation for phase. It is often used on development or construction drawings where
work will occur over an extended period of time. It is also used on electrical drawings to indicate single- or three-phase power. Their abbreviations are usually as follows: **1PH**—abbreviation for a single phase electrical conductor. **3PH**—abbreviation for a three-phase electrical conductor.

**pH** In soil, a measurement of the relative concentration of hydrogen ions; followed by a number. A pH of 7 is neutral. The higher the number is above 7, the higher the alkalinity of the soil. The lower the number below 7, the more acid the soil is. The pH scale is a logarithmic function. Each pH unit represents a 10-fold increase or decrease in relative alkalinity or acidity. A soil with a pH of 6.0 is 10 times more acidic than a soil with a pH of 7.0.

**phenology** Science dealing with the nexus (connection, link) between climate and periodic biological phenomenon such as flowering, breeding, and migration of plants.

**phenotype** In botanical terms, being of similar physical makeup as the species, but changed as influenced by environment.

**Phillips head** The top or driving portion of a screw or bolt that has an indentation shaped like an X to accept a screwdriver with a point that fits into the X indentation (Phillips screwdriver).

**phloem** The layer (outside of the cambium layer), or the portion of a plant, where tissues conduct organic substances (sugars, amino acids, hormones, vitamins, stored food) from leaves to other portions of the plant. In woody plants, most **bark** is formed as this tissue dies and becomes hard.

**phosphate** Any of numerous chemical compounds containing **phosphoric acid** or a **phosphorous** compound.

**phosphate rock** or calcium-magnesium phosphate **A fertilizer** with about 17% phosphoric acid and about 17% magnesium oxide.

**phosphatic** Of or relating to phosphate, phosphoric acid, or phosphorus.

**phosphoric acid** A syrupy tribasic acid used in preparing phosphatic fertilizers.

**phosphorus** A nonmetallic chemical of the nitrogen family that is a colorless semitransparent, waxy, soft solid; essential to plant and animal life. It is extremely rare in nature as a free form, but is instead found in various compounds, usually ** phosphates.** In **fertilizers,** this is normally the second percentage listed on a label and has the symbol of P. Plants consistently need this nutrient to sustain growth. It does not leach easily through the soil and should be added to deficient soils. It promotes root establishment and formation as well as flowering. It is commercially available in many forms includ-
ing triple superphosphate (NPK 0-45-0), superphosphate (NPK 0-20-0), and rock phosphate (NPK 0-25-0). It may be applied in natural forms such as cottonseed meal, blood meal, bonemeal, banana peels, etc.

**photic zone** The area of a water body pierced by sunlight.

**photoelectric cell** A device in an electrical circuit or incorporated into a luminaire (light fixture) that opens or closes the circuit (turns on or off electricity and/or light) as the device is affected by light striking a special portion of its surface. It is used most often to direct lights to automatically turn on at dark and off at morning light.

**photoelectric control** An electrical control or switch that is actuated by light or a lack of it.

**photometer** Any instrument capable of measuring luminance, luminous intensity, luminous flux, illumination, etc.

**photometry** The measurement of light.

**photopair** Overlapping aerial photographs that may be utilized in stereoscopic interpretation to determine such information as elevations and contours, heights of vegetation or structures, etc.

**photoperiod** A recurring cycle of light and dark periods of consistent length.

**photoperiodism** In horticulture, a reference to the alternating periods of lightness and darkness as they affect the growth of plants.

**photosynthetic** A product of photosynthesis.

**photosynthesis** The process in planting of making organic matter from inorganic matter within their tissues containing chlorophyll when there is sunlight.

**phototaxis** An orientational reflex stimulated by light.

**phototropic** In plant material, a tendency to grow away from light (negatively phototropic) or toward it (positively phototropic). Stems and shoots are positively phototropic, and roots are negatively phototropic.

**phototropism** The response of plants to light. See also phototropic.

**photovoltaic** Creating electricity from solar energy.

**phreatophyte** A deep-rooting plant that typically extracts its water from the water table or an area of soil just above it or a plant that usually has a major part of its root system in soil permanently saturated with water, usually below ground level. Examples are cottonwoods and willows.

**phylloclade** In botanical terms, a flattened branch functioning as foliage, or a part of the stem having the general form and function of a leaf.

**phylode** In botanical terms, a flat expanded petiole with the form and functions of a leaf, or a more or less expanded, bladeless petiole.

**phyllome** Part of a leaf or derived from a leaf.

**phyllodic** A botanical term meaning that the lowest leaves are well developed.

**phyllotaxus** or **phyllotaxy** A botanical term referring to the leaf arrangement on a stem.

**phylogeny** The evolutionary history of a plant group.

**phylum** A group or family that shows unity in descent. (The broadest class in plant kingdom taxon is a division; the broadest class in animals is the phylum.)

**physiography** The physical, mainly natural, character of a site or region.
**phytobial** Combining plant-based systems and microbial-based systems to remediate contaminated land.

**phytocap** Also known as a **vegetative cap**, plants growing over contaminants to protect them from leaching.

**phytodegradation** Also known as **phytotransformation**, the breakdown of contaminants in a plant or within its influence through the effect of compounds produced by the plant.

**phytoextraction** The uptake of a contaminant from below ground level to above ground level where it is stored and available for harvesting. This is a type of **phytoremediation** most often used for remediation of metals.

**phytohydraulics** A reference in **phytoremediation** to control of groundwater through plant transpiration also known as **hydraulic control**. It has the ability to contain groundwater-borne contaminants and prevent them from underground migration.

**phytoplankton** Microscopic algae suspended in water and not attached to underwater surfaces.

**phytoremediation** A technology that uses living plants to remediate or stabilize contaminants in soil, groundwater, or surface water.

**phytostabilization** The immobilization of a contaminant in absorption and accumulation by roots.

**phytotoxic** Descriptive of a substance poisonous to plants.

**phytotransformation** Also known as **phytodegradation**. The breakdown of contaminants in a plant or within its influence through the effect of compounds produced by the plant.

**phytovolatilization** The uptake and transpiration of contaminants through plants that allow the contaminant or a modified form of it into the atmosphere.

**piano hinge** See **continuous hinge**.

**pick or pickax** A hand tool with a 2½ to 3 ft long handle and a two-sided, steel, long (+/−12 to 20 in each side) curved head having one side with a point and the other side with a flat chisel end. It is used to break up hard earth that is otherwise difficult to dig with a hand shovel.

**picket** In landscape work, a pointed vertical member in a fence.

**picket fence** A fence made of a line of vertical posts, stakes, rods, etc. (often pointed at the upper end (traditionally about 4 ft high and painted white). It is usually made of wood and held together on horizontal rails. There may or may not be space between the vertical members.
pickup

pickup  A light truck with a cab for the driver and passengers, and an open bed having low sides with a tailgate.

picnic table  A table made of various materials (metal, plastic, logs, timbers, fiberglass) with benches or stationary seats, mostly used out of doors or under shelters for dining. In residential use they are usually moveable.

picotee  A flower with two colors and one of the colors only being present at the edges (margins). This color distribution is available in some tulips, carnations, etc.

picowatt (pW)  A measured unit of power equal to one-millionth of one-millionth of a watt (i.e., 10^{-12}W).

pier  1. A column, post, or other vertical structural support carrying loads from above. 2. A structure built over or floating upon the water and used as a landing place for boats as well as for other marine transport, fishing, swimming, etc.

piezometric surface  The surface elevation of pressurized groundwater in wells or springs.

pig iron  Crude, smelted, high-carbon iron ore. It can be further refined to make steel.

pigtail  A flexible conduit cord attached to an electrical component such as a sprinkler controller (instead of wiring direct) that can be plugged into an electrical outlet.

pilaster  An architectural member usually projecting one-third or less of its width from a wall and being structurally a pier. It usually has the appearance of a column.

pile  1. A long slender column of wood, steel, or reinforced concrete driven vertically into the ground (partially or mostly embedded) for bearing a load (the weight) of a structure above it (bridge, deck, building, etc.). These are common and useful in areas of unstable ground where the pile can be driven to a stable substrate. 2. An accumulation and heaping of material such as soil, rock, wood, etc.

pile driver  A machine that pounds vertical supports into the ground.

piling  See pile.

pillar  1. A sturdy upright support for carrying a load such as column, post, or pilaster. 2. An ornamental or significant column that may stand alone.

pill bug  The common name for an isopod crustacean (Oniscoidea) having an elliptical body with seven pairs of legs, sectioned shells, and the
capability to roll up into a ball about the size of a pea. Other common names are sow bugs, roly-poly- 
ies, or potato bugs. They feed mostly on decaying vegetation; however, they will feed on young 
tender plants, especially those just germinating or on fruits that are usually overripe or damaged. 
They are encouraged to proliferate by mulching and composting.

pilose In botanical terms, long, straight, hairy; or shaggy with soft, spreading, slender hairs.

pilot hole A punched or drilled shallow hole for guiding a nail, spike, or screw; or a guide for a larger 
drill bit to follow.

pin Flowers with relatively long styles and short stamens. (Compare with thrum.)

pinch back or pinch off or pinching back To use the thumb and forefinger to nip (pinch) off tips of new 
growth forcing side growth, delaying blooming, or making the plant produce a dense, more compact 
form. This is most useful with houseplants, flowers, herbaceous plants, and shrubs.

pine straw A surface mulch often sold in bales consisting of pine needles and no straw. It makes weed-free mulch that assists in preventing weeds and gives a finished appearance to planted areas.

pine tar A black substance made by distilling the wood from pines that is used to assist in 
waterproofing roofs.

pinna In botanical terms, a primary division or leaflet of a pinnate leaf or frond.

pinnae The leaflets of a pinnate leaf.

pinnate or pinnately compound In botanical terms, a compound leaf with the leaflets on two opposite 
sides of an elongated axis. They are arranged like a feather with rows on each side of a stalk, 
spreading outward. A pinnate leaf can have veins or leaflets arranged in this manner. (Compare with simple, bipinnate, trifoliate, palmate.)

pinnate-trifoliate A description of a leaf that has three leaflets arranged so that one is at the apex (end) and two split to either side opposite one another.
pinnate venation

A leaf with veins arranged off of either side of a central midrib vein.

pinnatifid

In botanical terms, pinnately cleft, halfway cut to the midrib, feathered, or pinnate veins with lobes at each arranged as a feather.

pinnatisect

In botanical terms, a feathered leaf cut down to the midrib.

pinnule

In botanical terms, a secondary pinna or segment of a leaf or frond.

pint (pt)

English or U.S. capacity measurement comprised of 4 gills, or ½ quart, or 28.875 c.i., or 473.176 milliliters.

pip

1. A small fruit seed, especially a small seed of a fleshy many-seeded fruit. 2. An individual rootstalk of the Convallaria (lily of the valley) plant.

pipe

A long, hollow, circular tube made of plastic, steel, copper, brass, iron, concrete, etc. for use as a conduit of fluids, wire, gases, etc.

pipe cross

A pipe fitting that can connect pipes as they cross at right angles.

pipe cutter

Any tool of various types used to make square cuts on the ends of pipes. Pipe cutters are different for pipes made of plastic, copper, cast-iron, etc.

pipe die

A device that cuts threads into pipe.

pipe dope

A putty-like substance used to apply to threaded pipe, fittings, or equipment before screwing them together to facilitate a seal.
**pipe expansion joint**  A device in a length of piping that compresses or extends to compensate for the piping expanding or contracting in length due to changes in temperature.

**pipe fitter**  One who installs and joins pipe and its associated devices mostly outdoors.

**pipe fitting**  A connection piece used in fitting pipe together. Examples are elbows, tees, couplers, etc.

**pipe hanger**  A device that hangs from a point of attachment and holds a pipe in place. They are useful when placing piping in or under structures such as buildings, bridges, and parking structures.

**pipe joint compound**  A sealing material used on threaded fittings.

**pipelayer**  
1. A tool comprised of a winch and a boom with pulleys facilitating raising and lowering heavy pipes into trenches. They are usually mounted on a vehicle with tracks or wheels (usually tractors) to move along the pipe route. 
2. A person skilled in fitting, laying, and securing pipe systems.

**pipe plug**  Any male fitting for a pipe that when inserted (glued or threaded) into an opening or a pipe end plugs it off, preventing flow.

**pipe puller**  A motorized machine with at least four wheels and a blade used to cut the ground and having an attachment at the base of the blade where pipe is attached for pulling into the ground.

**pipe pulling**  A method of establishing underground pipe lines by attaching pipe at the bottom of a steel blade behind a bullet-shaped head on a pipe puller that pulls the pipe into the ground.

**pipe reducer**  Any fitting or device that facilitates changing sizes of pipes that are connected.

**pipe ring**  A circular device for loosely holding a suspended pipe.

**pipe saddle**  An upright support for pipes or devices attached to them.

**pipe strap**  A thin metal strip wrapped around a pipe, allowing it to be hung from above.

**pipe tee**  A pipe fitting with three openings for connections of pipe, nipples, or other devices.

**pipe thread**  A V-shaped spiral cut on the inside or the outside of a pipe, or on a pipe fitting, coupling, or connector.

**pipe tong**  A tool to screw or unscrew lengths of pipe or pipe fittings.

**pipe vise**  A clamping device that has V-shaped jaws or a chain to hold pipe or devices firmly while being worked on.

**pipe wrench**  A hand tool with a long handle, a movable jaw, and a stationary jaw. It is useful in pipe work with the jaws shaped to tighten when placed on a circular device or pipe and forced in a circular motion around the pipe. This allows
for screwing together and tightening threaded pipes and devices.

**piping**  
1. A reference to the action of runoff water or water from broken sprinklers passing through underground passages of eroded tunnels and back to the surface, or a reference to the passages themselves.  
2. Any system of connected pipes or hollow cylindrical tubes used to carry liquids, such as in an irrigation system.  
3. The migration of soil within the soil profile from one point to another.

**pistil**  
In botanical terms, this means the female ovule-bearing organ of a seed plant. This female portion of a flower is composed of an ovary, style, and stigma. See illustrations under flower and perianth.

**pistillate**  
In botanical terms, provided with pistils (female); a term used when stamens are not present. This term is descriptive of a female flower or plant (only having female reproductive components).

**piston pump**  
A pump that moves and compresses fluids by use of a piston with an intake and outlet to the chamber allowing fluid in as it retracts the piston and forcing water out as the piston is pushed to the other end of the chamber.

**pit**  
The stone (seed) of a drupe fruit such as that of stone fruit.

**pit boards**  
Any lumber placed horizontally as sheeting to prevent caving in of an excavated bank of earth.

**pitch**  
1. The slope of a roof surface, often expressed as a ratio of a vertical drop or rise over a horizontal length such as 4:12, 3:12, etc.  
2. A dark distillate of tar or any of various resins. They may be useful in waterproofing, paving or caulking.
pitched roof  A steep roof, usually in reference to gabled roof.

pitcher plants  Carnivorous plants with leaves modified into organs shaped much like a pitcher.

pitch fiber pipe  A pipe made of cellulose fiber and coal tar with an advantage of being lightweight.

pitchfork  A tool with a long straight handle and several long, steel, pointed, and usually at least slightly curved pieces arranged in a fork-like manner. It is used for picking up loose intertwined material such as hay, straw, pine needles, or for aerating, etc.

pitch oil  Another name for creosote.

pitch pocket  1. A defect in softwood lumber where there is an opening in the grain containing pitch or resin. 2. A metal piece around a member where it penetrates the roof. It is usually filled with pitch or sealant to prevent leaking.

pith  The soft, central core of trees or most plants. In herbaceous plants, it is the large central area used for support and storage. In a woody stem, it is the area of dead xylem cells at the center of a stem.

pith-faced  Stone masonry finished with a chisel at the edges and the center left rough.

pith fleck  A short dark streak in lumber caused by insects during growth.

pith ray  See medullary ray.

pit-run gravel or bank-run gravel  Ungraded gravel as it is taken directly from a bank of earth or pit.

pivot  In agriculture, an irrigation pipe on wheels that rotates around a point of connection to a water source. It is often used at sod farms.

PL, pl  1. Abbreviation for power line. 2. Abbreviation for pipe line.

placenta  In plants, the tissue of the ovary to which the ovules are attached.

plain ashlar  Stone with the face to be exposed having been smoothed with a tool.

plain concrete or unreinforced concrete  1. Concrete not containing reinforcement or reinforced only for shrinkage or temperature changes and not for load bearing. 2. Concrete without an admixture or element added that is normally expected.

plain masonry  Masonry without reinforcement, or reinforced only for shrinkage or temperature change and not for load bearing, etc.

plain-sawn  or bastard-sawn  or flat-grained  or flat-sawn  or slash-sawn  A term used to describe lumber cut to size with the annual rings (seen from the end of the wood piece) intersecting its broadest face at less than a 45° angle.

plan  A drawing of an item, site, community, city, etc. as viewed from above.

planch  A British term for a floor of planks or an individual plank.

planching  See decking.

plancier or planceer or plancer or plancher  1. The underside of a structure's projection, such as a soffit. 2. A planch.

plan deposit  Money required to obtain bidding documents.

plane  1. An infinite number of contiguous straight lines forming a straight, flat surface. 2. A tool used in removing imperfections of a wood surface, or in shaping and smoothing a wood surface. It is comprised of at least a handle and a
slanted blade that is on or in a flat skid. The skid with its projecting blade is pushed over the wood surface to cut thin strips away.

**plane ashlar** A stone unit usually used in masonry having tool marks on its surfaces.

**planed lumber** Lumber having one or more of its surfaces planed smooth.

**plane surveying** Surveying not taking the curvature of the earth into account in its calculations.

**planimeter** A mechanical device with an elbow and two parts to its arm; one part has a pin at its end to hold it steady on a drawing, and the other part is used to trace an area on the drawing. It is used for measuring the area of a plane surface within a perimeter on a map. A wheel usually near its elbow rotates as it is moved and yields a number that can be converted to the area at the scale of the drawing. It is useful in determining areas of odd shapes.

**planing** The process of smoothing a surface of a material by shaving off small thin sheets.

**plank** 1. A board 2 to 4 in (5 to 10 cm) thick and usually 8 in wide (20 cm) or more. 2. Any long, wide, reasonably thick piece of lumber, the dimensions of which vary depending on whether it is hardwood or softwood and depending upon lumber industry standards, etc. They are sometimes tongue-and-grooved at their edges.

**plank fence** 1. Any fence made with lumber. 2. A fence constructed with horizontal lumber attached to square posts.

**planking** 1. A wood surface made of planks. 2. The action of attaching planks. 3. A log flattened on two sides, usually for use in a cabin. 4. A reference to a quantity of planks.

**planking and strutting** Temporary wood members against the side of an excavation to prevent or redirect material caving in.

**planned unit development (PUD)** An area of contiguous land planned and developed as a single entity, containing one or more residential clusters and one or more public, quasi-public, commercial, or industrial areas, or nonresidential uses. They usually have an open space component and encourage pedestrian travel and access.

**planning** The process of studying and determining the layout of spaces, routes, structures, plantings, land uses, etc.

**planning and zoning commission** Within a government's jurisdictional area, a group of people (elected or appointed) that recommend boundaries of zoning districts and determine appropriate requirements relative to site plan review, including landscape requirements.

**planning board** See planning and zoning commission.

**planning commission** See planning and zoning commission.

**plant available water (PAW)** The quantity of water stored within the root zone between the conditions of field capacity and permanent wilting point.

**plant classification** An orderly, ranked system of similar plants that becomes less and less inclusive and from broadest to most specific is as follows: kingdom, division, class, order, family, genus, species, variety or cultivar, and hybrid or strain. See also botanical name and taxon.

**plant community** All of the plant species within a microclimate, habitat, or environment.
**planted molding** or **applied molding**  A molding fastened to a work instead of cut into the solid material.

**planter**  1. An area of ground for plants on a project.  2. A container for plants.

**plant hopper**  See leafhopper.

**planting**  1. In landscaping, the act of placing plant material, roots, bulbs, rhizomes, or seed in soil or other growing medium anticipating or intending future survival or growth of a plant.  (See appendix for construction details.)  2. In masonry work, the placement of the bottom courses of masonry units as a foundation on a level bed.

**planting detail**  A drawing detailing the placement of a plant in the ground with information meant to facilitate its survival.

**planting high** or **planting proud**  Planting a tree or shrub slightly higher than the surrounding finished grade to avoid crown rot. This is often a good idea but is not as necessary in sandy soils.

**planting legend**  See planting schedule.

**planting pit**  A pit dug for the express purpose of placing a plant's roots, seeds, bulbs, or rhizomes in it along with backfill in expectation of a plant utilizing the space for growing.  (See appendix for construction details.)

**planting plan**  A designed graphic representation of the location and type of **plant material** for a site.

**planting schedule**  A schedule for the installation and growth of plant material.

**plant kingdom**  In taxonomy, the broad category containing all living and extinct plants. The next category or unit of differentiation is the **division**.  See taxon.

**plant lice**  See aphids.

**plant material**  1. Any or all plants.  2. In landscape-related work, plants utilized in a planting plan or in actual construction.

**plant palette**  A list of **plant material** available for use; restricted by hardiness, government regulations, desired aesthetics, soil type, pollutants, etc.

**plant pit**  A pit dug in soil for the express purpose of placing a plant within it along with backfill to secure for it a place to grow.

**plant production**  1. The amount of organic matter in the landscape over a day or year.  2. The propagation of plants.

**plant schedule**  A combined legend and table referencing a planting plan usually identifying symbols (or labeled plants) on the plan to dictate attributes and requirements of plants represented on the plan for planting. It usually includes the symbol of the plant, the **botanical name**, the **common name**, the size it should be when planted (height, width, caliper, container size), its container type, and remarks such as spacing or whether clumped or single plants are desired, quality of plants, etc.
plant succession

plant succession The change in plant material types and quantities on land over time due to competitiveness, amounts of water, amounts of light, changes in organic matter available, dispersal of seeds, etc.

plant taxon See taxon.

plantlet This term is often used to refer to a small young plant that is produced naturally by a parent plant and can be removed or separated to facilitate propagation.

plan view In reference to drawings, an aerial view or a view from above. Plan views are usually to scale. The scale should be referenced in writing or in a bar scale on the drawing.

plaque A small metal, plastic, etc. plate inscribed in some fashion to label or commemorate an item, person, historic event, dedication, etc. or to describe an exhibit, provide instruction, etc.

plastic 1. An organic polymer that can be molded, extruded, or cut into shapes; is fairly lightweight and may be stiff or bendable. 2. A term for concrete, mortar, or plaster that means easily spread or malleable. 3. A description of wet soil that is sticky, malleable, and cohesive.

plasticity The ease of shaping or molding soils, freshly mixed cement paste, concrete, mortar, etc.

plasticizer An additive that increases plasticity of a concrete mix, mortar, etc.

plastic limit The least water content with which a soil exhibits plastic properties.

plastic pipe Pipe made of organic polymeric substances. It has low initial cost, is lightweight, with high flexibility and good corrosion resistance, but it also has poor resistance to solvents, low pressure ratings at high temperatures, and may break down when exposed to sunlight.

plastic soil A soil easily molded with little resistance to deformation.

plat A map, plan, or chart of record at a county, etc. indicating the location and boundaries of individual properties.

plate 1. A thin, flat, rigid sheet of material. 2. In wood frame construction, a horizontal timber connecting ends of posts, joists, rafters, etc. 3. A timber laid on top of a wall, foundation, or ground to support other timbers or joists.

plate bolt A bolt that secures the plate on top of a foundation or wall and is usually embedded in the masonry or concrete.

playfield An area designed for and/or large enough for field games.

playground 1. An area with any apparatus for the amusement and recreation of children. 2. A landscaped area for children to play out-of-doors.
playhouse  A miniature house sized for children and built for their use.

play lot  1. A small playground. 2. An area or playground for children to recreate.

play structure  An apparatus built for the use, entertainment, play, and recreation of children, usually with many play components (slide, swings, bridge, tower, balance beam, fireman pole, etc.) assembled and attached as one unit.

plaza  A large open outdoor area or space frequented by pedestrians. These are usually urban spaces that are improved with landscaping or paving, and are most often encompassed by buildings, streets, or pedestrian corridors.

pleach or pleaching  The interlacing of branches of one tree or shrub with another, often done to create a hedge, arbor, or dense canopy.

pleasance  A pleasure garden used for enjoyment and relaxation; usually private and secluded.

plicate  In botanical terms, folded lengthwise into plaits or pleats as in a fan or skirt.

pliers  A hand tool with two handles and two jaws operating with a pivot much like scissors do. This tool allows one to grasp items and hold them or turn them. They also may be used for cutting wire.

plot  1. A future or present building site. 2. A plan for a present or future building on a parcel of land, usually showing accessory elements and often the dimensions thereto. 3. The printing of a computer-generated drawing or the finished print of a computer-generated drawing, usually on large paper.

plotter  A machine capable of printing wide sheets from computer-generated drawings, pictures, etc.

plow  1. A device, whether pushed by hand, pulled by animals, or pulled by machinery, that turns over soil. It is useful in preparing for planting and loosening compacted soil. 2. A router or carpenter’s plane capable of cutting grooves. 3. See plow groove.

plow-and-tongue joint  See tongue-and-groove joint.

plow groove  A groove parallel with the grain of wood in a piece of lumber, especially as within the indented side of a tongue-and-groove board.

plug  1. Very small pots with starter plants (sometimes called liners) used for planting in the landscape, or for potting up in a nursery. 2. Small pieces of grass used to start a lawn. 3. A device for connecting electrical wires to an electrical outlet receptacle. 4. Any male fitting for a pipe that, when inserted (glued or threaded) into an opening or a pipe end, plugs it off and prevents flow. 5. See plugging.

plugging  The act of drilling a hole in masonry and forcing into it wood, plastic, fiber, etc. to provide a spot for a screw to be driven into the wall, usually to attach something.

plumb  1. A plumb line. 2. Truly or exactly vertical. 3. To install plumbing. 4. A line pointed at the center of the earth (or its center of gravity) according to a plumb line.
plumb bob

A metal device usually with a point at the bottom suspended by a line indicating a vertical line or a point directly beneath another point from which it is held when dangled from a stationary point.

plumber

One who installs, repairs, or maintains mostly indoor plumbing (3).

plumbing

1. The act of using a plumb. 2. The trade or occupation of a plumber in which one installs mostly indoor pipe and its associated devices. Outdoors this work is referred to as pipe fitting and the trade is a pipe fitter. 3. The fixtures, pipes, fittings, or other devices for conveying fluids, especially water. 4. The installion work associated with a plumber.

plumbing hazard

According to the National Standard Plumbing Code, an internal or plumbing type of cross-connection in a consumer's potable water system that may be either a pollution or a contamination-type hazard.

plumb level or pendulum level

A bar with a plumb line; the bar can be placed horizontally by positioning it at a right angle to the dangling plumb line.

plumb line

A string, cord, etc. with a weight at one end able to be dangled to determine verticality.

plume

A body of contaminated groundwater moving or stationary that has originated from a source(s) and is moved by such factors as groundwater flow patterns, specific gravity, solubility of the contaminant(s), subsurface geology, and the influence of pumping wells.

plumose

In botanical terms, feathery; a description when any slender plant part is beset with hairs.

plunge

In landscape or nursery terms, piling material (soil, bark, peat, etc.) around a potted or b&b plant to moderate temperatures of the soil around roots, and affording a more uniform moisture for them.

plunging

Burying a potted plant in mulch to the top of the pot rim.

plywood

Wood sheets made of three or more layers of veneer (usually an odd number), joined and bonded with glue and pressure. They are most often sold in a 4 × 8 ft size.

pneumatic drill

A drill that operates on compressed air.

pneumatic riveter

A tool that installs rivets and is driven by compressed air.

PO

Abbreviation for purchase order.

pocket

1. A notch in masonry or concrete made to receive the end of a beam. 2. An opening between the annual rings of a tree developing during its growth.

pocket gopher

A landscape rodent (family Geomyidae) pest (about the size of a rat) that burrows 6 to 18 in underground, surfacing and creating little dirt mounds. They eat roots, bulbs, and even some types of small plants which they pull into their burrows.

pocket rot

A type of decay in trees and lumber consisting of holes (pockets) surrounded by sound, healthy wood.

pocosin

A swamp of the coastal plain of southeastern United States. They usually occur on poorly drained soils, or level lands between stream drainages. They have peat soils with shrubs and trees adapted to periodic fires.

pod

1. The fruit of many legumes, of the Bignonia genus, etc. It is often long and always contains seeds. 2. A botanical term identifying any kind of dry, dehiscent fruit.
podocarp  A plant having fruits with stalks.

pointed ashlar  A stone block for use in masonry having markings on its face produced by striking it with a pointed tool.

pointing  1. The finishing treatment of mortar joints by troweling mortar. 2. The act of filling gaps in mortar joints of brick or stone with mortar. 3. Removal of mortar between joints of masonry units and replacement with new mortar.

pointing trowel  A mason’s trowel with a pointed tip used in pointing or removing mortar from joints in masonry.

point of connection (P.O.C.)  The location where an irrigation system is connected to the water supply.

point source  Water pollution emitted at a single source such as a sewage plant outfall.

pole foundation  A foundation for support of a structure consisting of posts driven or partly buried in the ground.

pole pruner  A tool with a pruner and sometimes a saw at the end of a long aluminum or fiberglass handle that may be unscrewed and extended. The pruning jaws are operated by a rope that extends down the handle for pulling to chop off branches, etc. It is handy for small cuts instead of using conventional pruners operated from atop a ladder.

pollarding  A yearly pruning of deciduous trees to the same point on the same main branches each year to keep them at a modest size and give them a rather formal appearance. This gives a manicured style to trees. Branch ends become large and knobby. In summer they create a compact, leafy dome and a stark, odd, or interesting look during dormant months. London plane trees (Platanus acerifolia) have historically been a tree to which this technique has been applied.

pollen  The microspores (fertilizing powder, gametophytes, or pollen grains) of the male organ (anther) of a seed plant that form a fine dust.

pollination  In angiosperms, the transfer of pollen by gravity, wind, insects, birds, etc. from the stamens (anther portion) to the pistil (stigma portion) of a plant or plants to begin the process of creating seed.

pollinator  Anything (butterfly, human, wind, bee, animal, etc.) that assists in transferring pollen from an anther to a stigma.

pollinizer  1. A plant or flower that supplies pollen to fertilize another flower or plant. 2. Any source of pollen.

pollution  1. Contamination of any environment (for a particular organism or many organisms) from foreign or natural substances that have a negative effect. What is pollution to one organism may be a natural part of another organism’s environment. 2. In the human context, the presence of matter, gases, noises, unsettling visual images, or energy whose nature, location, or quantity produces undesired environmental, psychological, or physiological effects. Most any substance can be a pollutant (under this definition) if it affects a person negatively.

pollution hazard  According to the National Standard Plumbing Code, an actual or potential threat to the physical properties of the water system or the potability of the public or the consumer’s potable water system, but which would not constitute a health or system hazard as defined.

polyandrous  A flower with multiple stamens.
polycarpic

descriptive of a plant that fruits and flowers multiple times in a life cycle.

polyethylene  a low-cost, flexible plastic. in landscape work, it is most often useful in two forms. it is made into a somewhat bendable pipe, sheets, or rolls of plastic. as a pipe, it is useful because it generally does not break when frozen with water inside. as a sheet membrane, it is useful because it is waterproof. it has been used to line ponds, assist in roofing, and as a weed barrier. the difficulty of using it as a weed barrier is that it also is a barrier to gaseous exchange and water penetration. if it is watered by drip irrigation beneath the plastic it often develops anaerobic conditions detrimental to plant growth.

polyethylene pipe  a plastic pipe made of a thermoplastic.

polygamous  in botanical terms, having some perfect, some staminate, and pistillate flowers on the same plant or on different individual plants.

polymer concrete  any concrete utilizing an organic polymer as binder in the mix.

polymorphic  a plant that is quite variable regarding habitat.

polypedon  a group of similar pedons having edges defined by observable features such as changes in slope or soil properties like horizon texture or an easily observed color.

polypropylene pipe  a tough plastic pipe with resistance to heat and chemicals.

polysepalous  a botanical term describing sepals that are separate from each other.

polyvinyl chloride (pvc)  a thermoplastic resin highly resistant to chemicals and corrosion used for pipe fittings and piping. pipes of this material are classified for various pressures with either the pressure rating or a schedule (thickness) rating stamped on the side of the pipe. it is not resistant to impact, especially in smaller sizes. connections may be made by solvent weld, threads, or by compression fittings with rubber gaskets, depending on the type of connection the pipe is manufactured for. it is a popular and dependable pipe for underground irrigation systems if installed properly.

pomace  spent seeds and skins of apples and grapes as a by-product of cider and winery operations. it has been shown to be valuable as a natural slow-release nitrogen fertilizer. it is also helpful in improving the soil texture of clay soils.

pome  in botanical terms, a fleshy indehiscent fruit with an inferior ovary and more than one live seeds.

pom-pom  a reference to the pruning and shaping of a plant (usually a shrub) with all its main branches or stems exposed and no foliage for a distance extending to a small, rounded mass of foliage at each of its ends.

pompon  the small, rounded flower head of a chrysanthemum or dahlia.

pond  a natural or man-made water body smaller than a lake yet not a river or stream with...
moving water (though it may be a portion of one); a water body that is observed to be mostly still.

**poorly drained soils**  Soils in which water is removed so slowly that the water remains wet most of the year. Poor drainage usually occur at or near the surface. Poor drainage is caused by the high water table, a slow permeable layer within the profile, or seepage.

**popout**  The breaking away of small, usually conically shaped, portions of a concrete surface.

**pop-up head**  An irrigation head designed to be placed with its top surface flush with ground level (generally at finish grade), and extending itself upward to shoot over plant material when it receives water pressure.

**pop valve**  A safety valve that normally keeps the valve closed except when the pressure of fluid on the valve overpowers the force exerted by a spring.

**porch**  1. An exterior structure that extends along the outside of a building, is usually open or partially so, and is usually covered. 2. The steps and landing at the door to a building entrance. 3. A covered exterior entry to a building.

**pore**  1. A small interstice allowing the absorption or passage of liquid. 2. A minute opening in plants or animals that allows matter, liquid, or gases to pass.

**porosity**  The amount of pore space in a material, especially soil that permits gases or liquids to pass through the material or soil. It is usually expressed as a ratio or percentage of the volume of voids in a material or soil to the total volume of the material or soil (including the voids). Pores in soil are essential for plants as they need oxygen, water, and gaseous exchange for their roots.

**porous paving**  A surface used to facilitate traffic or storage of some kind out-of-doors and allows precipitation to infiltrate into the subsurface, preventing or reducing runoff.

**porte cochere**  1. A roof usually attached to a building and erected over a driveway or street for shelter of those entering or exiting vehicles. 2. An access through a screen wall to an interior court.

**portico**  A covered area held up by columns, usually in a colonnade and usually at the entrance to a building.

**Portland cement**  A cement-type binder used for structural concrete. It is manufactured by grinding and burning a mixture of limestone
positive displacement pump

with clay or shale and a smaller amount of gypsum. It is mixed with water and an aggregate to make a thick, heavy liquid that dries as concrete.

**positive displacement pump** A pump having pumping action created by displacement produced by a decrease in volume in the working chamber. Examples of this pump type are rotary pumps, gear pumps, reciprocating pumps, and vane pumps.

**positive environmental impact** Consequences in a realm involving interrelated or interdependent living things and their surroundings having influences of a beneficial nature, or being influenced in a positive way. It is most often used in the context of an anthropomorphic (human) cause of positive environmental changes and focuses on the effects of those changes. However, what is viewed as a positive impact upon one element or organism may be a negative impact to another. See environmental impact.

**positive impact** See positive environmental impact.

**post** A long, strong, stiff, vertical structural member (usually of wood or metal) or a column for a fence, etc. secured in an upright position to carry a load or give support to something.

**post and board fence** A wood fence design of posts and rails spanning between them with space between the rails.

**post base** A steel device with a rod for pouring cement. At the end above grade a U-shaped bracket holds a post that is screwed or bolted to the bottom of a post or to the underside of a beam.
**post emergent** An *herbicide* that will kill weeds after they have **germinated**.

**post hole** A narrow hole in the ground dug to accept a fence column (post), or support post for a structure.

**post hole digger** A tool for digging narrow holes in the ground to accept posts. They have two long handles with curved jaws on their ends moving on a pivot point. The handles can be held together while the open jaws are thrust into the ground. The handles are then pulled apart to squeeze the displaced soil and allow it to be lifted and extracted from the hole.

**post pounder** A steel tool with two handles connected to a pipe with one end open and the other closed with a weight. It is useful to drive steel or wood posts into the ground by sliding the post into the tube, standing the post where it is to be driven, raising it by the handles, and dropping it on the stake.

**pot** In the landscape industry, any free-standing container in which a plant is grown or placed. They are made of various materials including plastic, metal, fiberglass, clay, etc.

**potable water** Also known as *culinary water*, this water is of adequate quality to be used for human consumption. This water is usually treated to ensure purity for domestic or drinking purposes. It can be used as a source of irrigation if protection such as a **backflow preventer** is provided to prevent contamination to the domestic supply. Once water enters an irrigation system, it is not considered potable.

**potager** A French-inspired herb, vegetable, or flower garden of small size made with color, constant production, and low maintenance in mind.
**potash**

**potash** (K) Can refer to potassium, or various potassium compounds, but it is correctly used in reference to potassium carbonate (usually derived from wood ashes). It contains potassium, which is essential to plant growth. Potash can be obtained by washing wood ashes with water and evaporating the resultant solution until dry. This process used to be done in iron pots and thus the name derived from pot and ash. It is often used as the potassium in the basic components of a complete fertilizer and is usually indicated on fertilizer containers by the third percentage (number) listed on a label in the NPK ratio.

**potassium** (K) An alkali metal that is a light silver-white color, abundant in nature, and usually combined with minerals. It is highly reactive and thus readily forms various compounds. It is one of the three basic components of a complete fertilizer when it is in the form of potassium oxide, also known as potash. Plants consistently need this nutrient to sustain growth. It is represented by the letter K in the fertilizer NPK ratio. It is available in various compounds (i.e., potassium nitrate, potassium sulfate, etc.) for fertilizer or fertilizer manufacturing.

**potassium carbonate** A white salt that forms a strongly alkaline solution. See potash.

**potassium chloride** or muriate of potas A chemical fertilizer containing 48 to 62% water-soluble potash and 15% sodium. The salts can damage some soils and plants.

**potassium magnesium sulfate** A chemical fertilizer also known as double manure salts; supplies 30% water-soluble potash and up to 56% magnesium.

**potassium nitrate** A fertilizer with 14% nitrogen and 35% potash (14-0-35). See nitrate of potash.

**potassium oxide** The form of potash used in fertilizers.

**potassium permanganate** A mild fungicide and disinfectant with little potassium fertilizer value.

**potassium sulfate** A fertilizer also known as sulfate of potash containing 48 to 52% watersoluble potash.

**potato bug** An isopod crustacean (suborder Oniscoidea) having an elliptical body with seven pairs of legs, sectioned shells, and the capability to roll up into a ball about the size of a pea. They feed mostly on decaying vegetation; however, they will feed on young tender plants, especially those just germinating or on fruits that are usually overripe or damaged. They are encouraged to proliferate by mulching and composting. They are also known as sow bugs or pill bugs.

**pot-bound** A condition when a plant is in a smaller container than it needs or is left too long in a container. This is evident by roots that have begun to grow in circles. If planted in this condition they may not grow well, may become subject to windthrow, or may even die. Roots should be cut at the outside edges, or at least straightened and untangled.

**potentiometric surface** A surface that water will rise to as representing static head. In an aquifer, it is defined by the level to which water will rise in a well. A water table is a potentiometric surface.

**potherb** A plant grown for the use of its leaves, seeds, flowers, or other parts, especially as flavoring in foods, but also as a main dish.

**potting** Placing a plant and growing medium in a pot in such a way as to encourage growth.

**potting mix** The combination of materials used to support and sustain a plant growing in a pot. It may be comprised of soil, sand, decom-
posed manure, leaf mold, perlite, vermiculite, peat, or other ingredients in various combinations.

**potting on** Moving a plant from a smaller container to a larger container when it has outgrown its container rooting space or shortly before.

**potting up** Placing a plant that has been field grown and bare rooted, or grown as a cutting, etc. into a pot.

**poultry manure** Excrement from poultry that is sometimes used as a fertilizer. It has an NPK ratio of 0.9–5, 0.5–1.5, 0.8–1.5. If not composted well, it can burn plants.

**pound (lb) (#)** English or U.S. weight of 16 oz or 0.454 kg.

**pour coat or top mop** On a built-up roof, the top coating of bitumen or final pouring of hot bitumen into which the gravel or such is embedded.

**powdery mildew** Any of a number of fungal diseases acting as parasites, having a white, powdery, felt-looking appearance. They live primarily on the surfaces of plants and affect a wide variety of plants such as asters, calendulas, roses, zinnias, and lilacs. They are encouraged by damp areas with little air circulation, and are more prevalent when days are warm and nights are cool. Do not water infected plants late in the day.

**PPAF** Abbreviation sometimes found on plant tags that stands for plant patent applied for.

**ppm** Abbreviation for parts per million.

**ppt** Abbreviation for parts per thousand.

**PR, pr** Abbreviation for precipitation rate or gross precipitation rate. 2. Abbreviation for pair.

**preemergent** A botanical term describing a plant part that ends abruptly as if it were bitten off.

**praying mantis** An insect much like a grasshopper that feeds on other insects and holds its prey in its forelimbs, much as if it were praying.

**precast** See precast concrete.

**precast concrete** A term describing concrete formed, poured, and finished at a location other than its final resting location or position.

**prechill** A cold or freezing treatment given to seeds to break dormancy and allow them to sprout.

**precipitation** Water from climatic events including rain, mist, snow, sleet, or condensation. It is usually measured in inches or millimeters per day, month, or year.

**precipitation rate** 1. The rate at which rain, sleet or snow falls measured in water depth received per hour (inches/hour, or centimeters/hour). 2. A measure of the rate at which water is applied, or is projected to be applied by a design layout, by sprinklers of an irrigation system as measured in the field or estimated by calculations in inches per hour or centimeters per hour. 3. The rate water is projected to be applied over a given pattern of area by a single sprinkler head with a selected nozzle as given by a manufacturer in a catalogue based on field studies by the manufacturer. See gross precipitation rate and net precipitation rate.

**precocious** In plants, something that appears early, such as flowers appearing before leaves on a plant.

**predatory mites** A mite that eats the types of mites that are harmful to plants.

**preemergent** Generally a chemical for treatment of soil to prevent weed seeds from germi-
nating or emerging. It is also sometimes used after a crop is planted but before it emerges.

prefab  Anything fabricated off-site and then installed at the construction site.

prefabricate  The fabrication of components before their installation at the site.

prefabricated  An item or its parts that are usually standardized; having been formed, cut, drilled, etc. or partially assembled off-site so that assembly consists of uniting the parts on-site to complete the construction of the desired structure, device, etc.

prefabrication  The manufacture of components off-site for subsequent assembly at the site.

preferential assessment  A form of differential assessment allowing eligible land to be assessed for its agricultural value instead of its development value. Taxes are then based on the potential revenue in crops or livestock, instead of its speculative value for development.

preferred angle  1. An angle of the pitch on stairs between 30° and 35°. 2. An angle of the pitch or slope of a ramp less than 15° from horizontal.

preliminary drawings  Drawings not ready for construction that are produced during the early process of designing a project.

preliminary plan  This term usually refers to a site plan for a project showing the layout and design of features in plan view to scale and usually colored.

premium fertilizer  A complete fertilizer with several micronutrients added.

premorse  Abruptly ending as if broken off.

preplaced-aggregate concrete or prepacked concrete  Concrete made by placing coarse aggregate in a form before injecting a cement grout to fill the voids between aggregates.

preservative  A substance that waterproofs, prevents rust, prevents decay, etc. With regard to lumber, a chemical that keeps moisture out of wood to prevent bacteria or fungi from getting nourishment, or a chemical that carries toxins to inhibit growth of these decay-causing organisms.

pressed brick  Brick formed by pressing it to provide sharp edges and smooth surfaces before being fired in a kiln.

pressed steel  Steel pressed into shape.

pressure  1. The force exerted over a surface divided by its area. 2. The force of a liquid or gas of uniform structure or composition per unit area exerted on the walls of its container. In sprinkler irrigation, the pressure of water exerted on walls of the pipe, etc. It is expressed in pounds per square inch (psi), bars, or kPa. It is the amount of energy available to move water through pipes, valves, sprinklers, or other equipment. Static pressure is the pressure measured when no water is flowing through a closed system. Dynamic pressure is the pressure measured when the system is open, and water is flowing.

pressure at the head  In sprinkler design, the dynamic pressure as measured at the base of the sprinkler head.

pressure compensating  Some irrigation emission components (emitters, spray heads, etc.) that have devices within them that allow all emission points on the same line to operate at the same pressure by compensating for elevation change or pressure loss in flow of water through the system.
pressure-compensating emitter or flexible diaphragm emitter In drip irrigation, an emitter that is able to keep the emission of water fairly constant with variations in pressure within pipe supply lengths. This is accomplished by deformation of an elastomeric disc, diaphragm, or water passage. The drawback to these devices is that elastomeric materials have a tendency to absorb water, lose their elasticity, or creep under prolonged stress, which will change the performance of the emitter over time. See also emitter.

pressure gauge A gauge that measures the pressure of a liquid or gas.

pressure line A pipe line in a sprinkler system that distributes water from a source to valves. Also known as a main line.

pressure-reducing valve or reducing valve A valve that reduces pressure in a system, often adjustable to a range of pressure. They are used where pressure ranges for equipment (valves, heads) is excessive for proper operation, and on most drip irrigation systems.

pressure-regulating valve A valve designed to provide a preset downstream pressure in a hydraulic system.

pressure regulator A device in a pipe system that decreases the water pressure downstream, especially to allow sprinklers, emitters, etc. to operate optimally. It regulates available pressure to a preset maximum under static or flow conditions to downstream.

pressure-treated wood Any lumber that has been placed in a liquid under pressure to force it into the wood fiber. The liquid is often a preservative, and/or an insect- or fungal-retardant chemical. This is commonly performed on wood to be used in underground applications or where it may come in contact with water.

pressure vacuum breaker A backflow device with a spring-loaded float and an independent spring-loaded check valve. The check valve is designed to close with the aid of a spring when flow stops. It also has an air inlet valve designed to adequately open when the internal pressure is 1 psi above atmospheric pressure. This prevents nonpotable liquid from being siphoned back into the potable water system. This assembly includes resilient, seated shutoff valves and test cocks. It must be installed at least 12 in above all downstream piping and outlets, and it can be used to protect against pollutants or contaminants. It may only be used to protect against back siphoning and not against back pressure.

pressure zone An area or portion in a water system, such as for a city, where the pressure has a common origin not separated by a pressure regulator, pump, or other device for mechanically changing the pressure.

pretreatment In wetlands constructed for cleaning water, the initial treatment of waste water for removal of substances that might harm downstream treatment processes; to prepare waste water for more treatment, or cleaning.
pricking out

pricking out  Transplanting seedlings from their germinating tray, pot, or bed to a place where they have more room to grow.

prickle  With regard to plants, a small pointed projection that is often like a small wire or stiff hair and usually is strong enough to puncture one’s skin if pressed hard.

prick punch  A pointed steel punch used to mark metal or make small indentations for a drill to follow, etc.

primary nutrient  The most important nutrients needed in soils for plant growth commonly shown on bags of fertilizer, including nitrogen, phosphorus, and potash uniformly indicated in that order on fertilizer supplies.

primary productivity  The total amount of organic matter added to soils by plant photosynthesis daily or yearly.

primary treatment  The first step in the process of cleaning storm water or waste water. It usually consists of removal of particulate solids through screening and sedimentation.

prime contractor  A contractor on a construction project that has a contract directly with the owner.

prime professional  A person or company having a professional services contract directly with the owner.

primer  1. A first coat of paint applied to prepare for the finish coat by improving adhesion (especially on metal, plastic, etc.), sealing stains that may otherwise bleed, preventing rust, and/or filling small holes. 2. In irrigation, a chemical liquid used to soften plastic pipe to prepare it for glue.

priming  Applying a primer paint.

primocane  A first-year raspberry cane.

principle of limiting factors  The principle that the maximum rate of photosynthesis is limited by whichever basic resource needed for plant growth is least available to plants.

privacy berm  A mound that obstructs view from one outdoor space to another.

privacy fence  This term usually refers to any vertically constructed separation of outdoor spaces at least 6 ft tall, preventing views through it. It may be masonry, wood, plastic, etc.

Proctor compaction test  A test determining the moisture content of a soil for optimum compaction.

Proctor penetration needle  A needle, 0.05 to 1 sq in (0.32 to 6.45 sq cm) in area, used with a spring to measure resistance of fine-grained soil to penetration by the needle.

procumbent  In botanical terms, along the ground, trailing, or low spreading.

production drawings  Finished drawings for use in construction work.

progradation  The process of growth of a shoreline toward the water due to sedimentation.

program  In reference to a dual programmable sprinkler controller, a set time, day, and duration for operation of a valve(s) controlling irri-
gation of landscape areas with similar watering needs. Each area of different watering requirements is set on its individual program with its necessary start time, run time, and day(s) of operation.

**progress payment** A payment made by a client for work in progress but not yet complete.

**project** 1. A design for a proposed improvement on land in the form of drawings, models, etc. 2. A construction work of any kind, including the maintenance of facilities.

**project manual** The specifications, bid requirements, contract conditions, etc.

**promenade** A suitable place to enjoy walking for leisure, often with a dramatic, impressive, or beautiful view.

**propagation or propagating or propagate** Multiplying plants. In gardening, this refers to starting new plants (reproduction) from planting seeds (sexual reproduction), divisions, cuttings, budding, layering, or grafting.

**property line** A recorded boundary of land parcel, often having different ownership on each side of the line.

**proposal** A term often used interchangeably with bid.

**proposal form** A form to be filled in when submitting a bid for work.

**prostrate** In botanical terms, laying flat on the ground. It is usually a description of a ground cover.

**protected species** A plant protected by federal or state law.

**protective covenant** A written agreement or legal document that restricts the use of real property.

**protractor** An instrument usually shaped like a half circle connected at its ends by a straight piece, that is graduated in angular degrees along its curved edge for measuring angles, or to facilitate drawing angles.

**provenance** The geographical area from which a plant originated.

**proximal** A botanical term describing a plant part toward its base or its near end.

**pruinose** A botanical term meaning very glaucous, or having a bloom or powder on a plant part, such as on grapes and plums.

**prune or pruning** With regard to plants, the intentional cutting off of roots, stems, or shoots to make a plant more appropriate for its location, its purpose, to stimulate growth or flowering, or to improve its ability to survive.

**pruner** A tool with two jaws and two handles on a pivot point allowing the handles to be squeezed and the jaws (at least one of which is sharp) to chop off woody plant growth when pruning. There are small pruners with handles that just fit in one hand and larger ones, often called loppers, with long handles and larger jaws.

**pruning sealer** A substance, solution, or paint sprayed or brushed onto fresh cuts after pruning. There has been much controversy over its protective value, necessity, and potential harm.
pruning shears

pruning shears  Long-bladed pruners used for shearing hedges, grass, or similar thin plant material.

pry bar  A heavy solid steel bar with a point on one end and a chisel on the other. It is useful in prying, and in breaking up highly compacted soil, especially soils containing rocks.

pseudanthium  A compact inflorescence with small individual flowers that together simulate a single flower.

pseudobulb  A thickened, modified stem aboveground resembling a bulb (as in some orchids, Cymbidium) and serving as storage for nutrients.

pseudocarp  Fruit that has considerable fleshy material, as with a peach or a strawberry.

psf  Abbreviation for pounds per square foot.

psi  Abbreviation for pressure expressed as pounds per square inch. In water pressure calculations, 1 psi is equal to 2.31 feet of head or the pressure at the bottom of a column of water 2.31 ft tall.

psp  Abbreviation for plastic sewer pipe.

psyllids  A jumping, sucking insect less than ¼ in long, much like aphids and sometimes called jumping lice.

pt  Abbreviation for pint(s).

p-trap  A drain connection with a low point that is filled with water, preventing sewer gases from escaping into a space through a plumbing fixture.

puberulent  In botanical terms, covered with almost imperceptible fine and short down. It is a very fine, almost imperceptible pubescence.

pubescence  In botanical terms, the quality of being pubescent.

pubescent  In botanical terms, covered with fine and soft short hairs.

PUD  Abbreviation for planned unit development.

puddle  With regard to soils, compacting loose soil by first soaking it, and then permitting it to dry.

puddled soil  This is a reference to soil that is artificially compacted when wet by vehicle or foot traffic, or clay soils that are tilled when wet. It is dense, massive, compacted, and without granular structure. It does not allow good air or water movement in the soil.

puddling  1. Reducing voids in mortar or concrete by the use of a tamping rod. This makes it more compact and assists in avoiding cavities. 2. The act of coating with a mixture of wet clay that is water repellant.

pull box  A box in which wire raceway sleeves open to allow pulling wires (conductors) through those conduits or sleeves.

pulling pipe  A method of establishing underground pipe lines by attaching pipe to the bottom of a steel blade on a machine that pulls the pipe into the ground.

pull-string  A string covered with chalk for stretching tightly over a surface where it is pulled from near the center and let go to snap a line on the surface marked by the chalk. This line is often used for cutting or marking.

pulp  1. The pith of a plant stem. 2. The soft part of a fruit.

pulverant  A term used to describe fertilizers that are not liquid, not granulated, but mostly powder.
pulvinus  A botanical term referring to the swollen base of a petiole.

pumice  A lava product with a lightweight, highly porous, loose, and spongy structure.

pumice concrete  A lightweight concrete using pumice as aggregate.

pump  1. A hand or motorized device used for causing water to flow or be compressed. They come in a large variety of types and sizes for various applications but can be classified into two basic types: the positive displacement pump (or static pump type) and the dynamic pump (or kinetic pump type). 2. In excavation work, describes the ability of the ground to bring water to the surface when it is walked on or driven over. This is an unfavorable condition when attempting to compact an area.

pumping  1. The action of fluid flow facilitated by a device used to move liquid (especially water) by mechanical means (a pump), usually through a pipe. 2. In landscape and excavation work, the action of water movement to the surface when it is walked on, driven over, or an attempt is made to compact it. In this condition, soil is unfit for most work. In landscape work, if soil is worked in this condition, it becomes compacted, does not drain well, and is not conducive for most plants to thrive. Soil should not be worked when excess moisture becomes evident after stepping in the same spot several times (pumping occurs).

pump performance chart or pump performance curve or pump performance graph  A graphical representation of a pump's performance characteristics based on water with a specific gravity of 1.0. These graphs provide information such as total dynamic head, brake horsepower, efficiency curves, and net positive suction head required.

pump speed  The shaft rotational speed of a pump usually expressed in revolutions per minute. It is usually given on pump performance charts.

pump start circuit  A feature on an irrigation controller allowing a connection to be made through a relay, with the pump starter, so the starter will be energized when a watering cycle begins.

pump start relay  An electronic device that uses a signal current from the irrigation controller to actuate a separate electrical circuit that energizes the pump starter.

punch  A short steel tool with a sharp point. It is struck with a hammer for centering, marking, or starting a drill in the right spot so that the drill bit does not wander as it spins.

punches  A reference sometimes made in placing pipe underground where it must be bored or pushed under paved or sensitive ground areas.

punch list  A written notice, list, and record of items observed on-site that are not complete, need correction, or need repair work by a contractor to meet design documents' intent and for the project to be completely finished. Substantial completion should occur before a punch list is created.

punctate  In botanical terms, dotted with small, translucent glands, or with minute holes or apparently so.

pungent  1. A bitter or sharp taste or smell. 2. A botanical term referring to a plant part that is firmly sharp-pointed.

punkle  See midge.

pupa  The inactive, immature stage of many insects in the stage of metamorphoses to an adult stage.
purlin

purlin  A horizontal beam, strut, timber, or support in the framing of a roof system and usually supporting the roof decking.

pustule  A raised bump on a plant much like a blister.

putty  A heavy paste composed of pigment mixed with linseed oil and used to fill holes and cracks in wood prior to painting.

putty knife  A tool with a long handle and a flat-nosed blade used for spreading putty.

PVB  Abbreviation for pressure vacuum breaker.

PVC  Abbreviation for polyvinyl chloride, a common plastic material from which pipes are made, and is often the choice for use in constructing sprinkler irrigation systems. Pipes and fittings of this material are classified for various pressures with the pressure rating stamped on the side, or with the thickness of the pipe stamped by reference to schedule. It is not resistant to impact, especially in smaller sizes or with thin walls. It is sold in schedule or class sizes. Connections may be made by solvent weld, threads, or by compression fittings with rubber gaskets, depending on the type of connection it is prepared with.

pylon sign  A sign that towers above the surrounding landscape or buildings. (Compare with monument sign.)

pyramidal  A botanical term describing a shape that resembles a pyramid: broad at the base and tapering to a point. It may describe a plant part or a plant outline of its head, such as many evergreen trees. (Compare with round, columnar, fastigiate, oval, broadly spreading, upright spreading, weeping.)
**pyrethrin**  The active ingredient of **pyrethrum**.

**pyrethrum**  A broad spectrum organic insecticide relatively harmless to warm-blooded animals, but lethal to insects. It is used as a powder or liquid made from *chrysanthemum, cinerariae-folium,* or *C. roseum*.

**pyriform**  In botanical terms, pear shaped.

**pythium**  A water mold, fungal **pathogen**, soil inhabitant, and cause of **damping off** and **root rot**.
Q  Abbreviation for quantity often used in referring to gross precipitation rate.

qt  Abbreviation for quart(s).

quadrant sampling  Gathering representative evidence of soils, plants, etc. from small plots in a landscape.

quadrate  Nearly square.

quality of life  A measure of the enjoyment or convenience experienced by residents living within a specific area. A myriad of influences plays a part in this measure, and some influences affect a portion of the population positively while affecting others negatively. Open space, landscaping, and parks generally play a part in this measure.

quantity survey  A listing of the details of all materials and equipment needed for construction depicted on a drawing(s).

quarry-faced  Ashlar only squared enough to fit in a wall with a rough, quarried surface.

quarry tile  Fired clay tile often used in flooring or on outdoor patios.

quart (qt)  English or U.S. capacity measurement of liquid equal to 2 pints, ¼ gal, 57.75 c.i., or 0.946 l.

quarter section  A square tract of land that measures ¼ mi on each side.

quartz-halogen lamp  A lamp with a tungsten filament in a quartz envelope.

quasi-  A Latin prefix sometimes used in botanical terms meaning seemingly but not actually.

queen closer  A brick that has been cut in half along its length. It is often used to complete a course.

quick coupler key  A round key with a small knob that is inserted and turned into a quick coupler valve to allow water to escape.

quick coupler valve  A valve with water pressure, which when a key is inserted into it allows water to escape, usually to a hose or a sprinkler head. Quick couplers were extensively used with sprinkler heads before automatically controlled systems became available. Sprinkler heads operated by quick couplers are expensive when labor is considered. They are also difficult to turn off in time to avoid overwatering, as many times they are forgotten and left in operation.

quoin or coign or coin  In masonry, a hard stone or brick used to reinforce an external corner or edge of a wall.
R, r  1. Abbreviation for radius. 2. The symbol for the thermal resistance of a material. 3. Abbreviation for electrical resistance.

rabbet, rebate A long channel, groove, or recess in one member to receive another as in a window or door edge, or as in tongue-and-groove lumber.

raceme In botanical terms, a flower cluster with one-flowered pedicels along the axis of inflorescence. It is a simple flower cluster with many stalked flowers about the same length coming from the same stem and usually opening in succession toward the apex.

racemose Growing in the form of a raceme.

raceway A channel, pipe, or conduit for enclosing electrical conductors.

rachilla In botanical terms, the axis of a spikelet.

rachis In botanical terms, that which bears and is attached to flowers or leaflets of a plant. It may refer to an axis bearing close-set organs, especially the axis of a spike. It is also used in reference to the extension of the petiole or rib of a compound leaf from which the petiole meets the leaf blade to the tip of the leaf.

rachis radial A spine of a cactus where the spines originate from an aerole's periphery instead of its center as is the case with a central.

radial Projecting outward from a center along a radius or in a circle, as rays projecting from a point.

radial-arm saw or radial saw A saw that holds a rotating, circular saw blade above the work and has capabilities for tilting, rotating, or moving the blade.

radical Pertaining to the root.

radicle The lower part of a plant embryo. The root of a plant embryo or seedling.

radius of throw The distance from the sprinkler head to the farthest point of water application by the sprinkler.

rafter A structural support member extending from the ridge of the roof down to the eave.

raft foundation A thick, reinforced concrete slab used instead of wall or column footings or foundations to support and distribute the load of a structure to a soil with low-bearing capacity.

ragwork Thin, flat, undressed stones laid in a crude and random fashion, usually horizontally.

rail 1. An elongated item of various materials used for grasping with a hand for stability and
support, such as on stairs See handrail. 2. Horizontal members of a fence extending from post to post.

railroad tie A timber impregnated with creosote to prevent decay that had been used to hold railroad rails in place and then was salvaged for site work. They are often used for retaining walls, or separating various surface materials. They often ooze creosote, becoming offensive by staining clothes or tracking on shoes to other surfaces. Creosote contact with skin may raise health concerns.

Rails To Trails A federal act affording interested governments the opportunity to use potentially abandoned railroad right-of-ways for recreational and aesthetic uses.

rainfall erosion index Values representing the relative erosive power of rainfall from a 30 minute storm.

rainfall intensity The amount of rainfall measured in centimeters or inches per hour or minute.

rain gauge A device that collects rainfall information, particularly useful in computer applications of determining water needs. They are cup shaped and gather rainfall usually allowing detection in $\frac{1}{100}$ in increments.

rain gutter A channel at the edge of a roof for conveying water away.

rain sensor A sensor that turns an irrigation controller off when rain has accumulated, and on when the water has evaporated.

rainshadow The dry area on the leeward side of a mountain where precipitation decreases.

rainsplash The soil and water displacement occurring with raindrop impact, causing erosion.

rainwash Water from rain gathering as a sheet and running over the land surface, causing erosion.

rainwater conductor A pipe or tube, usually exposed on the surface of a structure, and usually made of aluminum or tin, for conveying precipitation from a roof or flat area of a structure downward.

raised planter A planter with an elevation higher than the adjacent grade. The earth is usually retained by a retaining wall, boulders, etc.

rake 1. A sloping or inclined surface, especially a roof. 2. A board along the sloping edge of a gable.
roof. 3. Toothed, downward-turned, parallel bars or teeth, or fan-shaped spines on a long handle used for removing debris from a ground surface, for loosening soil, or for grading and smoothing.

raking-out  1. In landscape construction, the action of preparing a surface for planting or placement of mulch, etc. by raking it smooth and removing any unwanted debris. 2. In brickwork, preparing mortar joints for pointing.

raking stretcher bond  A pattern of bricks laid as stretchers in a flush wall where each brick overlaps the one underneath by one-quarter of a brick length.

rammed earth  Earth and water compressed and then dried.

ramp  A relatively short access from one elevation to another without any vertical rise, usually with a slope accommodating a particular type of traffic (i.e., wheelchair, automobile, golf cart, etc.).

rampant  Wildness; absence of restraint; vigorous, aggressive growth.

rampart  1. A wide embankment as fortification, usually having a parapet at its highest level. 2. A wall-like ridge made of rock fragments, debris, or earth.

ramuliferous  Densely or profusely branched.

random ashlar  A masonry wall with rectangular stones not having continuous joints and without a fixed pattern.

rank foliage  Leaves that have grown profusely or larger than normal.

rapid-curing asphalt  Liquid asphalt cement and a petroleum-type diluting agent of high volatility, causing a quick cure.

rasp  A coarse file with protruding, pointed teeth.

ratchet drill  A hand-driven drill with ratchet-driven chuck.

rated horsepower  The maximum horsepower provided under normal, continuous operation.

rate of slope  See slope ratio.

rational formula or rational method  A method of runoff calculation with a formula for computing the runoff volume of a given area. It is represented by $Q = CiA$ where $Q$ is the peak runoff in cubic feet per second or cubic meters per second; $C$ is the coefficient of runoff; $i$ is the intensity of rainfall in inches per hour for design peak rainstorm adjusted to a duration equal to the time of concentration of the watershed; and $A$ is the area of the watershed in acres or hectares.
rational method

rational method  See rational formula.

ray  In botanical terms, a branch of an umbel flower stalk.

RBM  Abbreviation for reinforced brick masonry.

RC asphalt  See rapid-curing asphalt.


rd  1. Abbreviation for rod(s).  2. Abbreviation for road.

reach  The section of a sewer pipe between structures.

reaction wood  Wood resulting from abnormal growth.

real property  Land and everything growing on it or built on it (structures), and usually some space above it and everything beneath it.

reamer  A tapered drill bit with sharp, spiral, fluted cutting edges along the shaft. This tool is used to enlarge an opening to cut burs from pipe, etc.

rear lot line  Generally, the opposite and most distant line from the front lot line.

rear yard  The yard across the full width of a parcel extending from the rear line of the main building to the rear property line.

rebar  A steel bar used for reinforcing, having a pattern of raised areas on its surface to prevent moving concrete when temperatures change, or when pressure is applied.

rebloomer  A plant that flowers more than once in a growing season.

receiving site or receiving zone or receiving area  An area of land where dwelling unit numbers allowed (allowable density) is increased by transferring development rights (dwelling units) from a sending site by way of a transfer of development rights. This assists in preserving agricultural and natural areas.

receptacle  A botanical term identifying the end of the stem (pedicel) to which the other flower parts are attached.

receptacle plug  An electrical device capable of receiving a plug with a cord for supply of electrical current to appliances or portable, electrically powered devices. This device is mounted in a box, usually hidden behind a wall and the power is constantly supplied by a wire to the box and outlet.

recess  A depression in a surface.

recharge  In relation to water in the landscape, the replenishment of groundwater, or aquifers with water percolating from the surface of the earth.

recharge  1. (artificial) The addition of water to groundwater by activities of man at a recharge rate greater than historically recorded.  2. (groundwater) The replenishment of groundwater.

recharge zone or recharge area  The portion of any area of land surface where groundwater recharge is naturally or historically significant.

reciprocating pump  A pump that moves and compresses fluids by use of a piston with an intake and outlet to the chamber, allowing fluid in as it retracts the piston and forcing water out as the piston is pushed to the other end of the chamber.

reclaimed waste water  Waste water that has been cleaned enough to be of beneficial reuse.

reclaimed water  Water that has been collected (and sometimes treated as necessary) after
an original use and then made available for reuse (often in an irrigation system).

**reclamation** The reuse or reclaiming of resources, usually in reference to natural resources. This term is often used for revegetation of an area that has been disturbed or denuded of vegetation.

**record drawings** The drawings prepared by a contractor before, during, and after completion of a project, showing the project as it was actually constructed with any changes from the original design drawings.

**record sheet** At a construction site, a sheet recording materials delivered, number of workers employed at the various trades, hours worked, weather, etc.

**recreational vehicle (RV)** A vehicle designed or used for living, sleeping, and recreational purposes and equipped with wheels to facilitate traveling. They include pickup coaches (campers), motorized homes, boats, travel trailers, camping trailers, four-wheelers, snowmobiles, etc.

**recurved** In botanical terms, bent backward, downward, outward, or toward its beginning.

**recyclable material** Waste materials or by-products processed and then returned to the economic mainstream in the form of commodities or products. Recyclable materials include metals, glass, plastic, paper, wood, etc.

**recycling plant** A facility that recovers resources, such as paper products, glass, metal, etc. to return them to use.

**red brass or rich low brass** A metal alloy containing about 85% copper and 15% zinc. It has high corrosion resistance, can be polished, and is available in flat sheets, rod, wire, or tube.

**red spider mite** See *mites*.

**reduced pressure backflow preventer** See *reduced pressure principle assembly*.

**reduced pressure principle assembly** A backflow preventer with loaded, independently operating check valves and a mechanically independent, hydraulically dependent relief valve located between the check valves. The relief valve is designed to maintain a zone of reduced pressure between the two check valves. It contains tightly closing, resilient, seated shut-off valves upstream and downstream of the check valves along with resilient seated test cocks used for protecting the potable water supply from pollutants and contaminants and may be used to protect against back siphoning and back pressure.

**reduced pressure vacuum breaker** A device that protects upstream waters from downstream siphoning backward and contamination while under continuous pressure. It will stop water from moving backward even when it is under back pressure.

**reducer** 1. Any fitting for piping facilitating a connection between two pipes of different sizes. 2. A chemical such as a thinner or solvent that can be added to paints or varnishes to lower their viscosity.

**reducer bushing** A slip socket or threaded fitting that can be inserted into another fitting or flared end (bell end) of a pipe to allow the attachment of a smaller pipe or device with a male end by insertion into it.

**reducing pipe fitting** Any pipe fitting used to connect pipes of different sizes.
Reducing valve

**Reducing valve** A valve that decreases the upstream pressure of the pipe system it is installed onto. It assures less pressure for the pipe system downstream of it.

**Reduction ratio** In stone crushing, the ratio of the maximum dimension of rock before crushing to the maximum dimension of rock after crushing.

**Reel mower** A mower that has a spiral reel of blades that spin as the wheels turn and cut against a stationary sharp bar. They are drawn behind tractors or pushed by hand. They make a nice cut to lawn blades instead of tears as with a rotary mower. See also *rotary mower*.

**Refined tar** Tar having its water evaporated or distilled to a desired consistency.

**Reflected radiation** Solar light (radiation) reflected from surrounding objects.

**Reflecting pond** An existing body of water or one often created to reflect or mirror images near it.

**Reflection** The change of direction of ray of light, sound, or radiant heat when it strikes a surface.

**Reflector** Anything that redirects light or sound by reflection.

**Reflexed** In botanical terms, bent outward, downward, or backward.

**Reforestation** Replanting, encouraging, or allowing forest plant materials to increase where they once proliferated.

**Refraction** The change in direction of a light ray or a sound ray in passing from one material to another.

**Refractory** A material, usually nonmetallic, that can withstand high temperatures.

**Refuse** Trash or debris.

**Region** In spatial hierarchy (as defined in landscape ecology) of lands, a broad geographical area with common macroclimate and sphere of human involvement. It is smaller than a continent and larger than a landscape. It is tied together by human activities. Examples are northwestern United States, southwestern United States, and the Andes of Venezuela.

**Regolith** In a soil profile, a layer of loose unconsolidated rock covering the parent material (bedrock), sometimes termed the D horizon. It is weathered overburden mostly made up of weathered rock that is disintegrating into sand and clay particles.

**Regular flower** A flower that is radially symmetrical with petals and sepals arranged around a center like spokes of a wheel.

**Regulatory floodway** A zone designated by U.S. federal flood policy as the lowest part of the floodplain where historically the deepest and most frequent floods have occurred.
REINF, reinf. Abbreviation for reinforce, reinforced, or reinforcing.

reinforced blockwork In masonry, blockwork containing steel reinforcement.

reinforced brick masonry (RBM) Brickwork that contains steel bars to impart tensile strength.

reinforced concrete or ferroconcrete or steel concrete Concrete containing reinforcement (usually rebar) to assist in resisting forces placed upon or working upon the concrete.

reinforced masonry Masonry with steel reinforcement.

reinforcing bar A steel bar used in concrete or masonry construction to improve its strength.

reinforcing fibers A synthetic fiber usually of polypropylene that is incorporated into a concrete or mortar mix for extra strength or elasticity.

reinforcing rod A long steel member placed or formed in concrete to give it strength.

relative humidity The percentage of the maximum amount of water vapor that air is capable of holding at any given temperature. Colder air takes less water vapor than warmer air to obtain the same relative humidity. Air saturated to the point it can hold no more water is at 100% relative humidity. The amount of water necessary to reach 100% of the capacity of air to hold it (complete saturation) is always more for warmer air and less for cooler air.

relay An electromechanical device that opens or closes electrical contacts in a circuit by changes in the current flow in another circuit.

release agent A chemical or substance sprayed in forms to facilitate easy removal with less sticking or chance of damage to the concrete when removed.

relief The difference(s) in elevation(s) and in spatial configuration(s) within a prescribed area of the surface of the earth.

relief valve A valve installed in a pipe system to relieve pressure in excess of a preset limit by discharging a portion of the water in the system.

remediation The act or process of remedying. In land planning and landscape architecture, it is used in reference to contaminated site cleanup to remedy hazardous wastes.

remolded soil Soil that has had its natural structure modified by dislocation and manipulation.

remote control valve A valve actuated by an automatic controller with electric or hydraulic means.

render 1. In design work, to draw. 2. To apply shades, textures, shadows, etc. to a line drawing. 3. In construction work, to produce a smooth finish by covering a surface with mortar or concrete.

reniform In botanical terms, kidney bean shaped.

repand In botanical terms, wavy-margined.

repent A botanical term meaning creeping.

repot See potting up.
req’d  Abbreviation for required.

request for information  An inquiry made by a participant in contractual obligations usually in the construction industry.

request for proposal  A solicitation normally from public agencies distributed to consulting, manufacturing, or development firms asking for a proposal for services or products. They are encouraged to contain a description of the project, program, or items, the amount budgeted, the type of contract (fixed price or time-and-expense, etc.), qualifications required, evaluation criteria, and a description of the materials to submit.

request for qualifications  A solicitation usually prepared by a public agency distributed to consulting and development firms requesting a statement of credentials associated with the firm. It usually requests contact information, a description of the organization, resumes of key personnel, a statement describing work completed on similar projects, availability for the work, a list of projects completed, and references.

reservoir  An artificial lake or pond created to retain and store water for later use.

reservoir pool  With regard to recirculating water features, the lowest pool which must have enough capacity to hold the water normally in transit when in operation as it will flow into it when pumps are turned off.

residence  A dwelling where a person(s) re-sides.

residence time  The time necessary to exchange the water in an aquifer or surface water body with new water.

residual fertilizer  The portions of fertilizer remaining in the soil after one or more crops or seasons.

resilient hanger  A pipe hanger with a resilient spring between the clamp or saddle and the point of attachment.

resistance  In electrical systems, the resistance or restriction to the flow of current measured in ohms. It can be compared to friction loss in an irrigation system. When electricity is flowing, resistance causes a drop in voltage along the length of a wire.

respiration  1. The chemical process in which a plant absorbs oxygen, then releases energy from the oxidizing of plant sugars to water and carbon dioxide. Plant soil should be sufficiently aerated to allow oxygen to be available to the plant’s roots. 2. The biochemical processes that consume oxygen and carbohydrates and release energy. It is the reverse of photosynthesis.

responsible bidder  See lowest responsible bidder.

resting  Said of a plant that grows for more than one season at the annual time it slows or stops growth.

restoration  The return by human intervention of an ecosystem from a disturbed or altered condition to a previously existing natural condition.

restrictive covenants  A restriction on uses, aesthetics, layout, design, or other items associated with a land or its potential. These are usu-
ally recorded with land records in the governing authority's records and are usually transferred from owner to owner when property is sold.

**resupinate**  Upside down, or appearing to be so.

**retail nursery**  A nursery that sells a majority of its products to the general public.

**retainage**  Money withheld (usually a percentage) from progress payments to a contractor until completion.

moving downhill, slumping, sliding, or falling. They are made of concrete, brick, stone, block, etc.  2. A wall with one side open to view and the other having earthen material piled against it.

**retarder**  A chemical, etc. added to substances such as mortar and concrete to slow its hardening or wetting time.

**retarding**  In nursery terms, delaying growth by prolonging a plant's **dormant** season (usually through the control of temperature).

**retention**  1. A storm water management practice in which **runoff** is kept on-site in basins, underground, or released to infiltrate into the soil. See retainage.  2. An amount withheld from payments on a contract and then paid at the end of work to assure its quality and completion.

**reticulate**  A network (i.e., the veins in a leaf).

**retrorse**  In botanical terms, directed back or downward.

**retuse**  In botanical terms, a small terminal notch (the **apex** slightly indented) in an otherwise rounded or blunt leaf tip. (Compare with emarginate, cuspidate, aristate, acuminate, acute, mucronate, obtuse.)

**reuniform**  In botanical terms, kidney shaped.

**revegetation**  The replacement of plant material on a land area.
reversion

reversion  The occurrence of a plant of particular qualities reverting back (losing those qualities) to the parent plant qualities.

revet  The facing of stone, concrete, etc. against an embankment.

revetment  A wall facing over an embankment to prevent erosion or cave-ins.

revolute  In botanical terms, rolled backward, as the margins of many leaves.

RF, rf  On drawings, an abbreviation for roof.

rfg  Abbreviation for roofing.

RFI  In construction, a request for information by a participant of work under contract on a project.

RFP  Abbreviation for request for proposals.

RFQ  Abbreviation for request for qualifications.

rgs  Abbreviation for rigid galvanized steel.

rhiaomatous  A plant that spreads by rhizomes.

rhizanthous  Bearing flowers directly from the roots.

rhizobia  Small heterotrophic soil bacteria capable of making symbiotic nodules on roots of some leguminous plants that became bacteroids fixing atmospheric nitrogen.

rhizobium  A species of bacteria that live in symbiosis with some plant roots (usually legumes) by forming nodules on them and deriving their energy from the root while in return fixing atmospheric nitrogen for the plant and themselves.

rhizodegradation  Contaminant breakdown due to influence of the rhizosphere of a root.

rhizoid  A structure of a plant that is root-like, or a structure of root-like form and function but of simple anatomy, lacking xylem and phloem.

rhizome  In botanical terms, any prostrate, more or less elongated stem growing partially or completely beneath the surface of the ground. They may be thick, hard, and sometimes rather large, or in many grasses and such they are sometimes delicate and hair-like. Thicker, larger ones are sometimes considered a type of bulb, with the thickened underground stem utilized for food storage. They creep horizontally from their tips (and other growing points form along their length) with roots generally growing from its underside. The buds on the rhizome produce roots, foliage, and flower stalks. Cutting portions of the rhizome with new growth buds and transplanting them can produce new plants.

rhizosphere  The area of soil influenced by plant roots that shows more microbial numbers, species, and activity than other soil. In flooded soils with some plants the rhizosphere can be oxidized, resulting in the presence of aerobic soil in an otherwise anaerobic soil environment. The volume of soil adjacent to the root that is under the influence of the root.

rhomboid  In botanical terms, a solid figure, rhombic (somewhat diamond shaped) in outline.

rhomboidal  A botanical term meaning roughly diamond-shaped.
R horizon  The bottom of a soil profile that is sometimes not considered part of the profile because it is bedrock. This consolidated rock is the parent material of the soil profile above it and may consist of sandstone, granite, limestone, etc. It is sometimes incorrectly called the regolith. Regolith is actually unconsolidated bedrock also referred to as the D horizon.

rich concrete  Concrete with high cement content.

ridge  1. A relatively narrow top of a steep slope, usually with an elongated crest, and sometimes having peaks significantly higher than the adjoining crest line. It is a linear, elevated portion of land with downslopes on either side. 2. The horizontal line where the upper edges of two sloping roof surfaces meet.

ridgecap or ridge capping or ridge covering  The covering on the ridge of a roof.

ridgeline  See ridge.

riffle  A segment of a stream channel or any water feature channel with rapid and at least somewhat turbulent flow.

right angle parking  Vehicle storage spaces arranged at a right angle to the flow of traffic along the edge of a travel way.

right-of-way  Any strip or area of land granted by deed, easement, reservation, dedication, prescription, or condemnation for any use other than the owner's personal use. They are often for utilities (usually linear) such as for power lines, telephone lines, roadways, gas lines, oil pipes, water lines, sewers, vehicular or pedestrian access or egress, etc.

rill  Small, water-caused erosion channels made by a rivulet. These channels are usually small enough that they can be easily plowed out with a tractor disc. See also rill erosion and gully.

rill erosion  The erosion that occurs with runoff water when it begins to move earth particles in shallow, narrow channels no more than a few inches deep and easily removed by agricultural tillage operations. They are indications of erosion to a moderate extent and over time will move a great deal of soil, eventually becoming gullies if not corrected.

ring nail  This is a nail with tapered rings along its shank, which make it difficult to be removed from a material that it is pounded into. See also annular nail.

ring-shank nail  A nail with ring-like grooves around the shank to increase its holding power.
rink

rink  1. A bounded surface of ice used for skating, curling, or ice hockey. 2. A bounded, smooth surface of wood, concrete, asphalt, etc. for roller skating, rollerblading, etc.

rip  Cutting wood parallel to the grain.

riparian  In landscape work, plant communities occurring in association with any spring, lake, river, stream, creek, wash, arroyo, or other water body having banks and a bed through which water flows at least occasionally.

riparian right  The right of a landowner to use water from a river, lake, or other body of water that is contiguous to the owner’s land or on the owner’s land.

riparian wetland  Wetlands on the edge of a large water feature such as a lake or stream.

ripe  Mature, or fully developed.

ripper  An attachment dragged behind a tractor with long, curved teeth extending below it for ripping compacted earth.

ripping size  The size of lumber, as it comes from the operation of ripsawing.

riprap  A layer of stones, broken concrete, or boulders placed on a slope to stabilize it against slope failure or erosion due to precipitation, natural drainage, waves, or wind.

ripsawing or flat cutting or ripping  Sawing lumber essentially parallel to the direction of the grain.

rise  1. The elevation difference between a supply point in any irrigation system and an elevated point of discharge or the highest point of discharge. 2. The elevation difference in a flight of stairs from landing to landing. 3. The elevation difference between successive treads of a stair. 4. The vertical distance in a ratio used to express the height of a roof slope compared to horizontal distance or run.

riser  1. The front vertical portion of a stair step which comprises the rise from one stair tread to another. 2. In sprinkler irrigation, a vertical pipe, the nipple, rising above ground or finish grade from a lateral line with a water-dispensing device (sprinkler head, shrub adapter, etc.) mounted on its top. These are often used in shrub, ground cover, or flower areas to get the sprinkler above the plant material. 3. Any vertical portion of pipe.

rived board or riven board  1. A board shape obtained by splitting it along the grain instead of sawing it. 2. The board making the vertical face of a step.

riverine wetlands  Wetlands associated with rivers, streams, or creeks.

river rock  A rock having a rounded form (or at least edges) and smoothed by the action of water flow or other forces of nature; most often available in water channels or in alluvium.

riverwalk  A pedestrian path along a river edge.

rivet  A short pin of a malleable metal with a head at one end that holds it in place against metal sheets while the other end extends through the sheets and is then smashed flat to hold it in place.

rivulet  A small stream of water.

rivulose  A pattern like a branching river, or a wavy serpentine pattern.

R/L  Abbreviation for random lengths.

road  A path or way meant for and in some way prepared for vehicles to travel.

road corridor  The linear surface of a road and its associated linear vegetative corridors.
rock  A natural, solid, dense mineral material in large masses or fragments often requiring explosives or mechanical equipment to move. It is sometimes referred to as stone, and when fragmented can be any size. The word stone in most areas refers to small pieces used in masonry.

rock drill  A machine or device used to drill holes in rock.

rockery  Much like a rock garden, this is a mound or pile of rocks with planting dirt interspersed, usually formed to accommodate plants needing good drainage or for alpine-type plant material.

rock fill  Loosely placed rocks in a layer or mass.

rock garden  A constructed landscape with flowering or vine-type plant material amongst rocks. It is usually on sloping ground with rock used to retain soil or in an area containing natural-appearing rock or rock outcrops.

rock phosphate  A naturally occurring mineral with varying phosphorus content from 14% (0-14-0) to 27% (0-27-0). In this state, this phosphate is only helpful in acidic soils. It is used to make superphosphate. It is available very slowly and not easily released, even when ground to dust. It is not effective on soils over 6.2 pH. It is more readily used by leguminous plants.

rockwork  1. Any stacked-stone retaining wall, or free-standing wall. 2. Rough, stone faced masonry.

rod  English or U.S. length measurement equal to 5.50 y, 16.5 ft, or 5.029 m. 2. A solid long piece of metal, wood, plastic, etc.

rodding  1. The compaction of mortar or concrete by poking it with a rod. 2. The action of clearing an obstruction in a drain by ramming.

rod target  A target that slides up and down a leveling rod or range rod, making it easier to sight accurately from a transit, etc.

rogue or rouged  or rougueing  To weed out (remove) a crop, nursery stock, or field plants with diseases, inferior plants, or plants that are not typical.

rolling  In landscape work, pushing or pulling a heavy (usually water-filled) roller over the ground to level small bumps or depressions. This is most often not effective as it requires a moist soil and any walking over the soil in this condition causes depressions in the footprints of one pulling the roller. In clay soils, it forces air from the soil, leaving it highly compacted.

rolock  See rowlock.

roof  The top covering of a building, space, shelter, or pavilion, including all materials that support the surface as well as the surface itself. It prevents precipitation and sun from disturbing an area.

roof drain  A drain that receives water gathered on the surface of a roof to allow its drainage through an attached pipe or conduit.

roofing  Material such as metal, tile, wood, asphalt, thatch, etc. used to cover the surface of a roof.

roofing felt  A felt covered with asphalt and a mineral that is available in rolls.

roofing nail  A short nail with barb or rings on its shank and a large flat head. It may have a neoprene, lead, or plastic washer to assist in securing roofing felt or shingles to the roof.

roofing paper  See asphalt prepared roofing, asphalt paper.
**roof overhang**

**roof overhang**  A projecting area at the outer edge of a building or structure where it meets the roof.

**roof pitch**  The slope of a roof. It is expressed in degrees or a ratio of vertical rise to the horizontal run, such as 4:12.

**rooftop gardening**  Plants growing, usually in permanent containers, on top of a building.

**root**  The underground portion of a plant that provides support, obtains nutrients and water, stores food, and sometimes propagates by asexual reproduction for the plant.

**root ball**  The roots and the soil they hold when lifted from the soil, when removed from a container, or when in a balled-and-burlapped (b&b) condition.

**root bound**  Plants whose roots have outgrown the space they have to grow within. This is common for trees in cities with much pavement and walls. It is also common for nursery plants grown for too long a period in a container. Root bound plants in containers may suffer for nutrients (especially if not supplemented) and usually exhibit roots circling the inside of the container. Before planting, the outside circling roots should be cut. Otherwise the roots will likely girdle themselves. This also causes trees to be stunted and can eventually cause wind-throw.

**root cap**  The arrangement of cells that acts as a protection to succeeding tissues of the root as it penetrates the soil pores.

**root cellar**  A structure partially or completely belowground used to store crops or foods at cool temperatures.

**root collar or root crown or crown**  The flared area at the base of a tree trunk (or main stem) at ground level and just above it. It is where roots change to trunk or stem. The trunk is not capable of resisting constant soil moisture. In most cases (except plants tolerant of anaerobic conditions such as poplars, willow, etc.), root collars are meant to be exposed to air, and not covered with soil or excessive mulch. Movement of oxygen and carbon dioxide in and out of the inner bark should not be inhibited. Lack of gaseous exchange will kill cells in the phloem tissue over a period of years, interfering with downward movement of food to the roots. Interference of the food supply eventually causes root dieback along with reduced water uptake in the xylem tissue. Plants in this condition are more susceptible to insects and diseases. When planting new trees and shrubs, place them at the same depth as the plant was originally grown, so that the root-collar area is above.
the surrounding grade after planting. The soil should taper away from the plant, facilitating drainage of surface water into the surrounding grade. Mulching practices that pile mulches against a root collar and stem should be avoided or mulch must be large, loose pieces, allowing air to the crown and not harboring moisture there (avoids disease).

**root crown**  See **root collar**.

**root cuttings**  Portions of fleshy roots cut from some perennials that are able to produce another plant from the cut-off portion.

**rooter**  A heavy-duty tractor attachment intended to assist in removing roots of trees.

**root hair**  The small thread-like roots of plants responsible for most of a plant's absorption of nutrients and water. They are tube-like extensions of the epidermal cells of roots.

**rooting hormone**  A chemical that stimulates root growth and development. It is especially useful on cuttings, and is available in a powder or liquid form.

**rooting zone**  The volume of soil encompassed by the entire root system of a plant.

**root-knot nematode**  See **nematode**.

**root pruning**  With regard to plants in containers or plants being prepared for field digging, a cutting of the outer roots. This fosters the development of a branched root system and in a field, it keeps roots within the dig zone, reducing shock when transplanted. The roots of plants that have been in containers too long begin to circle the container, and they need to be cut off after being pulled from the container before planting. This discourages the roots from continuing to circle and girdle, but instead encourages the roots to leave the planting pit and spread out.

**root rot**  A disease caused by water molds, which are encouraged and spread by standing water. Many times plants are overwatered when some negative symptom is observed. The only symptom that calls for more water is **wilting**. Too much water, which brings on water mold, is the most common cause of plant death. It is usually easily detected by digging in the root zone and smelling the soil and roots. Water molds occur in anaerobic conditions, causing the affected area to smell much like a sanitary sewer. When a dead plant is pulled completely out from the soil, the stench many times is unmistakable and obvious. Sometimes it is necessary to hold soil from the **root ball** in your hand and put it to your nose to detect the smell. The most frequent cause of water molds is the use of a different soil than the existing soil in the **backfill**, or amendments to the soil backfill. This may cause a soil interface difficulty with water transfer.

**rootstock**  The portion of a grafted or budded plant that furnishes roots and sometimes some branches for the plant. See **budding**.

**root weavil**  An insect that feeds on roots in its larval state and as an adult eats leaves of plants such as roses, rhododendrons, and azaleas.

**rootworms**  Larvae of beetles that feed on roots.

**root zone**  The area of a plant beneath the soil that performs absorption, aeration, and storage for plants.

**rope**  A strong, thick line made up of twisted or braided strands of fiber such as hemp or wire.

**rope caulk**  A preformed bead of caulking compound often containing twine reinforcement.

**rosarian**  One who cultivates and raises roses.

**rose chafer** or **rose bug**  A beetle of North America (Macrodictylus subspinosus) whose lar-

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ae feed on roots, and adults feed on leaves and flowers. They are fond of roses, grapevines, berry bushes, beans, cabbage, beets, etc.

**rose hip**  The fleshy seed enclosure (fruit) of a rosebush.

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**rosette**  A description of the way a plant grows when its leaves are closely set around a crown or center. The leaves form a circular cluster usually near the ground.

**rostrum**  A raised platform, elevated area, pulpit, etc. for addressing an audience or performing in front of one.

**rosulate**  In botanical terms, having a rosette or basal cluster of leaves.

**rotary mower**  A lawn mower with a blade that spins horizontally and impacts grass blades, cutting or tearing them all at the same height. See also reel mower.

**rotary pump**  A pump that produces water by varying the volume in a cavity to force fluid in a desired direction. Depending on the type of impeller, a rotary pump may be a vane pump, a piston rotary pump, or a gear pump.

**rotenone**  An insecticide relatively harmless to humans and other warm-blooded animals, but deadly on contact with most insects and also effective as a stomach poison to them. It also kills fish and caution must be taken to keep it from infiltrating into water bodies. It is derived from such tropical plant species as *derris* and *lonchocarpus*.

**rotor head**  A sprinkler head that irrigates by rotating smoothly instead of by a constant spray pattern (see spray head), or by a device impacting the stream of water to drive it in an arc (this term is also sometimes erroneously used in reference to impact heads). These are usually gear-driven heads and project a stream or spray of water in a full or part circle. Some brands or models of these heads are made separately full or part circle, but most heads usually allow adjustment of arcs by hand or with an instrument, without nozzle change. The various nozzles that are usually available with these heads often provide a change in water quantity output as well as a change in length of throw (radius). The radius can also usually be adjusted by rotating a screw down into the water pattern (this screw is often meant to only keep the nozzle in place), or by changes in water pressure.

**rotor sprinkler head**  The radius is usually controlled by interchangeable nozzles and a screw that disperses water by being screwed down into the stream of water. The arc may be controlled by hand adjustments to the head or by devices changed in and out of the head.
**rototiller**  A device used to turn up and pulverize soils, etc. with turning blades powered with an engine.

**rough carpentry**  The structural or formation framing, boxing, or sheeting of a wood structure.

**rough-cut joint**  A mortar joint in brick masonry work that is flush with the face of the brick.

**rough grade**  1. Approximate slope, drainage, and terrain formed, but not raked, rolled or finely bladed smooth, and ready for seed, sod, planting, etc. Sometimes this grade is a few inches below where finish grade will be to allow for placement of topsoil. 2. Grading done before construction of structures, utilities, etc. begins.

**rough sawn**  Lumber that is cut to dimension, but not planed for smoothness or size reduction.

**round or rounded or globe**  These terms are sometimes used to describe a plant (especially trees) with a roundish outline to its head. (Compare with weeping, columnar, fastigiate, oval, broadly spreading, upright spreading, pyramidal.)

**roundabout**  A circular road, usually with a round island at its center, at an intersection of streets. In many cases this allows for the flow of traffic without stopping as vehicles yield and merge (so long as they are not overly crowded with traffic).

**roundhead wood screw**  This screw has various indented shapes in its head for accepting a tool (screwdriver) to drive (turn) it into wood. Its head is larger than the shank and is a half circle at its top with its head's underside being flat immediately around its shank. Its shank has either a threaded taper from the underside of its head surface to its more slender pointed shank, or it is a slender shank of a constant diameter continuing to its threads where it then tapers with threads to its point.

**round timber**  Logs that have not been sawn into lumber.

**router**  An electric machine with a rapidly turning cutter available in various shapes that cut to the shape of the cutter edge. They are used for routing, cutting mortises, making a decorative trim at the edge of a board, etc.

**ROW, row**  Abbreviation for right-of-way.

**row cover**  Semitransparent material over crops or nursery stock to extend the growing season or protect the plants. It is often laid over rows of plants, hence the name.

**rowlock or rollock or rollock**  A brick laid on its edge with its end exposed on a wall surface.
royal

royal  A cedar shingle with approximate dimensions of 24 in (61 cm) long and ½ in (1.25 cm) thick at the butt.

RP  Abbreviation for reduced pressure vacuum breaker.

rpm  Abbreviation for revolutions per minute.


rubble drain  A trench filled with loose rock, rubble, or gravel for carrying away excess runoff or excess water.

rudenture  Paving with pebbles or small stone and mortar.

rufus  A descriptive botanical term referring to a reddish-brown color plant part.

rugby  A field game played on a lawn with approximate dimensions of 450 to 480 ft long by 195 to 225 ft wide.

rugose  In botanical terms, wrinkled, roughened with wrinkles, or leaf veins depressed with in between areas elevated.

rule  A tool having straight edges marked off in inches or centimeters (and fractions thereof) for measuring distance or drawing straight lines.

rung  A bar forming the step of a ladder.

runner  In plant terminology, a slender stem sent out from the bases of certain perennials, which develops offsets at the joints (nodes) or at the ends. These horizontally spreading prostrate stems run aboveground. This term may sometimes refer to either offsets or stolons.

running grasses  Any grasses that spread by creeping stems, and tend to form dense mats covering the ground. They may spread by stems on the surface of the ground (stolons), or by stems below the ground (rhizomes).

running ground  Earth, sand, etc. that will not stand firm without sheeting.

run-of-bank gravel  See bank-run gravel.

runoff  1. In sprinkler systems, the water that is not absorbed by the soil and turf to which it is applied. Runoff occurs when water is applied at too great a precipitation rate for too long. 2. In the natural landscape, it is excess water that flows during rain or snow melt and is not absorbed by soil, plants, or objects, does not evaporate, and drains off the surface of a land area. It usually contains suspended solids or dissolved material. 3. Water that moves over the soil surface whether in sheet form or stream form.

run time  1. The length of time necessary (designed or actual) for an irrigation controller to complete the entire watering it is programmed to accomplish. 2. The length of time necessary (designed or actual) for an irrigation controller to complete one of its watering programs. 3. The amount of time necessary for a sprinkler zone (sprinkler circuit, or station) to complete its programmed or selected amount of watering. This can be calculated by dividing the gross requirement in inches of water (desired or necessary over the landscape area) by the precipitation rate (gross precipitation rate or preferably net precipitation rate) and multiplying this quotient by 60. This is the amount of time necessary to run in minutes. Caution must be taken not to apply water faster than the soil basic intake rate or water will be wasted to runoff. See maximum run time per cycle.

R/W  Abbreviation for right of way.
**rust**  With regard to plants, a disease caused by any of a number of fungi (order *Uredinales*) producing lesions of a usually reddish brown color. The fungal diseases are specific in being contagious only to plants of the same type. Each rust fungus is specific to its host.

**rustic brick**  Brick with a decorative effect created by being covered with sand on surfaces to be exposed before firing in a kiln.

**RV**  Abbreviation for *recreational vehicle*.

**R-value**  A measure of the thermal resistance of a material.
Abbreviation on drawings for south. 2. Abbreviation sometimes used for seamless. 3. Abbreviation for second. 4. A type of mortar used in exterior applications amounting to 1 part Portland cement by volume, 1 part hydrated lime by volume, and water in the amount of $2\frac{1}{4}$ to 3 times the sum of the volumes of cement and lime. It is useful for normal compressive and high lateral loads. It is the most common type used in reinforced masonry. Type M is stronger than type N.

**saber saw** A power-driven saw with an oscillating blade that acts similar to a jigsaw but has a wider and longer blade.

**sabulous** A sandy or gritty texture.

**saccate** In botanical terms, sack or bag shaped.

**sack rub or sack finish** A finish for concrete surfaces to produce even texture by filling pits and air holes. In this process, the surface is dampened, then mortar is rubbed over it, and then before it dries a mixture of dry cement and sand is rubbed onto it to remove surplus mortar and fill voids.

**saddle** 1. A roof cricket. 2. A floor support for a heavy pipe. 3. A device that is clamped to a pipe so that a hole may be drilled into the pipe and a pipe attached for access.

**saddleback** A coping stone with a ridge at its upper surface sloped to direct water to either side of a wall.

**saddle fitting** A fitting that clamps over an existing pipe with a portion fitting the pipe much like a horse saddle and having a threaded hole in it for attaching another pipe. A hole is drilled into the existing pipe and the saddle is tightened to allow a leakproof attachment of pipe to the threaded hole.

**saddle joint** A joint for sheet-metal roofing; formed by bending up the edge of one sheet and folding it downward over the turned-up edge of an adjacent sheet.

**saddle notch** A rounded notch cut near one end of the lower surface of a horizontal log interlocking with another log below it.

**safety net** A woven, mesh fabric suspended below a place where people or materials may fall that protects from serious injury or damage in such a fall.

**safe well yield** The maximum pumping rate in a water well without lowering the well water level below the pump intake in the well.

**safe yield** The amount of water that can be withdrawn annually from a groundwater basin or aquifer without an undesirable result. Undesirable results can include reduction of groundwater, intrusion of poor quality water, violation of water rights, depletion of stream flows, and subsidence.

**sagittate** In botanical terms, arrowhead-shaped with basal ears turned downward or inward. (Compare with leaf base descriptions of cuneate, obtuse, cordate, auriculate, attenuate, hastate, truncate, oblique.)

**sailor** A brick placed on its end and having its wider face showing on a wall surface. (Compare with soldier.)
saliens

An artificial fountain with water shooting up through a constricted tube.

saline soil  A soil containing enough soluble salt to impair plant health.

salinity  The amount of salt in a substance. In landscape work, this usually refers to the salt content of soil or water. Excess salt can be toxic to plants, but more often symptoms are leaf scorch, stunted growth, yellow leaves, or withered leaf margins. Salt also interferes with germination of seeds, and can build up in the soil from softened water, green manure, fertilizers, chemical amendments, or salt applied for melting snow. Salt can best be removed from soil by leaching with water that is free of salt. This is most effective if the soil allows water to drain through it freely. Salinity is usually measured in parts per thousand (ppt). The salinity of seawater is about 35 ppt.

salinization  The increased concentration of salt, especially in water or soil, which can result from lack of drainage and can reduce ability to sustain diverse plant life as well as a soil’s ability to sustain crops.

sally port  An underground passage or concealed gate linking the central and outer portions of a fortress.

salsuginous  Grows in salt marshes or brackish areas.

**salt damage**  In plants, injury caused by excessive salt in the soil or water. It is found most frequently in poorly drained lowlands, or in arid or semiarid lands, but it can occur anywhere. Salt accumulation in soil may come from fertilizers (including manure), deicing salts, spray from a nearby ocean, or other salt source carried by wind. Salts can be leached from the soil by frequent deep watering. It is a rule of thumb that 30 in of rain per year percolated into the soil (without runoff) is enough to leach the salts out. More water leaching may help, but one must avoid drowning plants, or causing root rot. Irrigation water can be used to leach salt from soil, but the water should be tested for salt content to make certain it does not add to salt accumulations in the soil. Salt damage in plants is usually evidenced by yellow leaves or yellow splotches on leaves, or dark brown leaf tips, or margins. Plant growth slows, stops, and plants may die. Excessive salt in soil may be evidenced by dark or white crusts forming on soil surfaces, especially in low dried spots. Some plants have higher salt tolerance than others.

**salt-glazed brick or brown-glazed brick**  A brick with a glossy finish, obtained in a kiln by reactions between silicates of clay and vapors of salt, etc.

**salt-glazed tile**  Facing tile with a lustrous, glazed finish obtained in a kiln by reaction of the silicates of the clay with vapors of salt, etc.

**salt hay or salt marsh hay**  Hay from salt marshes useful in covering plants as a winter mulch, etc. It is desirable because of its wire-like makeup, which does not decompose easily, and because its seeds will not germinate or survive except in wet and usually saline conditions, so it does not promote weeds.
saltwater intrusion or seawater intrusion
The migration of salt water into freshwater aquifers because of groundwater development (pumping drainage).

salvage Material once in place and then removed to be reused on the same site or another site.

salverform In botanical terms, a slender tube abruptly expanded into a widened, spreading limb. It is the shape of many flowers.

samara A dry, one-seeded, winged fruit found on maple, ash, elm, etc. Children call them helicopters.

sand 1. A mineral component of earth derived from fragmented and weathered rock made up of particles of a size between \( \frac{1}{500} \) and \( \frac{1}{12} \) in (0.05 to 2.00 mm) in size. It is classified by the U.S. Department of Agriculture as follows: very coarse sand—0.080–0.040 in; coarse sand—0.040–0.020 in; medium sand—0.020–0.010; fine sand—0.010–0.0040 in; very fine sand—0.0040–0.0020 in. It is smaller than gravel, but coarser than silt. It is used in mortar, glass, abrasives, foundry molds, etc. 2. A soil textural class comprised of approximately 0 to 10% clay, with 0 to 15% silt and 85 to 100% sand. Individual grains of sand can readily be felt in this soil. When it is squeezed in the hand while dry, it falls apart as pressure is released, and when wet it will crumble if touched after being squeezed. These soils tend to be well drained or excessively drained, having little water-holding capacity, and little fertility.

sandbag A plastic, canvas, or nylon bag filled with sand, useful in temporarily containing floodwaters, or to hold down stands for temporary signs, etc.

sandblast Directing or shooting sand under air pressure at a surface to remove paint, dirt, or rust, to cut, to roughen, or to produce a desirable texture on the surface.

sand filter A layer of fine sand through which water is passed to remove small debris from the water.

sand interceptor or sand trap A small catch basin preventing passage of sand (and other solids) into a drainage system by allowing it to settle to the bottom of the basin before entering another pipe. It only functions if it is cleaned often enough to keep the collected sand and debris below the pipe inlet.

sandpile A sandbox or area of sand with boundaries for children to play or dig in, etc.
sand separator

sand separator  See separator.

sandstone  Sedimentary rock composed of particles of sand with a high silica content bound in a natural cement. It is usually a relatively soft stone being easily eroded, but some are hard and durable. Some can even be polished.

sandy clay  A soil textural class comprised of 35 to 55% clay, 0 to 20% silt, and 45 to 65% sand.

sandy clay loam  A soil textural class comprised of 20 to 35% clay, 0 to 28% silt, and 40 to 80% sand.

sandy loam  A soil textural class comprised of 0 to 20% clay, 15 to 50% silt, and 45 to 80% sand. Individual grains of sand can be felt and seen, but it has enough silt and clay to make it somewhat coherent. If it is squeezed while dry, it will form a cast that will fall apart readily. If squeezed while wet, it will form a cast that will fall apart unless handled carefully.

sanguineous  A botanical term referring to a bloodred color.

sanitary sewer  A pipe system conducting sewage, usually to a treatment facility.

sap  The fluid flowing in the vascular tissue of plants.

sapling  1. A young tree. 2. A tree less than 4 in. in diameter at breast height.

saprophyte  A plant that grows on dead or decaying organic matter.

sapwood  Wood from the outer portions of a tree trunk between the bark and heartwood where there are active growth cells. It comprises the live cells of the xylem and phloem. It is generally more permeable, less durable, lighter in color, and less resistant to decay than heartwood.

sarment  A runner.

saturated soil  Soil in which all pore spaces are filled with water.

saturation coefficient  Refers to the saturation coefficient for brick, which is the ratio of the percent absorption of a brick submerged in cold water for 24 hours to the absorption of a brick submersed in boiling water over a 5-hour period. The 24-hour cold water test is divided by the 5-hour boiling test. This value is a strength value that assists in measuring the durability of mason units. Durability of mason units may also be measured by conducting freeze/thaw tests. This is of prime importance in landscape work (especially in temperate climates) as brick in the landscape is exposed on one or both sides in nearly all cases. Most brick in the landscape should have a compressive strength of 3000 psi with a 5-hour boiling absorption at 17% maximum, and a maximum average saturation coefficient of 0.78. However, if a brick’s minimum compressive strength is 8000 psi or greater, or in the cold water test of 24 hours absorbs less than 8% water, the saturation coefficient can be ignored.

savanna, savannah  1. A treeless grassland or area of only low-growing plants. 2. A tropical ecosystem with a consistent herbaceous ground cover (grasses or drought-resistant low growth) and scattered trees. 3. A zone of transition between grasslands and forests, where there are scattered individual trees or clumps of trees and shrubs.

saw  A cutting tool with a thin, flat blade, band, or stiff plate with cutting teeth or an abrasive that cuts as it slides through a material.

sawdust  Fine, dusty wood shavings from cutting wood. This material is often used as a
mulch, but the bacteria in the soil breaking it down then use most of the nitrogen in the soil preventing plants from gathering what they need. If used, it should be highly decomposed and nitrogen must be added to compensate for losses to bacteria. Watch for nitrogen deficiencies in plants with symptoms such as yellowing leaves, stunted growth, or no growth.

sawflies A variety of flies whose larvae feed on plants. Adult females saw plant tissue open and lay eggs within it.

sawhorse or sawbuck A four-legged narrow stand about waist height used for placement of material while working on it for sawing, gluing, etc. These are normally used in pairs.

saxicolous or saxicoline In botanical terms, living on or among rocks.

scab 1. A fungal disease that makes disfiguring lesions. It is common to crabapples and apples. 2. A short piece of lumber nailed onto two abutting pieces to splice them together.

scabrid A botanical term meaning roughened.

scabrous In botanical terms, rough, abrasive, or harsh to the touch. The roughness may be from the surface itself or from small stiff hairs.

scaffold A temporary, elevated platform for standing upon while working, which supports workers and materials and is advantageous in providing access to work above the area reachable from the ground.

scaffold branch 1. A branch that grows horizontally from a main stem or trunk. 2. The large limbs of a tree that intitate its basic shape and form its structure.

scale 1. The ratio of difference in units measured (usually in a drawing or model) and the actual measurement of something that exists or is designed for building. In drawings, it is a short measurement of a representation of an item for construction that is, or will be in actuality, a larger dimension. Expressions of scale usually are written in such forms as follows: 1″ = 200′, or 1 in = 200 ft, or 1:10,000. 2. A ruler or device with units of measurement marked upon it for the purpose of measuring items, or spaces in scale to an existing or proposed item or space. 3. Spatial proportion. A broad-scale example of spatial scale would be a region, whereas a fine-scale example would be for a building site. 4. In botanical terms, a small leaf-like body that is usually dry and not green, but a rather chaffy or woody bract. 5. Small insects much like aphids, or mealybugs that form hard or soft waxy shells and feed on plants.

scalping Removing particles larger than a size being screened.

scalp rock Waste rock.

scandent In botanical terms, a climbing growth habitat or a plant part that ascends.

scape In botanical terms, this refers to a peduncule rising from the ground, naked (without ordinary foliage). The leafless stem of a single flower. Examples are daylilies, irises, etc.

scarf joint Matching two board faces of fitted shapes for joining them and forming one continuous piece. This joint may be secured by glue, bolts, screws, or welding.

scarifier A machine, a tractor attachment, or a part of a grader with long teeth that can be lowered to rip a soil surface, or pavement.

scarify 1. To run a scarifier over ground. 2. To roughen a surface by sanding, etc. to improve
adhesion of paint or glue, etc. 3. Softening the outer coat of a seed to shorten germination time.

scarious A botanical term referring to a plant part that is spoon shaped.

scarp A steep slope or steep rock outcrop.

scenic area Any area of significant scenic beauty.

scenic corridor An area of land, right-of-way, or an area visible from a highway, waterway, railway, or major hiking, biking, or equestrian trail that provides aesthetically pleasing views of water, vegetation, farmlands, woodlands, coastal wetlands, mountains or hills, or even cities, etc. What is scenic to one may not be scenic to another.

scenic easement The right for a public agency or other group to use an owner's land for scenic enhancement, such as roadside landscaping or vista preservation, by restrictions on the area of the easement

SCH Abbreviation for schedule. This is a pipe of determined thickness regardless of the diameter of the pipe.

schedule 1. An outline of time needed in sequence or overlapping to accomplish tasks.
2. In construction, a detailed table showing components, items, or parts to be furnished or installed for a design as per the drawings or the design it references. Irrigation schedules show symbols, give descriptions, manufacturers, sizes, remarks, etc. Typical planting plan schedules give such information as botanical name, common name, size, condition, spacing, remarks, etc. 3. In reference to pipe, a pipe wall thickness based on a ratio of pipe size to pipe wall thickness.

schedule of values A list furnished by the contractor showing portions of the contract sum allotted for various portions of work. It is often used as the basis when reviewing the contractor's applications for progress payments.

scheduling coefficient (sc) A measure of uniformity depicting water distribution in an area of irrigation based on a formula that does not treat underwatering or overwatering the same and assumes a landscape manager's water to the critical driest spot will be a number greater than one. This coefficient is an irrigation runtime multiplier and indicates how much longer one must irrigate to adequately water the critical driest spot. The formula is SC = average catch of all water catchment containers / average catch of water in the driest area of catchments.

scientific name The Latin name (botanical name) of a plant.

scion A bud or short stem of a plant that is grafted onto another plant rootstock.

sclerophyll A firm leaf, with a large amount of strengthening tissue, that retains its firmness (and often also its shape) even when wilted.

scoop loader See front-end loader.

scorch See sunburn.

score To cut, roughen, groove, or scratch a surface.

scorpioid In botanical terms, a plant part that is curved or coiled at the end, reminiscent of a scorpion's tail.

scour Erosion of a material. It is especially applicable to erosion of earth by water in a channel or ditch.

scouring action The lifting or scrubbing of loose particles such as sediment and small pebbles during high flow in a drainpipe carrying the materials downstream.
S.C.R.  Abbreviation for modular brick.

scraper  A large, heavy, wheeled machine, with or without an engine, having a blade under its belly and a large hauling container useful for cutting, filling, and hauling earth.

scree  Loose stone on a slope or at the base of a slope or cliff.

screed  A long metal or wood rail used to slide along forms holding fresh concrete to pull off (strike off) the excess concrete and leave the surface at the intended level.

screen  1. Something used to conceal from view one point or area to another. See also berm, buffer, fence. 2. A metal sheet of woven wire or other similar device with regularly spaced openings of uniform size, mounted in a frame and used in separating earthen material according to size. 3. A see-through framed fabric (usually tiny metal or plastic wire mesh) used as protection over openings (windows, doors, etc.), in walls, etc. Protects from insects, debris blown by wind, etc. 4. A machine used to separate earthen material into various sizes.

screening  1. Visually shielding or obscuring an adjacent landscape, structure, or use from another by fencing walls, berms, vegetation, etc. 2. Removal from liquids of any large, heavy, floating, or suspended solids by straining through racks or screens. 3. Separating earthen materials into various sizes, usually with a bearclaw, or screen.

screen wall  An opaque wall preventing the ability to view through it.

screw  In construction, a nail or rod-shaped device with a spiral groove or extended portion that when under pressure can be turned and inserted into a solid material for attaching materials.

screw clamp  A clamp pressing two jaws or arms together by means of a screw, usually used in woodworking.

screwdriver  A tool with a handle and a long shaft protruding from it with a tip that fits into a recess in the head of a screw so that by turning it a screw can be driven into place or removed.

sealant  A three-dimensional form, prepared for decoration or artistic expression.

scupper  1. An opening in a wall or parapet allowing water to drain from a roof. 2. A device mounted in a drain opening having slotted openings or small holes to prevent debris from clogging the drain.

scurf  In botanical terms, minute scales on the surface of many leaves.

scurfy  A botanical term meaning beset with small, bran-like scales.

SDR  Abbreviation for Standard Dimensional Ratios, used chiefly in the plastic pipe industry.

seal  1. An embossing device to verify a corporate signatory or to show a registration in a state for a particular profession. 2. A coating on a surface to repel moisture or prevent staining.

sealant  In landscape construction, a compound used to waterproof such materials as concrete or wood.
seamless pipe  A pipe not having a longitudinal joint or seam.

seawall  A wall or embankment for stopping the encroachment of a water body.

seaweed  Dried kelp. Used as an organic fertilizer. It has an NPK ratio of about 2.5-1.5-15.

secateur  A mostly British term for pruners.

second  Having flowers only on one side of a flower spike.

secondary nutrient  In soils, these are the nutrients calcium, magnesium, and sulfur that are secondary (see primary nutrient) in importance for fertilizers because they are commonly already found in adequate amounts in most soils.

secondary treatment  Generally refers to storm water treatment beyond initial screening or sedimentation. It usually includes biological changes in concentrations of oxygen-demanding pollutants.

section  1. A drawing of a structure, landform, object, etc. as it would appear if cut by an imaginary plane, showing any internal portions and outer edges along the intersection. It often also shows the view of portions beyond the section as viewed in a particular direction. 2. A subdivision of a division of construction specifications covering the work of only one trade.

section modulus  A measure revealing the strength of a beam.

section view  See section (1).

secund  In botanical terms, the flowers or branches are all on the same side of the axis.

sedge  A grass-like plant with triangular or hollow stems usually growing in wet areas.

sediment  Mineral and organic solid particulate material that settles out from suspension in water having been removed from its site of origin, and deposited elsewhere. This is the material forming deposits along the courses of streams, rivers, etc. and at the bottoms of lakes, ponds, and reservoirs.

sedimentary rock  Rock formed as the result of previously eroded and deposited sediments undergoing cementation with pressure, but not with high temperatures.

sedimentation  The process of depositing suspended matter carried in water or air, accomplished by reducing the velocity of the water or air below the point where it can transport the suspended material, or by having the material contact a solid object.

seed  1. In the active work of agriculture or horticulture, it means seeding. 2. As a noun in agriculture or horticulture, it means the grains of ripened ovules for sowing, or ripened ovules with a ripened embryo usually capable of producing a new plant.

seed bank  The accumulation of live plant seed in soils available for germination under favorable conditions.

seedbed  Soil prepared for planting seed.

seeding  The act of placing, planting, gro diesel, etc. seed in anticipation of its germination and growth.

peach (cutaway illustration)
seedling  1. A small, very young plant.  2. A young woody plant started from a seed.

seepage  Groundwater or interflow water oozing from the ground.

seepage bed  A wide trench containing distribution piping surrounded by clean, coarse, gravel material. Sewage from a septic tank that is partially treated flows through the pipes, and seeps into the ground via the gravel.

selected bidder  The bidder chosen by the owner for possible award of a contract for a project. See also successful bidder.

selective herbicide  An herbicide that only kills certain types of plants. See also nonselective herbicide.

selective pruning  Selecting branches to prune rather than shearing all branches to a particular length.

self-branching  A reference to certain perennials that produce many side growths, growing compactly and without having to be pinched back to form a dense plant.

self-cleaning valve  An automatic valve with a device that moves when turned off and on to clean portions of the inner valve.

self-fertile  The capability within a single plant of producing viable seeds by its own pollen fertilizing its own ovules.

self-pollinating  See self-fertile.

self-seeding  A plant that will grow from seed deposited by a plant the year before without human aid.

self-sterile  A single plant not capable of producing viable seeds and fruit by its own pollen fertilizing its own ovules.

self-tapping  Able to create its own screw threads on the inside of a hole as it is forced by turning.

semi-arid climate  A climate where precipitation averages more than 20 in per year, but less than 40 in per year.

semidirect lighting  Light from luminaries distributing 60 to 90% of the emitted light downward onto a surface.

semi-double flower  A flower with two or three times the number of petals necessary to form a circle; usually the petals appear in two or three rows.

semi-evergreen  A reference to plants that throughout winter retain some leaves, or lose only older leaves. Also descriptive of plants that retain nearly all leaves if the winter is mild.

semitransparent stain  This is a color pigment applied to wood that is not dark enough to cover the natural grain of the wood.

sems  A machine screw with a lock washer that was placed on the screw before threads were cut on it and which cannot be easily removed.

sending site or sending zone  An area of land where the number of dwelling units allowed by law can be purchased to keep the land from development. These units are usually sent or transferred to another site to increase the housing density allowed on that property (receiving site or zone).

senescence  The process of aging; growing older.

sense of scale  The feeling created or perceived when one is placed next to a very large object (such as a 50-story building 500 ft wide) or a small object (a toolshed 6 ft tall and 8 ft wide).
sensitive areas

One can be made to feel large or small, comfortable, or uncomfortable.

**sensitive areas**  In land development, areas not particularly suitable for development, areas that could have negative impacts if not carefully developed, or areas that have elements of concern to those surrounding or associated with the land. These land areas could be historic, part of a scenic corridor, habitat for endangered species, significantly influence property values, be polluted, have valuable resources, contain wetlands, be too steep, erosion prone, near fault line, subject to avalanche, flood often, have bedrock on or near the surface, be significant politically, have significant social interest, contain too high a pH, consist of salty soils, be made up of unstable soils, etc.

**sepal**  One of the modified leaves making up a calyx of a flower that is typically green or greenish.

**separator or desander or sand separator**  In irrigation systems, a device also called a desander or sand separator useful for removing sand from water.

**septage**  Solid and liquid wastes removed from sewage disposal systems.

**septate**  A botanical term meaning divided or with partitions.

**septic system**  An underground sewage-treatment system that includes a settling tank (septic tank) through which liquid sewage (domestic waste) flows and into which solid sewage settles to be composted and decomposed by bacteria. Flow through the tank exits to a leach field where it infiltrates into the subsurface soils. Septic systems are commonly used for individual home waste disposal where a sewer system is not available.

**septic tank**  A container that receives the discharge of sewage and permits the deposition of settled solids, the digestion of the matter deposited, and the discharge of the liquid portion remaining into a leaching field.

**sericeous**  A plant part covered with fine, soft hairs to the point it is often downy feeling.

**series circuit**  An electrical circuit connected so that the current passes through each device on the circuit in completing its path to the source of supply.

**serrate**  In botanical terms, a leaf with a margin cut into teeth pointing forward. It may look like a saw blade. (Compare with ciliate, pectinate, cleft, lobed, dentate, denticulate, entire, serrulate, double serrate, incised, crenate, crenulate, parted.)
serrulate  In botanical terms, the diminutive of serrate or finely serrated. (Compare with ciliate, pectinate, cleft, lobed, dentate, denticulate, serrate, entire, double serrate, incised, crenate, crenulate, parted.)

service conductors  Electrical wire supply conductors between the street transformer or street main and the service equipment of the customer.

service connection  The point where a customer’s piping or wiring connects to a utility main service pipe or wire.

service equipment  In electrical systems, a reference to all conductors and devices that are a part of transferring electricity from the power company’s lines to the fuses or circuit breaker devices of an individual user.

sessile  In botanical terms, a plant part sitting close without any stalk or petiole.

set  1. A reference to an emission device (head, emitter, etc.) being at its proper elevation, orientation, and location. 2. A nail that is pounded into place. 3. With regard to concrete, masonry mortar, etc., a general point in time when it is no longer fresh enough to be loaded, or worked. Its condition is hard and no longer plastic or pliable. 4. In landscape terms, to plant. 5. Small bulbs, tubers, or other plant parts or starts used for propagation.

seta  A botanical term meaning a bristle.

setaceous  A botanical term meaning bristle-like.

setback  The distance required by a governing authority from a line (usually a property line or easement line) to a structure, wall, sign, or another use, etc. that is usually specified by an ordinance, code, or restrictive covenants.

set heads or setting heads  The action of placing or setting and stabilizing sprinkler heads during construction to assure their proper orientation and elevation for desired water dispersing.

setose  A botanical term meaning beset with bristles.
setscrew

setscrew  A screw placed through a collar shaft, etc. to hold a detachable or movable part in its place.

sett  A granite paving block that is often cube shaped.

setting bed  The layer of mortar on which tile is laid.

setting-up  1. The mobilization of equipment, obtaining sanitary facilities, establishing temporary office facilities, etc. to prepare for or begin a construction project. 2. The hardening of concrete, mortar, paint, varnish, pipe glue, etc.

settlement  1. The sinking of earth, the fall in elevation of a ground surface in a backfilled trench or excavation, if not properly compacted or caused by underground erosion. 2. The slow downward movement or change in elevation of a structure that is slightly sinking because of a poor bearing subsurface, or poor compaction beneath it, etc. 3. An agreed upon compromise. 4. The downward movement of solids in a liquid such as water due to gravity. When flowing water carrying sediment slows, it deposits material through this process.

sewage sludge  Recycled, dried product of municipal sewage treatment plants. Two forms are available: activated sludge (NPK 6-3-0.5) and composted sludge (NPK 2-2-0). The long-term effects of using sewage sludge are still under investigation. Heavy metals such as cadmium may be present in the soil where sewage sludge has been used, and they may build up after a period of time. There are possible negative effects depending on the origin of the sludge used.

sewer  A system of piping for collecting and disposing of waste waters. See sanitary sewer and storm sewer.

sewer main  A sewer line having sewer branches dispensing into it.

sewer pipe  A conduit or pipe used for carrying liquid waste.

SF, sf  1. Abbreviation for square foot (feet). This is an area equal to a square that measures 1 ft (12 in) long at each edge. 2. Abbreviation for surface flow.

SH  Abbreviation for sheet.

shade  In consideration of access regulations regarding sunlight, the shadow cast by a structure, vegetation, etc.

shade cloth  A special cloth useful in placing above plant material to protect them from sun while in containers or greenhouses.

shade netting  A netting draped above plants to provide some shade. It has larger openings in the fabric to allow sun than shade cloth has.

shade tolerant  A plant that can grow well in shady conditions.

shade tree  Any tree planted or existing for the value of its shade.

shake  1. With regard to construction materials, a wood shingle split from a piece of wood (best formed by hand-splitting) and usually thinner on one end than the other. They are commonly made of cedar. 2. With regard to lumber, a reference to cracks in the surface of the wood caused by drying and other effects.

shale  Sedimentary rock derived from clays or silts thinly laminated and easily split along planes.

shallow soils  Soils that are generally less than 20 in deep to bedrock, unweathered parent material, or a water table.

shark fin  In roofing, this refers to an upward-curled felt side lap or end lap.

shear  To break off, clip off, or cut off. This is often done by chopping foliage and twigs to
make a shape of the plant (especially espaliers, Christmas trees, hedges) or to confine a plant to space.

**shear force** The lateral force perpendicular to the axis of a member or structure, etc., causing it to be inclined to break, slide, deform, or be cut off. (Compare with tensile force and compressive force.)

**shears** Tools with handles and opposed cutting edges used for cutting plants by squeezing or drawing the handles together.

**shear strength** The maximum shear stress that a soil or other material (structural member, etc.) is capable of sustaining. (Compare with tensile strength and compressive strength.)

**shear stress** or **shearing stress** The force per unit area of cross section that can cause shear. (Compare with compressive stress and tensile stress.)

**sheath** A thin, usually tubular, covering over a plant part. In many grasses, this is the basal part of a leaf that wraps around the stem and holds it in place.

**sheathing** The surface material (usually wood boards, plywood, or wallboards) attached over exterior studs or rafters. See also sheathing.

**sheave** In pulling cable, a grooved wheel or pulley assisting in pulling cable and often used for pulling underground cable between manholes or pull boxes.

**shed** A relatively small structure used for shelter, storage, or a workshop. It is often a separate building but is sometimes attached to another structure.

**shed roof** or **pent roof** A roof surface having only one sloping side.

**sheep manure** Sheep excrement used as an organic, rapidly available fertilizer having an NPK ratio of 2-1.5-3.

**sheepsfoot roller** A self-propelled or towed large cylinder-like roller with projecting bumps or studs that penetrate the surface of the ground to facilitate a deeper compaction of fill material than facilitated by a smooth drum roller.

**sheet** In construction, a thin, flat, wide piece of material.

**sheet asphalt** Plant-mixed asphalt cement having a content of graded sand passing through a 2.00 mm (No. 10) sieve. Its use is usually confined to surface courses laid on binder courses.

**sheet flow** A relatively thin flow of water.

**sheet glass** Glass used in windows.

**sheeting or sheathing** 1. Pieces of material (wood, steel) used to secure the vertical surface
shell aggregate

of an excavation. 2. Material used in sheets. 3. The boards forming the vertical surface of concrete formwork. 4. Bedrock or stone with many fractures.

shell aggregate An aggregate composed of crushed seashells and sand.

shelterbelt See windbreak.

sherardize The process of placing a thin coating of zinc (usually with other materials) with heat (between 320 to 500°C) on steel to provide a corrosion- and abrasion-resistant surface.

SHGC Abbreviation for solar heat gain coefficient.

shifting See shifting up.

shifting up Removing a plant from a small container and placing it in a larger container. This is common practice in a nursery where plants are being grown up to size for sale. After this process, plants should be rooted into the growing medium before selling at the larger size.

shim A thin, tapered piece of stiff material (wood, metal, etc.) inserted under a member to adjust its height or vertical alignment, etc. They are often used to bring materials into flush alignment with one another.

shingle A roofing unit made of various materials and sizes used on an exterior surface. Each unit usually overlaps others to shed water.

shiplap A connection of boards side to side where the edges are rabbeted to overlap flush from board to board.

shoot 1. The young sprout of a plant. 2. New growth of a plant. 3. This year’s growth of a plant usually identified on deciduous trees from bud to bud.

shop drawings The drawings, illustrations, schedules, etc. prepared by a contractor or any subcontractor, supplier, etc. that illustrate how specific items or portions of the work will be made, designed, or installed.

shore 1. A board set temporarily at an angle to support a wall. 2. The land immediately adjacent of, contiguous to, and influenced by a body of water.

shoring 1. A number of boards set to temporarily support a wall. 2. Material used and placed to support the earth on the sides of a trench or steep slope.

shoreland The land around a water body from which surface water drains directly into the water body instead of draining into streams and tributaries.

short circuit A condition in an electrical circuit when electricity escapes to a ground or returns, occurring when a hot wire of opposite phases touch each other, or a bare wire or connection touches a bare spot on a grounded wire or component, or a hot wire comes into contact with water or moist soil. This will usually blow a fuse or trip a circuit breaker if they are a part of the system.

shotcrete Concrete or mortar pumped through a hose onto a surface, sometimes with considerable force.

shot hole A fungus that causes spots on leaves that fall out, creating holes and looking like they have been shot with a shotgun.

shoulder nipple 1. A nipple having threads at each end and a space along the pipe between the threads that are without threads. 2. A short nipple just longer than a close nipple, but having only a short area without threads along its length.
**shovel**  A hand tool with a long, tubular handle and a broad, thin, metal blade. It is used for digging, scooping up, or cutting soil, sand, gravel, or any loose granular medium.

**shovel prune**  1. To prune a root system of a plant with a shovel by forcing the shovel blade completely into the ground at a consistent distance from the plant stem, usually completely around it. This prevents roots from extending to undesirable areas, prepares them for a more likely successful transplant by forcing more root growth closer to the stem, or in some cases encourages more top growth. 2. A slang term meaning to dig up and throw away an undesirable plant.

**shrinkage**  The reduction in size of a member or material (pipe, timber, steel, concrete, etc.) as a result of drying, temperature change, etc.

**shrinkage limit**  With regard to soils, a point at which a reduction in water content will not cause a decrease in the soil mass, but an increase in water content will produce an increase in soil mass.

**shrub**  A plant with many stems or much branching near the ground; and is woody and forms new wood from old wood each year.

**shrub adapter**  An irrigation part that fits between a pipe threaded end and a nozzle mounted on top of it. It is usually mounted on top of a nipple aboveground to allow the watering of shrubs with a spray nozzle.

**shrub head**  A shrub adapter and nozzle.

**shrub swamp**  Swamps dominated by woody vegetation including shrubs, young trees, and trees that are stunted because of environmental conditions. The height of plants are less than 20 ft (6 m) tall.

**shubunkin**  A colorful variety of goldfish hardy in temperate climates for outdoor ponds. They are approximately 8 to 10 in long at maturity.

**si**  Abbreviation for square inch(es). It is an area equal to a square measuring one inch along each edge.

**sickle**  A hand tool with a short handle and a long, curved, sharp blade used to cut grain, grass, or brush.

**SIDD**  See standard inside diameter dimension ratio.

**side-dressing**  Fertilizers applied close enough to plants to provide the root zone with food.

**side-dump loader**  A tractor with a front bucket that can dump forward and to the side.

**side lap**  The amount that one sheet or roll of material overlaps another at its side edge.

**side lot line**  Generally any lot line that is not a front lot line or a rear lot line.

**side shoot**  A secondary stem that grows from the base of a main stem.

**sidewalk**  An improved footpath for pedestrian use that is usually paved (usually with concrete) and is typically located adjacent to a street. Its
side yard

name derived from how it allows pedestrians to walk beside a street, but this term is also used for any footpath located in any open space.

side yard The space to the right or left of a building as one faces it from the front. It includes the area between the building and the property line, along the entire side of the building. Most municipalities and counties specify a minimum side yard in their planning codes. The side yard as defined in codes for regulation usually includes a set minimum distance from a side property line extending from the front property line to the rear property line.

siding A covering finishing exterior walls made up of a series of horizontal strips or boards made of wood, aluminum, or such, usually applied horizontally with each strip overlapping the one immediately below it to prevent penetration of water as it drains off.

sieve A metal sheet of woven wire, closely perforated metal, or other similar device with regularly spaced openings of uniform size, mounted in a frame and used in separating earthen material according to size, cleaning, and sifting seeds, or separating any material for size.

sieve analysis or screen analysis The investigation and ascertainment of the proportions of particles and their size ranges in a granular material by using sieves (screens) with different-sized openings.

sieve method A method utilized in separating sizes of particles of a soil sample.

sight distance triangle The triangular area bounded by the street property lines of corners and a line joining points along said street lines a determined number of feet from their point of intersection. This area is kept free of visual obstructions from street to street to provide an open view of the intersection, providing more safety for those traveling toward the intersection so that they can avoid intersecting traffic.

sight line The line from an observer to an object or area viewed.

sight rail One of a series of horizontal rails used to check the gradient of a pipe in a trench. The rails are adjusted to the desired gradient so that the bottom of the trench can be measured from them and ensure the proper gradient for a pipe.

sign A device that is usually flat with words, pictures, or drawings used for visual communication of commands, warnings, directions, advertisements, or anything intended to attract attention or communicate.

signage Visual communications in symbols, pictures, letters, drawings, photographs, or words whose function is to communicate directions, identifications, warnings, advertisements, etc. to passersby.

silica brick A brick baked at high temperature that is made from quartzite containing approximately 96% silica, 2% alumina, and 2% lime.

silicate An insoluble metal salt often contained in concrete, brick, glass, clay, etc.

silicone Many types of polymeric silicon compounds useful for water resistance, electrical insulation, heat resistance, binding, or as a lubricant.

silky In botanical terms, glossy with a coat of fine and soft, close-pressed, straight hairs.

sill 1. A timber fastened to the top of a foundation useful in attaching a wood frame above it.
2. The bottom horizontal portion of a frame, especially a window frame.

sill cock A water faucet that is threaded to provide a connection for a hose and often placed on
the wall of a building just above the foundation at about the elevation of the sill.

silt  1. Earth with soil particles of a size between \( \frac{1}{12,500} \) to \( \frac{1}{500} \) in (0.05 to 0.002 mm) in size. It is a mineral component of soils that is a loose sedimentary deposit material derived from fragmented and weathered rock. It is smaller than sand particles and larger than clay particles. In high proportions in the soil it increases potential for compaction, but also increases water-holding capacity. 2. A soil textural class comprised of approximately 0 to 12% clay, with 80 to 100% silt and 0 to 15% sand.

siltation  The deposition of sediment from erosion, storm water runoff, etc., but especially of particles of a size intermediate between sand and clay.

silty clay  A soil textural class comprised of 40 to 60% clay, 40 to 60% silt, and 0 to 20% sand.

silty clay loam  A soil textural class comprised of 20 to 40% clay, 4 to 73% silt, and 0 to 20% sand.

silty loam  A soil textural class comprised of 0 to 25% clay, 50 to 80% silt, and 0 to 20% sand. This soil may be cloddy when dry, but lumps can be broken easily or pulverized. It feels floury soft and when squeezed it will readily form a cast that can be handled without breaking whether wet or dry. When moistened and squeezed between the thumb and forefinger, it will not make a smooth ribbon, but will have a broken appearance.

silver orfe  See golden orfe.

simple  In botanical terms, of one piece; usually refers to leaves that are not made up of leaflets, but instead have one single leaf blade. It may be deeply lobed, but it is not divided into separate blades. (Compare with compound.)

simple fertilizer  A fertilizer with only one of the three components (N, P, K) of a complete fertilizer. An example of a simple fertilizer is ammonium sulfate (18-0-0).

simple leaf  A leaf with its entire blade in one piece (although it may be deeply cleft) and not having leaflets. (Compare with compound leaf.)

simple vein  A vein in a leaf that extends from one end of the leaf to the other without branching.

single-acting pump  A reciprocal pump with a piston that causes pumping only as it moves either up or down, but not both.

single flower  A flower with the minimum number of flowers for its kind.

single grain soil  A soil without structure or aggregation that has individual particles of the same size.

single-hub pump  A pipe having a bell at one end and a spigot at the other.

single leg profile  In measuring water distribution of sprinklers, this refers to using a single row of catchments (catch cans) to obtain a precipitation rate profile of the throw of an individual sprinkler head.

single phase or 1PH or 1ph  Refers to electricity in alternating current with only one phase or hot wire and a ground. This is the most common type of electricity source used by landscapers when connecting a sprinkler controller, pump, or low-voltage lighting system to an electrical system. Large pumps and other heavy electrical equipment run more efficiently and economically on three phase electrical power.

single-stem  A description of a plant that has one trunk or stem arising from the ground. (Compare with multi-stem.)
sink

sink  1. In landscape ecology, an area where input exceeds output of organisms or materials; nearly opposite of source.  2. In terrestrial and aquatic environments, a place where natural or man-made debris collects.

sinker nail  A slender nail having a flat head with a slight depression in it.

sinuate  In botanical terms, leaves with a deep, wavy margin.

sinuosity  The curviness of a stream or water feature channel numerically expressed by the ratio of channel length to the length of the meander water centerline.

sinus  In botanical terms, the curve (or cleft portion, depression) between two lobes or teeth of a leaf or leaflet.

site  1. A defined area of ground where (with boundaries) a building, project, park, etc. is located or proposed to be located.  2. Any land area of reference.

site plan  A plan of a site showing the positions, size, and types of elements such as roads, drives, parking lots, play areas, outdoor furniture, land uses, or structures existing or proposed for a site. It may or may not show dimensions, contours, or have a legend.

sitework  Construction work outdoors including earthwork, landscaping, and installation of fences, irrigation systems, utility services, retaining walls, etc.

size of pipe or size of tubing  In drawing and specifications, the normal size by which the pipe (or tubing) is commercially designated. Sometimes specifically exact dimensions are given in specifications.

sizing  Working (sawing, sanding, chipping, etc.) material to a desired size.

skeleton steps  A staircase with treads supported on the sides and having no risers for support at the front of the treads.

skewed  Oblique, or twisted to one side.

skid steer loader or skip loader  A compact tractor steering by direction of spin on wheels and with a front bucket that interchanges for various attachments such as a sweeper, an auger, a hydraulic hammer, etc.

skimmer  A device used in water features that collects material mostly from the surface of the water, depositing it in a basket or net as it flows through, usually to a pump.

skin  1. The material covering a framework, especially on a building.  2. An exterior wall bearing no weight from above.

skin friction  Resistance due to friction between a soil and a structure.

skip  1. With regard to surfaced wood, an area missed by the machine during surfacing operations of sanding or planing.  2. In a finished painted surface, an area not finished or painted. These unfinished areas are sometimes referred to as holidays.
skylight  An opening in a roof that has a covering of a transparent or translucent material. It is useful for admitting light into a space below.

slack side  The face of a board or wood veneer that was facing toward the tree’s center before being cut.

slag  A gray aggregate residue of blast furnaces.

slag cement  A fine or powdery cementitious material made of a uniform blend of granulated blast-furnace slag and hydrated lime.

slant  A sewer pipe connecting a building’s sewer to a main or common sewer.

slate  A hard, thin, flat, brittle rock made up mostly of clay minerals that were formed along parallel planes. It is used in roofing, flooring, patios, and even chalkboards.

slating nail or slate nail  A nail with a large, flat head and a medium, diamond-shaped point; useful in attaching slate to wood.

sledgehammer  A hammer with a heavy head used for pounding. Their heads are of various weights, and handles are of various lengths.

sleeper  A timber at or near the ground that distributes load from other wood members above or from decking (flooring) attached to it.

sleeve  1. In irrigation, a pipe used to allow pipe(s) or wire(s) to be pulled or pushed through it. This is useful under pavements when the water pipes or wiring will be installed later. It also allows for access to wires or pipes housed in these conduits after paving is completed. 2. In sprinkler irrigation, a vertical pipe that allows a long, solid shank key to be slid down it to the top of a valve to facilitate turning it off and on by turning a handle on the top of the shank.

sleeve fence  A short, decorative fence attached to a building often designed to complement the building design.

slip  1. A cutting of a plant. 2. A description of the method of attachment of PVC fitting that slides together with glue as opposed to compression or threaded fittings.

slip fix  A PVC device that slides into slip sockets (tee, coupler, etc.) with glue, and is capable of being extended so that it is particularly useful in repairing (fixing) damaged pipes.

slip-joint pliers  A tool with curved, ribbed jaws and handles with a joint between them that slips to two different positions. When the handles are squeezed, the jaws can grip wide or narrow objects depending on the slip-joint setting.

slope  Ground that is not horizontal, but instead has an incline. The state of any surface not level or essentially perpendicular to a line from a
slope failure

given point on the earth’s surface to its center. See percent of slope and slope ratio.

slope failure  A slope that fails by mass movement. See also landslide and slump.

slope map  1. A drawing showing land form (topography), allowing one to ascertain steepness of ground and surface drainage characteristics by use of contours (in most cases). 2. A drawing showing various selected slope categories (i.e., 5 to 10%, 10 to 20%, etc.) in graphic form. These drawings are usually colored, but may also simply be labeled, or have various shades of gray to indicate steepness of slope as identified with a legend. These drawings may be generated by hand or computer by use of a contour map.

slope ratio  The steepness of a slope indicated by the rate at which it diverges from being vertical. It is a relationship of a horizontal distance to a vertical elevation difference. Examples are 3 to 1, sometimes shown as 3:1. In this example, the slope diverges three units horizontally for every one unit of vertical distance.

slough  A slow-moving creek or stream in flat terrain characterized by wetland vegetation.

sloughing  Loose material such as soil or shotcrete slipping, crumbling, or breaking loose from a vertical or steeply sloping face.

slow-release fertilizer  A fertilizer that releases its nutrients in regulated amounts. These are (1) fertilizers that very slowly dissolve in the soil, and (2) plastic-coated fertilizers through which water slowly penetrates, releasing the soluble fertilizer.

sluffing or sloughing  1. Material coming off at the edge or surface. 2. Material in a pile, on a slope, or in an embankment, etc. that no longer is stable and falls or tumbles from above under the force of gravity.

slug bait  A palletized or liquid substance attractive to slugs that is combined with a toxic substance to kill them.

slugs  Terrestrial mollusks found where moisture is high and temperature is cool. They feed on living plants, dead or decaying organic material, earthworms, and other slugs or snails.

slump  1. An indication of consistency of freshly mixed concrete, mortar, or stucco found by measuring the decrease in height to the nearest ¼ in (6 mm) of molded mass immediately after removal from a slump cone. 2. See slumping.

slump cone  A truncated cone used to form freshly mixed concrete, mortar, or stucco that holds the fresh mix to the shape of the cone until it is removed to measure decrease in size as it slumps. See also slump and slump test. A concrete slump cone measures 8 in (20 cm) at the base, 4 in (10 cm) at the top, and 20 in (30 cm) in height. A mortar or slump cone measures only 6 in (15 cm) in height.

slumping  The movement of a mass of soil on a slope in response to gravity. This is often triggered by overly saturated, unstable soils, earthquake, vibration, or excavation.

slump test  A procedure for measuring the slump amount (the amount a fresh concrete mix sinks) after being placed in a slump cone, tamped, and then having the cone removed. It gives an indication of consistency and some idea of its workability. Aggregates should not be larger than 2 in when this test is performed.

smart controller  An advanced irrigation control system that controls irrigation by mon-
itoring the weather or the soil moisture. They adjust station run time(s) or the frequency when there are changes detected in the soil moisture or the weather. Some will monitor wind, rain, or temperature. Another feature of some of these controllers is that they can monitor flow in pipes, determining if there is a break in the line. The features of these controllers are not all the same, but they include some method of automatically adjusting their schedules through the seasons of the year in an attempt to keep the optimum amount of moisture in the soil. These controllers are quite helpful in preventing waste of irrigation water. However, their accuracy and usefulness is only as good as their monitoring devices and their monitoring locations.

**smart growth** A term used in land planning and landscape architecture referring to urban growth that serves the economy, the community, and the environment. The movement attempts to bring this about by basing itself on the following principles: mixed land uses, compact building design, ranges of housing choices, walkable neighborhoods, attractive neighborhoods, open space, farmland, natural beauty, strengthening existing communities, providing a variety of transportation choices, making fair development decisions, and encouraging community collaboration in development decisions. These offer general directions, but do not constitute an adequate theoretical construct for whole cities.

**smut and white smut diseases** Fungi creating white or yellow blisters or galls with dark sooty-looking spores. These affect a variety of herbaceous plants.

**snag** In pruning, an improperly pruned branch where a short stub remains.

**snail** A terrestrial mollusk found where moisture is high and temperature is cool. They feed on living plants, dead or decaying organic material, earthworms, and other slugs or snails.

**snake** 1. See fish tape. 2. A long, thin, wire-like metal strip with a crank handle useful for extending down pipes and rotating to remove clogs.

**snecked rubble or snecked masonry** A masonry wall of rough, irregular stones fitting together well (tightly) to increase its strength.

**snow fence** A usually horizontal fence-like linear structure, perpendicular to storm winds, that catches drifting snow and prevents it from accumulating where it is not wanted, such as on roads, driveways, etc.

**snow mold** A disease of lawns caused by a variety of fungi with a variety of symptoms. It usually appears with the melting of snow. Poor drainage, excess thatch, and fast fall growth encourage these fungi.

**soaker** An irrigation line that oozes water along its length.

**soapin** Any of various glucosides produced in plants characterized by a soapy lather.

**soapstone** Soft rock containing large amounts of talc. It feels like soap.

**soccer** A game played on a lawn where goals are at each end and players on 2 teams attempt to kick a ball or bounce it with their head to their goals (on opposite ends of the field). The field may be 255 to 300 ft long and 150 to 180 ft wide, depending on whether it is for girls, boys, men, women, college, high school, etc.

**sod** 1. A grass-covered surface of the ground including its roots and the soil they hold. 2. A
roll or sheet of grass (or other herbaceous plants), soil, and its roots cut from the ground in a thin piece for transplanting. It is produced by cutting an inch or two below the ground-surface and piling the slabs or rolls on pallets. It is important to get the sod laid down in place and watered before it undergoes dessication.

sod cutter Any of various motorized machines used to cut and provide sod pieces in slabs or rolls of various sizes.

sodding Laying sod.

sodic soil A soil with a significant amount of sodium, usually characterized by poor structure and poor drainage.

sodium chloride The salt found on tables for culinary use that is also used for melting snow and ice on pavements. It is toxic to roots; symptoms are scorched leaves, premature fall color, premature leaf drop, or twigs dying back.

sodium lamp See sodium vapor lamp.

sodium light Yellow-orange light produced by a low-pressure, sodium vapor lamp.

sodium nitrate See nitrate of soda.

sodium vapor lamp A lighting device using an electric discharge producing light by electric current flowing between electrodes in a sodium vapor container. They are usually used outdoors.

soffit The narrow undersurface of an overhead structure such as a balcony, staircase, beam, cornice, roof, eave, arch, etc.

softball field An outdoor playfield for the game of softball that starts at a point (home plate) and travels out in two base lines at right angles to one another, 60 ft to bases, and a 60-ft line bisects that angle. The distance to home plate from the pitcher's mound is 38 ft for women or 46 ft for men. The outfield fence is about 200 ft from home plate. These dimensions are for understanding scale, comprehension of shape, etc. and are for planning purposes only. Contact the appropriate league for their exact layout and dimensions and current information regarding different types of playfields.

softened water Water that has been treated by reverse osmosis, filters, magnets, ultraviolet light, or use of salt (sodium chloride replaces calcium and magnesium ions), etc. to decrease dissolved minerals and their ability to form deposits. Water treated with salt can cause salt burn in plants, especially over a period of time. Some plants are highly susceptible, while others are tolerant of salt.

soft water A water that has a low dissolved mineral (calcium, iron, magnesium, etc.) concentration (less than 100 ppm). Unlike hard water, it does not form insoluble deposits in pipes, valves, tanks, etc. It is common in alkaline soil areas and near limestone geological formations.

softwood Wood obtained from an evergreen (conifer). It is often relatively soft and easily cut or worked, although some wood of evergreen trees is harder than many hardwoods (wood from deciduous trees). This term does not refer to the relative hardness of the tree.
**soil fabric**

- **soil fabric**

  Various-sized mineral particles derived from rock and arranged into geometric patterns.

  In the United States, the Soil Conservation Service is actively engaged in this work and has records in many areas of the country of soil types.

  Soil compaction

  The degree to which particles in the soil are compressed, filling pore space and increasing soil density. Compaction of soils is advantageous and usually essential to the stability of structures and paving, but is detrimental to plant growth. Plants are restricted by compacted soils because they afford little aeration, little gaseous diffusion, difficult root extension and penetration, and they usually lack water because it does not infiltrate well and has little pore space for its storage. See also compact and bulk density.

  Soil Conservation Service

  In the United States, a portion of the federal government that has been assisting farmers, ranchers, and construction efforts by classifying, mapping, and analyzing soils for many years; now called the National Resources Conservation Service (NRCS).

  Soil creep

  A type of soil mass movement characterized by a very slow, often erratic and infrequent downslope displacement of soil not fracturing the soil mass. The impetus of soil creep is often freeze-thaw cycles or wet-dry cycles.

  Soil density

  See soil compaction and bulk density.

  Soil drainage

  Water drainage from the soil made up of three components: runoff, internal drainage, and permeability.

  Soil erosion

  The removal of soil by water or wind.

  Soil fabric

  Various-sized mineral particles derived from rock and arranged into geometric patterns.
soil fill

soil fill  See as fill or backfill.

soil-heat flux  The rate of heat flow into, from, or through a soil.

soil horizon  In soil science, the reasonably distinct layers of soil or a land’s underlying material in a profile as observed, studied, or found in a vertical section of land. Horizons are usually distinguishable by their change in color, or texture. Each layer or horizon is determined not only by color and texture, but also by soil structure type, pH, roots, and organisms. The master soil horizons are the O horizon, A horizon, B horizon, and C horizon. Sometimes a lowercase letter(s) will follow a soil horizon designation as follows: A1b. The letter(s) has a general meaning. Some of those meanings are as follows: b—buried soil horizon; ca—carbonate accumulation; cn—concretion accumulations; cs—calcium sulfate accumulation; f—frozen soil; g—strong gleying; h—humus and iron accumulation; m—cementation; sa—salt accumulation more soluble than calcium sulfate; se—silicious cementation that is soluble in alkali; t—illuvium clay, maximum clay; x—fragipan, a firm, brittle, and high density layer. The major soil horizons may also have differentiation of layers within them called subhorizons. They are usually labeled with the major soil horizon letter designation (O, A, B, C) followed by a number (1, 2, 3). The lower number is higher in the soil profile or the first subhorizon encountered when digging from the surface. There may be no subhorizons present in a soil profile, or several. See also subhorizons A1, A2, A3, Oe, Oa, Oi, and the D or R horizons.

soil intake rate  1. The speed at which water infiltrates a soil. This changes significantly: it is a greater speed when precipitation first occurs and slows to a stopping point at complete saturation or at a point when the precipitation rate exceeds infiltration rate. 2. The speed at which water infiltrates a bare soil at a specific time during the water application (irrigation) period. In irrigation, higher intake rates of soil assist in avoiding runoff, but the rate of infiltration significantly decreases with duration of water application. High soil intake rates are found in soils with good aeration (not compacted) and organic content.

soil interface  The area where two dissimilar soils meet. It will usually impede the flow of water, nutrients, and living things from one soil type to the other. This is dangerous because long periods of standing water usually bring on water mold, causing death in most plants.

soilless  Without soil. This term is often used in describing a growth medium (soil mix) that does not contain any soil as a part of its mix or composition.

soilless mix  A rooting or planting medium that has no soil, but instead is comprised of such materials as perlite, vermiculite, sand, peat, fertilizer, etc.

soil line  The circular line around a plant stem, or a structure where it contacts the earth.

soil mechanics  The laws and principles of mechanics and hydraulics in engineering as applied to soils examined as an engineering material.

soil mix  1. A mix of soil, perlite, vermiculite, finely ground bark, peat, or other organic or inorganic materials, used as a growth medium for plants. 2. A growing medium mix for nursery container plants of the aforementioned ingredients except that soil is not normally a part of the mix. This is called a soilless growth medium.

soil pH  A measurement of the relative concentration of hydrogen ions in soil. It is followed by
a number. A pH 7 is neutral. The higher the number is above 7, the higher the alkalinity of the soil. The lower the number below 7, the more acid the soil is.

**soil pipe** A pipe carrying the discharge of toilets or other sanitary sewage.

**soil polymers** Materials that absorb water hundreds of times their weight and that are used around plant material roots to provide water over a longer period of time. They are often called **superabsorbents**. They are most helpful in potting soils.

**soil profile** The vertical assemblage of soil made up of layers that are called **horizons** and lying between bedrock and the earth’s surface. Soil profiles vary from region to region and usually from site to site in thickness and horizon types present. A soil profile may be as the accompanying illustration shows, but may also not contain some or many of these layers or may contain other layer combinations and **subhorizons**.

**soil reaction** Also known as **pH**, the hydrogen-ion concentration of a soil expressed in the form of the reciprocal of the log of the hydrogen-ion number. Neutral is a pH of 7.0. **Acid soil** is lower than 7.0, and **alkaline soil** is higher than 7.0.

**soil reclamation** An effort to return a soil that was once arable back to an arable condition.

**soil report** A document from a geological engineer providing information about the subsurface soil conditions. This report does not usually contain the information about a soil’s capacity to grow plants but does tell about the composition of soil layers and gives information relative to its capacity and stability for construction purposes. See **soil test**.

**soil salinity** The amount of salt in the soil. Excess salt can be toxic to plants, but more often symptoms are leaf scorch, stunted growth, yellow leaves or withered leaf margins. Salt also interferes with germination of seeds. Salts can build up in the soil from softened water, green manure, fertilizers, chemical amendments, or salts applied for melting snow. Salts can best be removed from soil by **leaching** with water that is free of salts. This is most effective if the soil allows water to drain through it freely.

**soil series** A group of soils having similar profile characteristics and having been derived from the same parent rock material.

**soil stabilization** The application of a chemical, biological (plants), or mechanical treatment to a soil to increase stability or desired engineering properties.

**soil stabilizer** 1. A machine with rotating tines that mixes surface soils in place with stabilizing materials (such as cement or lime) to increase soil-bearing capacity. Its rapidly rotating tines pick up and blend the soil with the stabilizing agent. 2. A chemical or substance to improve the physical properties of soil, placed on or mixed in with soil to reduce or prevent erosion and sloughing, or to improve its bearing or structural qualities.

**soil sterilant** A chemical that will kill all plants and prevent all plant growth in a soil.
They usually last for a number of years and should be used with caution. They may leach from points of initial application to adjacent areas as they travel with water moving through the soil.

**soil sterilizing** 1. Heating soil to destroy organisms present. 2. The application of chemicals to soil to prevent plants from being able to grow for a year or more. These chemicals should be used with extreme care.

**soil structure** The arrangement and degree of development of the primary soil particles into geometric patterns of natural aggregates. Various types of soil structure are recognized (massive, platy, prismatic, blocky, granular). Disturbance or excavation of naturally occurring soils tends to destroy its natural structure, which can lead to compaction and its associated problems of decreased gaseous diffusion, reduced water infiltration, and increase in resistance to root penetration.

**soil survey** An investigation of the soil, accompanied by a written report, usually including information concerning the type of soil, its thickness and strength, location of bedrock, depth to water table, shrink-swell capacity, stoniness, etc. that is prepared by a geotechnical firm, a government agency, etc.

**soil test** In horticulture, the necessary process and information obtained about a growing medium by analysis. This analysis of soil can be done with kits by individuals, but the most accurate information on pH, nutrient deficiency, texture, salinity, etc. is obtained by having a soil laboratory perform the analysis. Such laboratories can be found as private businesses, or they are often available at a university or at an agricultural extension service.

**soil texture** The size, shape, and proportional distribution of individual soil particles such as sand, silt, or clay into size classes; usually expressed by a percentage basis by weight into 12 classes of soils as defined by the USDA. It is not directly interpolated into the Unified Soil Classification System.

**soil texture class** The relative amounts of sand, silt, or clay in a soil. Sandy loam, loamy clay, and silty clay loam are examples of soil classes.

**soil type** See soil classification.

**solar** Relating to or derived from the sun.

**solar collector** A device made to absorb the sun’s radiation and transfer the accumulated heat to a fluid passing through the collector.

**solar constant** The rate at which solar radiation is obtained on a surface facing directly at the sun on the edge of the atmosphere.

**solar gain** The amount of solar radiation absorbed by a landscape element or any surface.

**solar heat coefficient** The portion of incident solar energy transmitted through glazing under normal summer conditions.

**solar heating** Generating or using heat from absorbed solar radiation.

**solarium** A sunny room having a significant amount of glazing, allowing the sun’s light and warmth to enter. These are often useful for growing indoor plants and for a person’s leisure relaxation.

**solar orientation** The direction an object or formation faces in relation to the sun.

**solar skyspace** The space between a solar energy collector and the sun. It should be free of obstructions that shade the collector.

**soldered joint** A metal pipe joint made by heating the pipe and melting solder into the joint.
**soldering gun**  An electrically heated soldering tool with a grip and trigger like a pistol.

**soldering iron**  A tool with a tapered metal tip used to heat metal and melt solder to join the metals.

**soldier**  A brick placed on end so that it is positioned vertically while having the narrower face showing on the wall surface. (Compare with sailor.)

**soldier course**  A horizontal row of upright bricks with their narrow faces exposed on the wall surface.

**solenoid**  In irrigation, an electrical device attached to a valve, which activates by signal through a wire from a controller opening or closing the valve.

**solenoid valve**  A device preventing the flow of water (or other fluid or gas) through a pipe system until a small coil is electrically energized to move a plunger that allows the device (valve) to open and allow flow. This type of valve is the one most commonly used with automatic controllers in landscape irrigation work.

**solid brick**  A brick without voids. See also solid masonry unit.

**solid masonry unit**  (U.S.A.) A masonry unit with a net cross-sectional area in every plane parallel to bearing surface with at least 75% of its cross-sectional area being measured in the same plane.

**solid state controller**  A digital sprinkler controller.

**solid waste**  This term encompasses garbage, refuse, rubbish, and trash as classified and defined by the National Solid Waste Management Association.

**solu-bridge**  A device that measures the electrical conductivity of a soil solution, facilitating a determination of the soluble salt concentration.

**solum**  The soil above the parent mineral material comprising the A horizon and B horizon.

**solvent-weld joint**  A connection made between plastic pipes or devices where substances (primers, glue) are placed in contact with each surface (usually with a brush or a dauber) to dissolve the surface of the plastics so that when placed in contact they can harden into a leak-proof joint.

**somewhat excessively drained soil**  Soil in which water is removed rapidly. They are usually sandy and porous. After it rains, it is not long before optimum amounts of moisture for plant growth are no longer present.

**somewhat poorly drained soils**  Soils in which water is removed or percolates slowly enough to keep it wet for significant periods, but not always.

**sooty mold**  A mycelium growing on leaves, and twigs of trees and shrubs, caused by honeydew secretions from sap-sucking insects such as aphids and scale.

**sordid**  A botanical term describing a plant part with a dull, dingy, or dirty hue.

**sorus or sori**  A cluster of sporangia on a fern.

**sough**  A surface water drain at the base of a hill or embankment that carries the water gathered to another drain, usually to one side.

**sound wood**  Wood without decay.

**source**  1. In landscape ecology, an area where output exceeds input of organisms or materials, and is nearly opposite of a sink. 2. In irrigation design and construction, the supply of water for
south elevation

the irrigation system; it may be a city water main, lake, river, well, spring, etc.

south elevation 1. A drawing, usually to scale, showing the south-facing portion of a structure or element as it would be seen standing to the south and looking north to view it. 2. The elevation of a portion of ground, paving, or structure situated south of the remainder of it.

southern elevation See south elevation.

southern exposure 1. A slope that from top to bottom slopes downward toward the south. In the northern hemisphere, it receives more light, and in the southern hemisphere, it receives less light. 2. The south-facing portion of a structure. 3. The area to the south of any nearly vertical surface that has a changed microclimate effected by it with regard to heat or cold, or brightness of sunlight or shadow.

southern grasses See warm season grasses.

southwest sunscald or southwest sun scorch Damage on tree trunks or sometimes branches of mostly young or recently planted trees that appears as split and exfoliating bark. This mostly occurs on the southwest-facing area of a tree trunk where on sunny days (especially with snow on the ground) the sap begins to flow, and then at night, if it is sufficiently cold, the sap freezes and the bark cracks or is exfoliated.

SOV Abbreviation for shutoff valve.

sow In landscape work, the placing of seed for future growth, especially by scattering, but also by covering with earth or growth medium.

sow bug An isopod crustacean (suborder Oniscoidea) having an elliptical body with seven pairs of legs, sectioned shells, and the capability to roll up into a ball about the size of a pea. They feed mostly on decaying vegetation; however, they will feed on young tender plants, especially those just germinating, or on fruits that are usually overripe or damaged. They are encouraged to proliferate by mulching and composting. They are also known as potato bugs or pill bugs.

sowing See sow.

soybean meal Remains of defatted soybeans used as an organic, quickly available, fairly long-lasting acidic fertilizer having an NPK ratio of about 6–7-1.2–1.5-1.5–2.5.

SP, sp 1. Abbreviation for soil pipe. 2. Abbreviation for standpipe. 3. Abbreviation for species. 4. Abbreviation for static pressure.

space 1. A defined area created indoors or outdoors by walls, fences, hedges, berms, buildings, trees, etc. that gives visual enclosure to an area. 2. Any amount of area. See also spacial.

spacial A two- or three-dimensional area or space. A reference to an area, land, site, or anything regarding land that can be shown to have a defining edge whether sharp or vague. These relationships are those graphically shown and analyzed in GIS applications.

spade A shovel or hand-digging device that has a relatively thin blade and a handle.

spading Turning over soil for sowing seeds or transplanting plants.

spadix A long, fleshy, usually upright organ extending up from a flower (usually a spathe).

spall A chip or area removed from the surface of a stone, masonry unit, or concrete by a blow or by action of weather, etc.

spalling The flaking of a brick, stone, or concrete surface usually due to frost, chemical action, or in concrete work, too much water at the surface when it was finished. See also laintance.
The distance between two supports.

spandix See spadix.

spangham Mosses common to bogs, which, after harvesting and drying, are used in planting soils because of their moisture-retaining capacity and nutrients. See peat moss.

Spanish tile A curved, red-clay roofing tile laid in courses, with adjacent tiles having their convex side laid alternately up and down.

spathe In botanical terms, a flower-like or leaf-like bract partly surrounding the inflorescence that is usually colored and noticeably appealing. They usually enclose a spadix.

spathulate See spatulate.

spatial element In landscape ecology, each of the relatively homogeneous units in a mosaic at any scale.

spatulate In botanical terms, shaped like a spatula, or druggist’s spoon.

species A group of plants closely resembling each other and breeding freely. In a plant's botanical name, the first word used is the genus, the second word is species, and the third word, if any, is the variety. If there is a fourth word, it is a strain.

species factor (Ks) or crop coefficient (Kc) In irrigation auditing, a plant’s transpiration rate. A factor from 0.80 to 0.90 is generally high. Medium factors generally range from 0.50 to 0.70 depending on plant type. Low factors again depend on plant type and generally range from 0.10 to 0.60.

species richness The number of species in a given area. In most cases, the more species found or available, the more it is thought to be rich. But compatibility and environmental survivability are issues for the actuality of species richness.

specifications A written description of materials, systems, work processes, equipment use, etc. to be adhered to in order to enhance quality of construction on a project as part of the contract documents.

specific capacity The discharge rate pumped from a well divided by the drawdown in the well water surface. It is a measure of the productivity or capacity of a well.

specific epithet In botanical terms, the name of a plant in binomial nomenclature.

specific gravity A ratio of the density of a substance to the density of a reference substance. For fluids, the reference material is usu-
specific name

ally water. For gases, the reference material is usually air.

specific name  A plant’s botanical (scientific) name.

specific retention  The ratio of volume of water within rock or soil, after being saturated and retained against the pull of gravity, to the volume of rock or soil.

specific speed (Ns)  With regard to pumps, the value that centrifugal pump design engineers use to classify impeller design. It is not the pump speed.

specific yield  The ratio of the volume of water within rock or soil that moves with gravity after saturation to the volume of the rock or soil.

specimen  1. A term used to describe an ornamental plant of particular note for some attribute. 2. A plant that is exemplary in form to the point of being an example of how plants of the same botanical name should appear. 3. A plant specified for installation in a landscape construction project that should be healthy and true to form. It is usually for a conspicuous or important location in the landscape. 4. A plant that is chosen, with purpose or at random, from many plants of the same type as a sample.

specular angle  An angle that is equal to the angle formed by a ray (such as light) striking a surface and a line perpendicular to the surface. The ray is reflected from the surface at the same angle it received the ray. The angle between the reflected ray and a line perpendicular to the surface is the specular angle.

spent  Flowers that have finished their blooming cycle, or an individual flower that has completed its bloom.

sperm  In reference to plants, a male gamete that can fuse with an egg to form a zygote.

sphagnum  Many mosses of the order Sphagnum, which grow in moist, acid areas where there are decaying remains with other plants become peat (peat moss).

spicate  In botanical terms, spike-like, in a spike, or arranged in a spike.

spider mite  See mite.

spigot  1. A faucet or sill cock. 2. The end of a pipe made to fit into a bell end of another pipe of the same type.

spike  1. A thick, long, heavy nail, usually given this reference if over 3 in (7.6 cm) long. They are usually available up to 12 in (30.5 cm) long and are useful for attaching timbers. 2. A grain plant head. 3. A long inflorescence much like a raceme except that flowers are sessile (closely held) on an elongated axis. The flowers are directly attached without any stems along the main lower stem. Flowers open in sequence beginning with the bottom of the spike. Racemes are similar, but have a small stem supporting each flower from the main stem.

spikelet  In botanical terms, a small or secondary spike. It is a type or portion of a flower in

spike inflorescence
grasses and sedges. It may be a flower or flower cluster, consisting of a flower or flowers and their enclosing bracts.

**spill stone**  In a waterfall, the stone at the point where water falls; it shapes the sheet or dribble of water that falls.

**spindle**  In woodworking, a short piece shaped by turning and cutting on a lathe.

**spindle-shaped**  In botanical terms, tapered at both ends.

**spine**  In botanical terms, a sharp woody or rigid outgrowth from a plant branch or stem. A thorn or a stiff pointed portion of a plant capable of puncturing skin.

**spinner sprinkler**  A spinning sprinkler operated at low pressure with a small distribution pattern.

**spirit level**  A leveling device nearly filled with fluid utilizing an air bubble within a clear tube (or container) to allow determination of orientation to or from vertical or horizontal.

**spittlebugs**  Numerous insects (family Cercopidae) whose larvae secrete froth, protecting them from being seen. They feed on stems, strawberries, etc.

**splash block or splash guard**  A small precast concrete or plastic block laid below a downspout to direct roof drainage away, and to prevent erosion of the surface on which it sits.

**splash line**  A noticeable line on a surface (such as a fence or a building) where water splashes or is sprayed consistently, causing discoloration from minerals in the water.

**splice box**  A box (often underground) made of plastic, fiberglass, or concrete, etc. where conductors (wires) are joined.

**split-rail fence**  A fence with openings between the horizontal rails that are made of split wood.

**spoil**  Material from excavating, trenching, or dredging.

**sporangium, sporangia**  In botanical terms, a case or capsule producing spores on the underside of the fronds of ferns.

**spore**  A simple type of reproductive cell (taking the place of a seed) that can produce a new plant and is common to algae, fungi, ferns, and mosses. These plants are not seed producing.

**sport**  In horticulture, a mutant plant. It can be a plant or a portion of a plant exhibiting a sudden deviation from the norm for the plant type.

**spot elevation**  A point on a site, plan, or map with a known existing or specified future elevation.

**spotted spurge**  An annual weed with small leaves producing thousands of seeds within a month and is difficult to control, especially in lawns.

**spp**  Abbreviation referring to more than one species.

**spray**  The application of water or water mixed with fertilizer, insecticide, etc. by tiny droplets
sprayed concrete

produced by pressure and coming from a nozzle that fans it out.

sprayed concrete  See shotcrete.

sprayer  A tank and nozzle in various shapes and sizes used to spray dyes for concrete, insecticides, liquid fertilizer, weed killers, etc.

spray head  A sprinkler head that sprays in a continuous spray pattern without rotating to irrigate. These heads usually allow change of nozzles for various trajectories, arcs, and water quantity outputs.

spray lime  A hydrated lime made of fine particles, at least 9% of them pass through a No. 325 sieve.

spray sprinkler  See spray head.

spreader  A piece of equipment used to evenly broadcast seed, manure, fertilizer, herbicide, etc. over the ground.

spreading  In the landscape industry, a plant that has a branching pattern or growing pattern that is more horizontal than vertical. Trees with this type of branching have horizontal trunks, or nearly so. (Compare with ascending.)

sprig  Stolons or small plant divisions.

spigging  The process of placing grass sprigs from running types of grasses (such as Bermuda grass) to create a lawn or stand of grass.

spring clamp  A clamp with jaws that are normally kept closed by pressure from a spring to clamp materials or items. The jaws may be opened with two handles when they are squeezed.

springwood  Growth of the xylem from the cambium layer that is formed in woody plants during spring and early summer. It is generally lighter in color than wood grown in late summer through fall.

sprinkler  In landscaping, a device that emits, shots, sprays, or in any way distributes water.

sprinkler circuit  The area covered by sprinkler heads operated by a single valve.

sprinkler controller  A timing device used to turn on and off sprinkler valves or heads.
**sprinkler flag**  A small flag and thin wire or plastic staff, usually 12 to 18 in high, used to mark locations of existing or proposed **sprinkler heads**, **valves**, etc. in the landscape.

**sprinkler irrigation**  The watering of plants or seeds with **sprinkler heads**.

**sprinkler key**  A long metal device used for turning on or off valves on sprinkler systems. Some have a slot at their end (for **stop and waste valves**), some have a box on their end (for large, water line, cast-iron valves), and some have a rounded fork at their end (for turning on **manual valves**). The sprinkler key in the illustration fits over a manual angle valve.

**sprinkler profile**  See **sprinkler head profile**.

**sprinkler program**  Information entered into the controller’s memory determining when the system will water. A program usually contains three pieces of information: days to water, time to start watering, and the length of each zone to be watered.

**sprinkler schedule**  1. A tabulation of materials for a sprinkler system including, but not limited to, such information as the type of equipment (i.e., sprinkler head, valve type, controller, quick coupler) size, gallons per minute, manufacturer, and model number. 2. The timing and frequency of sprinkler operations including runtime, time of day for operation, and days to be operated.

**sprinkler system**  The composite of all elements to facilitate irrigation; usually refers to an irrigation system with sprinkler heads.

**sprinkler valve**  An automatic valve or a manual valve used for turning on and off a **sprinkler system**.

**sprinkler valve key**  See **sprinkler key**.

**sprinkler zone**  The area covered by sprinkler heads operated by a single valve.

**sprout**  1. The opening of a seed; the beginning of its growth. 2. A sucker or runner from a plant.
spun concrete

spun concrete Concrete compacted by spinning, as with the manufacture of pipes.

spur 1. Some fruits such as apples and cherries that bear their fruit on specialized short twigs. 2. Projections from a flower (usually tubular) such as found in columbine (Aquilegia) flowers. They arise from sepals or petals. 3. An offshoot or projection away from the main body.

sq. ft. Abbreviation for square foot (feet).

sq. in. Abbreviation for square inch(es).

sq. km. Square kilometer(s); 1,000,000 square meters, or 0.3861 square miles.

sq. m. Abbreviation for square meter.

sq. mi. Abbreviation for square mile(s).

square 1. Roofing materials equaling 100 sq ft (9.29 sq m). 2. A steel, L-shaped tool used to draw lines to cut lumber perpendicular to an edge. See steel square.

square edge In reference to lumber, wood cut with four edges at right angles. It is not tapered or tongue-and-groove.

square foot or square feet or sq. ft. or ft² English or U.S. measurement of area equal to a square measuring one foot along each edge. It is an area equal to 144 sq in or 0.093 sq m.

square foot gardening A type of intensive gardening where plants are grown 1 ft apart, usually in raised beds, and by organic means.

square inch or sq. in. or in² English or U.S. measurement of area equal to a square measuring one inch along each edge. It is an area equal to 0.0069 sq ft, or 6.452 sq cm.

square kilometer A metric measurement of area being one kilometer square; equal to 1,000,000 sq m, or 0.3861 sq mi.

square meter A metric measurement of surface area equal to one meter square.

square mile or sq. mi. or mi² English or U.S. measurement of area equal to a square measuring one mile along each edge; equal to 640 ac, or 2.590 sq kms.

square spacing A reference in sprinkler layout design in which head-to-head coverage is obtained by heads being laid out in a pattern that is square if imaginary lines were drawn between heads in plan view.

square yard or sq. yd. or yd² English or U.S. measurement of area equal to a square with each edge measuring one yard. It is equal to 9 sq ft, or 0.836 m.

squarrose In botanical terms, a plant part abruptly spreading or recurved at some point above the base.

squash borer A larva of a moth prevalent in the eastern United States that bores into squash stems, leaving a sawdust-like excrement while causing wilting and death.

squash bugs A large blackish bug (Anasa tristis of the Coreidae family) that can cause plants of the gourd family to completely wilt. Damage is usually found on zucchini, winter squash, and pumpkin. Control is usually by chemicals.

sq. yd. Abbreviation for square yard(s).

SSF Abbreviation for subsurface flow.

SST Abbreviation for stainless steel.

stability In reference to composting, an indication of the relative state of decomposition. The more decomposed the compost material, the more stable it is. The process of decomposition may be temporarily harmful to plants, especially as nitrogen is robbed from the soil to assist in the...
Humus is fully or nearly fully decomposed organic material that is stable in or on the soil.

**stabilization** 1. The increase of stability of a sloped earthen mass. 2. The securing, steadying, or establishment in place of, a construction item.

**stable** A building for the sheltering and care of horses.

**staging area** A space allowed for a contractor to place materials and equipment for constructing a project.

**stain** 1. An added color or a natural discoloration in the surface of a material. 2. A chemical colorant (pigment) for enhancing wood grain during finishing. It may be a solid stain or a semitransparent stain. 3. A pigment or dye in paint.

**stair** A step or several steps.

**staircase** A group of stairs or several groups (flights) of stairs with the associated framework, handrails, etc.

**stake** 1. A piece of metal, wood, etc. pounded into the ground to mark or support something. 2. A reference to a fertilizer stake made of hardened fertilizer in the shape of a stake so that it may be forced into the ground. It is much like a fertilizer stick except that it is usually larger and has a point. It decomposes, and some materials leach, acting much the same as a fertilizer tablet.

**stake-and-rider fence** A fence made of posts resting on the ground at an angle and fastened together where they cross near their ends; also has rails riding on these crossings extending horizontally between them.

**staking** See tree staking.

**staking out** The placing of stakes to give locations for construction work and placements.

**stalk** 1. The main stem of an herbaceous plant. 2. The main stem of any plant. 3. A slender support of a flower or leaf (petiole, peduncle).

**stalked leaf** A leaf with a petiole for attachment of the leaf. (Compare with sessile and perfoliate.)

**stall** A place for the sheltering and care of horses.

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standard

In horticulture, a treelike form of a shrub or vine that is trained and pruned to have a trunk with a head like a miniature tree. Tree roses are the most common standards grown. Most standard forms have a head that starts at least 5 ft (1.5 m) from the ground surface. Some shrubs are grafted on a tall stalk for an interesting standard specimen.

Standard Dimensional Ratios (SDR) The ratio of a pipe’s outside diameter to its wall thickness (outside diameter/wall thickness). As the pipe diameter increases, there is a proportional increase in wall thickness. Pipes with the same SDR ratio will usually bear the same working pressure throughout all pipe sizes.

Standard inside diameter dimension ratio (SIDR) With regard to pipes, the ratio of the average inside diameter to the minimum thickness.

standpipe A high vertical pipe or tank used for storing water and supplying pressure.

staple A double-pointed, U-shaped metal wire or stiff steel often used for the same purposes as nails, but preferred for its potentially increased holding power. In smaller sizes, they are forced under pressure from a staple gun into construction materials, but in larger sizes they are usually forced by hand into such materials as erosion control fabric or weed barrier fabric.

start A set or larger plant part used to propagate another.

starter solution A chemical (usually vitamin A) fertilizer dissolved in water, and applied in the planting hole or around the roots of plants that have been newly transplanted. Sometimes bare root plants are soaked in such a solution before planting. This assists plants to withstand the shock of being moved and speeds up root development.

State Agriculture Experimental Station In the United States, a government-sponsored resource for unbiased, current information regarding hardiness, soils, fertilizers, plant varieties, pest and disease control, etc. They are often associated with state agricultural colleges.

static head The pressure in any water system not in use and not flowing when expressed as head.

static pressure Within irrigation pipes, the pressure of water exerted when the system is at rest, in a closed system, with no water flow from or through pipes.

static suction head A condition occurring when the pump is lower in elevation than the supply. It is the distance between the pump centerline and the water supply surface elevation.
static suction lift  The vertical distance from the pump centerline to the supply surface when the pump is above the supply.

station  1. A circuit on an irrigation controller that can be programmed with a runtime separate from other circuits and provides electrical power to open or close one or more remote valves.  2. The coverage of a valve in combination with its watering devices.

statue  A three-dimensional representation of a person, animal, or mythical image (or a combination of such) created by sculpting, casting, carving, etc.

steal  An alloy of iron and steel refined from pig iron or from scrap steel.

steel square  A flat, steel, L-shaped tool with measurements (inches, centimeters) marked along its edge, used to mark perpendicular lines or check corners for being perpendicular (square) to each other.

stem  1. A primary plant portion that develops buds and shoots rather than roots.  2. The main trunk of a plant.

stemflow  Rainfall intercepted by plant leaves and branches conveyed to the ground via stems or the trunk.

stepl  A tread and a riser as a single unit or in a staircase.

stepped fashion  A horizontal flashing along a sloped roof against and intersecting a vertical face that steps up with the slope of the roof.

stepping stone  1. In landscape ecology, patches that are spatially arranged to act as cover or favorable conditions for an organism or element to move through the landscape from patch to patch.  2. A hard surface piece placed in a lawn, ground cover, or surface mulch to allow temperatur e of 160 F (56°C) to kill harmful organisms such as weed seeds, nematodes, insects, diseases, etc.

steam sterilization  Treating a growing medium (soil mix) by heating with steam at a temperature of 212 F (100°C) to kill all living organisms in the soil.

STD, std.  Abbreviation for standard.

steam pasteurization  Treating a growing medium (soil mix) by heating with steam at a temperature of 160 F (56°C) to kill harmful organisms such as weed seeds, nematodes, insects, diseases, etc.
pedestrians ease of access and prevent damage (soil compaction, damage to plants) to the landscape. They can be round, square, or any shape. Examples of materials used for stepping stones are brick, concrete, block, and wood rounds. They are usually laid in series with spaces between each. They are most often used in low-level pedestrian traffic areas.

stepping stone

stereoscope  A viewing device used to see a three-dimensional image using two aerial photographs overlapping (showing adjacent land areas) or side to side.

sterile 1. With regard to flowers (inflor-escence), incapable of reproducing because of not bearing spores, pollen, or female reproductive organs (the pistil). 2. Not bearing flowers or not having seeds capable of germination. A description of the condition of a single plant that is not capable of producing viable seed. 3. A condition of soil when it contains no living organisms.

sterilization 1. The act of causing soil to be incapable of sustaining plant growth by use of heat, chemicals, etc. 2. The act of causing a flower or plant to not be capable of reproduction.

stick 1. A length of pipe. 2. A long, slender piece of wood. 3. A hardened fertilizer somewhat in the shape of a stake so that it may be forced into the ground. It is very similar to a fertilizer stake except that it is usually more slender and has no point. It decomposes, and some materials leach to the soil below, acting much the same as a fertilizer tablet.

stiffener plate  A steel plate attached to structural members to add support against heavy loads, or to make a secure attachment.

stigma  The part of the female portion of a flower (pistil or style) that receives pollen.

stile  A vertical, structural member of a frame.

stinkbug Any of the family Pentatomidae that emits an unpleasant odor when disturbed. It can feed on fruits and vegetables and may become a nuisance.
stipe  In botanical terms, the stalk of a fern’s frond.

stipple  A texture made of dots, points, or small bumps.

stipulate  A botanical term referring to the stipules at the base of an attachment of a leaf.

stipule  In botanical terms, the appendages on each side of the base of some leaf petioles.

stirrup  1. Same as a hanger. 2. Bent rods or bars usually in W or U shapes, or any shape to resist shear in masonry or concrete.

stock  1. In construction, materials or plants on hand. 2. The rooted plant on which a scion (bud or shoot) of another plant is placed in budding, grafting, or inarching.

stock plant  A plant from which cuttings are taken for production of more plants.

stock tank deicer  A floating heater designed to keep water a few degrees above freezing when the air is below freezing.

stolon  A long stem of a plant that creeps along the surface of the ground, or trails shoots above the ground, capable of rooting at some points where it contacts the ground, and forms new plants there. Examples of plants exhibiting this phenomenon are St. Augustine and Bermuda grasses. The term is sometimes loosely applied to slender rhizomes near the ground surface.

stoloniferous  In botanical terms, stolons or plant material producing or propagating itself by stolons.

stoma or stomate or stomata or stomates  Microscopic openings in plant tissues, usually in leaves (usually undersides) and stems, allowing for gaseous exchange and transpiration of water. Carbon dioxide enters the tissue through these pores, and water vapor is lost to cool the leaf. They occur between two adjoining specialized cells, called guard cells. Variation in the guard cell size by turgor adjusts the size of the opening. When pressure is low, the stomata are small to reduce loss of water, but they become larger when photosynthesis increases.

stone  1. A cut, shaped, or split rock for use in construction for facing or building walls, etc. 2. Solid mineral matter of indeterminate size. A rock.

stoned  Removal of sharp edges of tile or masonry produced during cutting. This term comes from the use of a carborundum stone.

stone fruit  Fruit containing one seed in the center such as in plums, peaches, and apricots.

stonework  Any masonry work where rock is secured in place with a cement or mortar.

stool  A stump of a tree producing suckers. 2. A plant crown from which shoots grow.

stop and waste key  A long, T-shaped device with a slot on one end that fits over a valve to turn it off and on. They are typically used to slide down a vertical sleeve or curb box to access a valve below grade to operate it.
stop and waste valve  A valve that can be turned off and on with a long key that is extended down a sleeve to the valve. The valve stops the water flow in the pipe and opens a small hole in the valve to drain (waste) all water downstream and at a higher elevation. This is important in areas where the ground freezes in the winter to prevent freeze damage.

stope  An excavation with a series of benches or tables.

storage tank  A container that receives water from a source and holds it for distribution to the points of use.

storm cellar  An underground space for shelter against violent storms such as tornadoes or hurricanes.

storm drain or storm sewer  A conduit, pipe, natural channel, or structure used to convey waste water or storm water, but not industrial waste or sanitary sewage.

stormflow  The significant increase in water traversing a stream channel due to storm water.

storm sewer  A pipe system collecting and disposing surface water runoff.

storm water  The water precipitated from clouds. It is usually in reference to rain but not sleet or snow and refers to its immediate impact or flow.

storm water detention 1. Any storm drainage technique that detains runoff. 2. Storage of storm water runoff and its controlled release during and after a flood or storm.
storm water retention  Storage of storm water runoff.

straightedge or rod  1. A rigid, straight piece used to strike off a concrete, mortared, or plastered surface. 2. A straight piece of lumber or metal used to align tile, or provide a straight or flush surface in aligning material. 3. A metal, straight tool used to guide a straight line cut through paper, cardboard, etc.

straight fertilizer  Those natural or synthetic fertilizers that are not blended or mixed with other fertilizers or ingredients.

straight goods  See straight fertilizer.

straight tee  A pipe tee made with all three openings having the same size.

strain  In a botanical name, strain refers to a population of plants within a variety that exhibits definite, usually attractive or improved characteristics, such as resistance to disease, improved yields, tolerance to environments, attractive growth, larger size, more vigor, etc.

stramineous  A botanical term meaning straw-colored.

strap anchor  A post attachment for a footing to support the post and its load. The metal strap is a U shape with its lower portion poured in concrete and the two upper ends bolted to two sides of a post for attachment.

strap leaves  Leaves with margins partly or completely missing so that the leaves are narrower than normal and may resemble straps.

strap-shaped  In botanical terms, long, flat, and narrow.

strap wrench  A tool used for tightening large pipe, or pipe that may be broken with a pipe wrench, or pipes or devices that may be marred easily and that clamp with a strap that has a handle for tightening.

strategic  A golf hole design allowing a golfer to play position to score well. Poor shots are not severely penalized. See penal design. Hazards are placed to give a golfer a reward if a risky shot is negotiated. See also heroic.

stratification  1. Layers of soil. 2. Treatment of seeds at low temperatures to assist in breaking dormancy and to promote germination.

stratified rock  Rock layers that vary in composition.

stratify  Freezing or chilling seed to assist in breaking dormancy and to promote germination.

stream bank  The normal boundaries (defined by slope) of a stream channel, except when flooded.

stream corridor  A strip of vegetation along a stream or river, which may be wider than the flood plain.

stream order  The number assigned to a stretch between intersections or ends of a dendritic river system, determined by the number of upstream tributaries. Streams without any other streams contributing to them are first-order streams. Streams with one tributary are second-order streams. Second-order streams become third-order streams at the point downstream after the intersection of another stream, and so on.

street  A public travelway.

street elbow or street ell  A fitting accommodating a 90° turn, having one male opening and the other female.

street frontage  The length of a property abutting one side of a street as measured between the property line and the street.

street furniture  Items commonly furnished along streets such as trash receptacles, benches, movable planters, etc.
**street lamp**

_A light on a pole alongside a street._

**street noise barrier**

_A high wall, typically made of concrete, that parallels a street and reflects the noise of the traffic._

**streetscape**

1. The ground area adjacent to a street that may contain sidewalks, street furniture, landscaping, etc.  
2. The scenery viewed from a street and the visual positive or negative experience or feelings generated by such.

**street tree**

_A tree that is currently located or proposed for planting along a street._

**stress**

_In reference to plants, a condition brought on by any number of difficulties where the health of a growing plant is put at risk, or where external factors inhibit plant growth. It may be due to too little water, too much water, temperatures that are too low or too high, reflected light, chemicals, lack of aeration within the soil, lack of gaseous exchange within the soil, soil compaction, insects, fungus, etc. It is often noticeable by wilting leaves, brown-edged leaves, or a dulling in the color of leaves._

**stretcher**

_A brick laid lengthwise in a wall or any masonry structure._

**striate**

_A term often used to describe plant parts marked with fine, more or less parallel or longitudinal lines._

**strict**

_A botanical term that means very straight and upright, not at all lax or spreading._

**strigose**

_In botanical terms, beset with appressed, rigid bristles or hairs pointing in more or less the same direction._

**strike**

1. _Finishing a mortar joint with a stroke of the trowel, at the same time removing extra mortar and smoothing the surface of the mortar to remain in the joint._  
2. _A rooted cutting used in propagation._

**strike off**

1. _To slide a straight wood or metal bar across a surface of fresh concrete, usually by extending one form across to another form so that excess concrete is removed, leaving a straight even surface. The long straight member is usually slid back and forth as it is pulled along the forms and moved forward, pulling the excess concrete._  
2. _The straight edge used as indicated in (1)._

**strike plate or strike or striking plate**

_A metal plate and indentation that receives a bolt or latch of a lock on a door. It often has a curved lip at its edge toward the door opening, allowing a bolt with a sloped face to strike it as the door is closing, and then be forced by the plate to retract until the door closes far enough that a spring forces it back into the strike plate box. This holds the door shut until the bolt is removed by a door knob, etc._

**string algae**

_An algae type that uses up oxygen and space in water features, choking out plants and fish. It forms a dense mat and can be removed by hand. Barley straw can retard its growth._

**stringer**

_A long, narrow, horizontal timber between uprights for carrying the load of a floor, deck, or for making a frame._

**stringing mortar**

_Spreading enough mortar to lay several masonry units at one time in place._

**string trimmer or weed eater**

_A motorized gas or electric tool that spins a heavy plastic string to cut vegetation, especially at edges where a lawn mower cannot cut._

**strip**

1. _Material that is long and narrow._  
2. _To remove some or all of the threads on a nut or bolt._  
3. _To remove old material from a surface, such as paint from a wall._  
4. _To remove all vegetation from a site._
**strobilus or strobile** In botanical terms, this means a cone-like or head-like fruit, as in hop and pine.

**strong mortar** A cement mortar made without lime that has more shrinkage than usual.

**structural** A term describing a load-bearing member of a structure.

**structural glass** Glass cast in the form of cubes, rectangular (solid or hollow) blocks, tile, or rectangular plates.

**structural plywood** A plywood of the highest grade of structural exterior capability used between joists and such to create rigidity and provide a base for other surface finishes.

**structural steel** Steel used as load bearing or reinforcing material.

**structure** 1. Anything built. 2. The members giving stability to an object or conglomerate. 3. The agglomeration configuration of soil. See soil structure.

**strumose** In botanical terms, covered with cushion-like swellings, or bullate.

**strut** Any structural member resisting thrusts in the direction of its length.

**stucco** An exterior finish made of some combination of Portland cement, lime, sand, water, and additives that dries to a hard, textured surface.

**stud** A vertical support member in a framed wall. There are usually several in a series to which sheathing for a wall surface is attached.

**studio** The workroom of an artist or designer.

**stunt** Smaller than normal. This can have many causes such as pollution, reflected light, soils low in fertility, or lack of water.

**STW** Abbreviation for storm water.

**style** An elongation of a plant ovary connected to a stigma at its apex.

**STW** Abbreviation for storm water.


**suberose**

ically has little or no open space, small lots, and similarly sized dwellings.

**suberose** A botanical term meaning corky in texture.

**subfloor or blind floor or counterfloor** A base floor for the finished floor material.

**subfloor**

1. A surface of earth or rock prepared to receive a foundation. This is applicable under paving and buildings, etc.
2. The level of grade before topsoiling a landscape that is usually shaped and drained properly within $\frac{1}{3}$ of 1 ft.
3. The prepared bed surface in a trench ready to receive piping.

**subgrade**

1. A surface of earth or rock prepared to receive a foundation. This is applicable under paving and buildings, etc.
2. The level of grade before topsoiling a landscape that is usually shaped and drained properly within $\frac{1}{3}$ of 1 ft.
3. The prepared bed surface in a trench ready to receive piping.

**subhorizon** A distinguishably different layer of soil within a major soil horizon. They are usually labeled with the major soil horizon letter designation (O, A, B, C) followed by a number (1, 2, 3). The lower number is higher in the soil profile or the first subhorizon encountered when digging from the surface.

**submerged plants** Plants that grow below water surfaces for all or a majority of their life cycles.

**submergent species** Species of plants that lie entirely beneath the surface of water.

**submersible pump** A pump designed to be submerged in the liquid (usually water) that it pumps.

**subshrub, sub-shrub** A more or less woody plant, usually shorter than 3 ft.
1. A perennial.
2. A permanently woody plant with soft, pliable, usually greenish stems.

**subsoil** The layers of soil lying beneath the topsoil and above bedrock. They are often more compacted, less fertile, of poorer soil structure, contain less organic matter, and have few but large roots.

**subsoil drain** A pipe or conduit that collects water below the ground surface.

**subspecies** A category in botanical classification that is a portion of a species with a variant characteristic observed in a locale. It is genetically different from others of the same species, but propagates well with the normal species if their range overlaps.

**substrate** The base or surface on which an organism lives (soil for plants), grows, or is attached.

**subsurface flow (SSF)** Flow of water beneath the soil surface.

**subsurface investigation** Soil boring sampling and testing to determine subsurface soil profiles revealing relative strengths, compressibility, density, and other characteristics of the soils or rock to the depths necessary to establish viability of a proposed project or use.

**subsurface sewage disposal system** Treatment and disposal of sewage via a septic tank and drain field.

**subsurface utility** An underground gas, water, electric, or cable TV line, etc.

**subsurface water** Any water below the surface of the ground.

**substantial completion** The point at which work on a project (usually construction) is substantially complete. Other definitions are created within contract verbiage and are sometimes determined by date of occupancy, etc.

**subtend** In botanical terms this means extend under, be opposite to, extend across, or directly below and close to.

**subtropical plant** A plant found in the tropics, but capable of surviving cold better than tropical plants. Some even survive light frosts.
subulate  In botanical terms, awl-shaped or tapering from a broad base to a sharp point or tip.

suburb or suburban  An outlying area of predominantly residential land use in or near a city.

successful bidder  The bidder selected to sign a contract for construction or supply of material.

succession  The sequential changes of plants and animals in a given area following disturbance.

succulent  1. Plants having stems, or leaves, or both made up of fleshy tissue that stores water. This allows them to grow where water is scarce or infrequent. The most prominent members of this group are cacti. Other succulents include such plants as sedum, agave, hoodia, crassula, senecio, caralluma, duvalia. 2. In botanical terms, juicy or pulpy.

sucker  1. In reference to trees, a growth from the rootstock of a budded or grafted plant. Growth is instead desired from the intended portion of the plant, being the budded or the budded portion. 2. Underground stems that give rise to new plants. 3. Strong, extremely vigorous, vertical green shoot growth from the stem, or sometimes the branches of a tree. The proper term for this is a water sprout.

suckering  The process of producing suckers.

suction entrance loss  With regard to pumps, the velocity head (pressure) loss due to fluid moving in the direction of suction, and loss to any foot valve.

suction lift  With regard to pumping, the vertical distance from the surface of fluid to be pumped to the centerline of the pump.

suction line  See suction pipe.

sulfate-resistant cement

suction pipe  With regard to pumps, a pipe connected to the inflow of a pump, drawing fluid or air from another location.

suction pipe friction loss  The is the loss of pressure in a suction pipe for a pump due to friction caused by interaction with the pipe walls. This is variable depending on flow rate, pipe materials (roughness), and pipe size.

suction pump  A pump that raises water (liquid) by creating an area of low pressure or a partial vacuum that the fluid is drawn into.

suffrutescent  A botanical term, half-shrubby, somewhat shrubby, or slightly shrubby.

suffruticose  A botanical term indicating a plant or plant part that becomes somewhat woody.

sulcate  In botanical terms, grooved, marked, or furrowed longitudinally.

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suction line  See suction pipe.
sulfur

A micronutrient found in soils necessary for plant health. Plants lacking sulfur have similar symptoms to those lacking nitrogen. They are stunted and light green or yellow in color. It is seldom deficient in soils except where they are highly alkaline. Areas close to industrial centers may obtain sufficient sulfur in precipitation, and some irrigation water contains sufficient sulfur. Sulfur is an element present in sulfides, and sulfates and is a constituent of proteins.

summer 1. A large timber or beam serving as a bearing surface. 2. The warmest season of the year occurring between spring and fall. See also summer solstice.

summerhouse A garden structure of light, open design used during summer for protection from the sun.

summer oil A refined, powerful horticultural oil used as an insecticide for controlling insect pests during the growing season by spraying it on plants. It suffocates insects or their larvae and is not hazardous to other living animals.

summer solstice The longest day of the year (about June 22 in the northern hemisphere and December 22 in the southern hemisphere), which marks the beginning of summer.

summerwood Wood that is compact and has thick-walled cells denser than springwood because it is formed later in the growing season when growth is generally slower.

summerhouse A garden structure of light, open design used during summer for protection from the sun.

sump 1. A depression, pit, tank reservoir, receptacle, etc. holding excess groundwater, sewage, or runoff, etc. to allow removal of the liquid to a higher elevation by pumping. 2. A low point on a roof where a roof drain carries excess water away. 3. An underground space filled with gravel where water is drained usually for disbursement into adjacent soils.

sump pump or ejector A pump for removal of the accumulated waste in a sump.

sunburn or sunscorch or sunscald With regard to plants, damage caused by sunlight to stems, branches, or leaves due to lack of water or excessive transpiration. This can be caused by planting in a location that is too sunny or too hot, sudden exposure in a previously shaded area, or because of improper hardening off of transplants. Sunburn may be evidenced by split bark, dead portions of leaves, leaves yellowing or fading to a whitish color, or wilting of leaves. It is most common with plants facing south or west, and with plants receiving reflected light.

sundeck An outdoor space with little or no shade oriented to take advantage of the warmth of the sun, and usually having a paved or wood surface.

sundial A device that casts a shadow on a dial capable of indicating the time of day. These must be designed for the longitude and latitude where they will be located. Accurately designed and placed, they will only give an accurate indication of time four days each year. For best results, place sundials on a level surface at noon on April 16, June 15, September 1, or December 25. On these days, position it so the shadow cast by its gnomon at noon points due north (not magnetic), adjust it so that the shadow is on the 12:00 mark, and fasten it in place.

sunken garden A garden that has a substantial portion of its space below the surrounding elevation, or that is surrounded by elevated terraces.

sun pocket A small space designed to take advantage of solar heating and light.

sunroom A room in a building allowing a substantial amount of natural light from glazing in walls or on the roof.
sunscald  See sunburn.

super-, supra-  Latin prefixes often used in botanical terms meaning above, upon, more than, or opposite.

superabsorbent  A polymer used to increase the water-holding capacity of soil. They come in natural starch-based polymers and synthetic formulations. The starch-based polymers absorb greater quantities of water, but are more easily broken down by soil organisms and lose their effectiveness. The synthetic polymers do not absorb as much water, but they are not as susceptible to attack by soil organisms. They are used most effectively in sandy soils of low water-holding capacity and dry regions.

superintendent  The general contractor’s representative responsible for field supervision, coordination, and project completion.

superior oil  See horticultural oil.

superior ovary  In botanical terms, having all petals and sepals below the ovary, or an ovary attached to the summit or center of the receptacle and free from all other flower parts.

superphosphate  This is rock phosphate treated with sulfuric acid to make it more soluble (about 90%) with a nutrient rating of about 0-14-20-0. It also provides the essential nutrients of sulfur and calcium (calcium phosphate usually in excess of 50%).

supplementary conditions  A portion of the contract documents supplementing and sometimes modifying provisions of the general conditions.

supplier  A person or firm that supplies equipment, plants, components, fixtures, materials, or parts for construction work.

supply bond  A bond guaranteeing that materials delivered comply with contract documents.

supply main  The pipes through which the water flows from the source to the user laterals.

surcharged earth  Any or all earth placed at a higher elevation than the top elevation of a retaining wall.

surcharged wall  A retaining wall holding back surcharged earth.

surety  A person or organization who contracts to insure the potential debt, performance, or default of another. An insurance company.

surety bond  A binding document with one party agreeing to answer to another party for any unpaid debt, default, or the failure to perform of a third party.

surface bleeding  With regard to lumber, a substance in the wood coming through the finished surface and causing discoloration or oozing. It may be moisture, a preservative, wood resin, etc.

surface course  The exposed surface of pavements intended to withstand wear, or provide aesthetic appeal.

surface flow (SF)  Flow of the water over the surface of the earth.

surface mulch  In landscape work, loose material (i.e., bark, rock, pine needles) spread on a landscape surface for aesthetics, moisture retention, weed control, etc.

surface pump  A water pump sitting on dry land and not submerged in water.

surface root  1. The plant roots within about 12 to 18 in of the soil surface, which gather most of the nutrients and water for a plant. They are also called feeder roots. 2. The roots at the surface (usually tree roots), being visible above the ground, usually due to compaction. These are
most often apparent around trees in heavy pedestrian traffic, or where soils are highly compacted around them due to construction or other activities. They are prone to be damaged or cause girdling. They are caused by the difficulty of roots attempting to penetrate highly compacted soil or by the lack of water percolating to soils beneath.

**surface skimmer**  See skimmer.

**surfaced size**  A reference to a piece of lumber's size that was rough sawn to a particular size and after being planed or surfaced for a smoother or more refined finish is then a different size.

**surfacing**  The material used as a finished layer; covering.

**surfactant**  A chemical that essentially makes water wetter by removing surface tensions. They allow liquids to penetrate better, spread out over a surface better, and dissipate better into a granular material such as soil. They are often used to help sprays spread out over leaves, and improve the wetting of new growth media.

**surfacial wetland**  A wetland producing local surface runoff.

**surge**  A sudden voltage increase or decrease in an electrical current.

**surge protector**  A device that protects electrical components and devices from damage caused by electrical spikes and surges.

**surgical aquifer**  A water-bearing underground stratum that is not covered by a confining (impervious) bed and which can be replenished directly by rainfall or snowmelt.

**survey**  1. Locating boundaries, easements, plans, buildings, pavements, topography, etc. on land. 2. A map of the elements in (1). 3. Acquiring information about a site, interest area, or project.

**suspended load**  Sediment carried by wind or water above the ground surface.

**sustainability**  1. The ability to sustain ecological integrity, including human needs throughout generations. Also, the ability to provide healthy human-influenced existences or processes symbiotic with, allowing, encouraging, or capturing stability with natural variances over generations. 2. The ability to maintain with little deviation, with little waste, with renewable energy, etc.

**sustainable agriculture**  1. The production of food stuffs over generations on the same ground without depleting its usefulness or ability to continue to produce. 2. Farming that is ethically and environmentally sound while being productive for food and financial rewards. The quandary is how are such ethical uses defined and by whom.

**sustainable development**  Development that maintains or improves economic, social, physical, spiritual, and cultural opportunity for the community's well-being, while preserving or protecting the natural environment upon which people depend. It satisfies the needs of the present without compromising the ability of future generations to meet their needs.

**sustainable soil**  1. Soil capable of sustaining plant growth of various types presently and for future generations under present conditions. 2. Soil comprised of recyclable products or with little mixture of useless soil material.

**s & w valve**  A valve that can be turned off and on with a long key that is extended down a sleeve to the valve. The valve stops the water flow in the pipe and opens a small hole in the valve to drain all water downstream and at a higher elevation. This is important in areas where the ground freezes in winter to prevent freeze damage.
swale  A linear depression in land. Usually
describes smooth, low areas that gather water
and direct it away at a slight slope.

swallowtail  See dovetail.

swamp  A wetland (completely, partially, or
intermittently) dominated by woody plants
(trees and shrubs).

sward  Ground covered with grasses; turf.

sweating plants  Forcing bare root plants
to bud before planting. Some plants require this for
best survival, but most do not.

sweep elbow or long radius elbow  A term
for a bent pipe portion or fitting changing a
pipe’s direction with a large sweeping radius
assisting in avoiding pressure loss to resistance,
improving flow characteristics, or facilitating
the need to pull wire through it.

swing check valve  A backflow preventer
with a hinged gate that permits water flow
through the valve in only one direction.

swing joint  A type of joint used with threaded
pipe and fittings that permits motion to occur in
the configuration. These are often used in
attaching heads to laterals so that heads can be
run over by mowers, etc. without breaking the
head, its attachment, or the lateral pipe.

swing pipe  Polyethylene pipe, usually ½ inch
in size, connected with barbed fittings. This pipe
was originally and currently is most prolifically
used to connect sprinkler heads to a sprinkler
system’s lateral lines.

swing set  A usually free-standing frame sus-
pending two or more swings and sometimes
other play equipment. Some are portable and
used in the backyards of single-family residences.

switch  A device bridging or breaking the flow
of electricity.

sy  Abbreviation for square yards. It is an area
equal to a square that measures 1 yd (36 in)
along each edge.
syd

Abbreviation for square yard(s).

symbiosis  Close physical association between two different kinds of organisms, which benefits both.

symbiotic  A mutually beneficial relationship between organisms.

sympatric  A plant or organism occupying the same geographic region. (Compare with allopatric.)

sympetalous  With the petals connate (connected), at least toward the base.

symphyllid  White, segmented, small (about ¼ in long) pests that kill plants by feeding on root hairs.

syn- or sym-  A Greek prefix used in botanical terms, meaning united.

syncarpous  A botanical term meaning with united carpels. (Compare with apocarpous.)

syngenesious  A plant that has connected stamens or anthers.

synthesis  The combination of simple molecules forming another substance. Photosynthesis forms carbohydrates from water and carbon dioxide.

S.Y.P.  Abbreviation for southern yellow pine.

syringing  An old term mostly used in greenhouse work that refers to the process of washing dust, insects, grime, etc. from the foliage of plants. This term came about because originally a syringe pump was used to spray plants. Indoor plants should not be sprayed too late in the day as wet foliage at night may promote fungi.

system hazard  According to the National Standard Plumbing Code, this is an actual or potential threat of severe damage to the physical properties of the public or the consumer's potable water system, or a pollution or contamination that would have a protracted effect on the quality of the potable water in the system.

systemic  Spreading throughout the tissue of a plant. Some pathogens are systemic, as in a pesticide that is absorbed into the system and tissues of a plant, causing the plant juice to become toxic to targeted insects or fungi. This term can be found on container labels for weed killers, insecticides, and fungicides. It is also used for chemicals that, when absorbed, kill the plant itself.


**tab**  The lower portion of a shingle that is exposed.

**table saw**  A circular saw set below the surface of a table but having a portion of the blade extending through a narrow slot above the table surface. An adjustable straight edge to one side of the blade allows for boards to be slid along the edge, cutting them straight.

**tablet**  A plaque that is often etched, carved, or inscribed, placed in or on a wall or pavement, etc., often to commemorate an event or make a memorial.

**tachifyer**  A substance used in hydromulching or hydroseeding that acts as a glue with the mixture holding materials in place when dried. This is especially useful on steep slopes and in windy areas.

**tack**  Fastening in spots, often to temporarily hold. Fastening can be by gluing, welding, nailing, etc.

**tack coat**  See asphalt tack coat.

**tackle**  Rope or cable with a pulley block or assembly of pulley blocks that allows one to lift or move heavier objects than one could normally move alone.

**tack rivet**  A rivet temporarily placed to hold work for riveting, but not intended as a load-bearing rivet.

**tack weld**  1. A weld used to temporarily hold metal parts in position. 2. A number of welds is not necessary to have a continuous weld.

**tail**  The lower portion of a slate shingle that is exposed on the finished roof.

**tailing**  1. The portion of a projecting stone or stones in a wall. 2. Earthen spoils of a mine, usually in a pile, and often containing pollutants.

**take off**  Measuring and counting anticipated necessary materials and labor in preparation for bidding construction work.

**taking**  An illegal government appropriation, restriction, or use of private property or property rights. This is a government action that disturbs or interferes with an owner’s use and enjoyment of real property without having a proportionate nexus between the reason for interference or disturbance and the owner or the real property.

**talc**  Hydrous magnesium silicate used to prevent rolls of roofing or rubber liners, etc. from sticking when in a roll. This is a mineral found chiefly in soapstone.

**talus, tallus**  A sloped surface or plane such as a wall face. 2. Rock fragments, etc. at the base of a cliff or steep slope.

**tamp**  To compress firmly, usually with a tool.

**tamper**  A compaction device. Power tampers vibrate a plate up and down to facilitate compacting voids. With a hand tamper, one raises
and lowers a heavy metal plate while grasping a long handle extending up from the plate, so as to compact material.

**tamping rod**  A straight steel rod with a rounded tip at one end.

**tankage**  Dried animal residues used as an organic fertilizer with an alkaline reaction.

**tap bolt**  A completely threaded machine bolt that is screwed into a hole in a material without the use of a nut on its end because it is held tightly in the material.

**tap root**  See taproot.

**tape measure or tapeline**  A steel or plastic ribbon with graduated measurements along its length.

**taproot**  A main or primary root growing vertically or essentially straight down below some trees. It usually provides smaller lateral roots as it travels downward.

**tarp or tarpaulin**  1. A waterproof fabric often used to cover items exposed to wind or precipitation. 2. Any thin sheet of plastic, canvas, etc. in a fairly large size, capable of being folded and tied around or over items, usually for protection or storage.

**tautonym**  A botanical name in which the genus and the species names are the same. According to the *International Code of Botanical Nomenclature*, these are not valid plant names.

**taxon or taxa**  1. A category or unit in taxonomy. In plant taxonomy, the taxa from broadest inclusion to most specific (descending order branching into many categories as it descends) is as follows: kingdom, division, class, order, family, genus, species, (sometimes subspecies), variety (or cultivar) and strain or hybrid. 2. Relating to, or concerned with, taxonomic classification; taxonomy.

**taxonomist**  One who studies classifications of plants and animals based upon their attributes and relationships.

**taxonomy**  The theory, science, and practice of classifying biological organisms, including plants, into groups from the broadest to the smallest category by identifying features and abilities. See taxon.

**tbc**  Abbreviation for top back of curb.

**T-beam**  A reinforced concrete or rolled metal beam having a cross section in the shape of a capital T or combining with the beam a portion of the slab above as acting with it in load bearing.

**TDH**  Abbreviation for total dynamic head.

**TDR**  Abbreviation for transfer of development rights.

**teak**  A dark, yellowish-brown wood with a greenish or black cast that is often used for exterior construction or street furniture.
team dodge ball  A game played with teams throwing a ball at the other team; one is knocked out of the game by being hit by the ball. The playfield space is 50 sq ft for girls and 60 sq ft for boys. The central circle area is a 35 ft diameter for girls, and 40 ft diameter for boys.

tear strength  Resistance of material to being pulled apart.

tectonic  1. Relating to construction or building, including the design or art associated therewith. 2. The portion of geology concerned with structure of geological features such as faults and folds.

tectorial  Covering, as with a roof.

tee  In pipe work, a fitting accommodating the connection of one pipe to another at a 90° angle. 2. The area of a golf hole where the first stroke is taken (usually with a driver), driving the ball toward the green and its flagged cup.

tee beam  See T-beam.

teepee  An upright, conically shaped dwelling of some American Indians. It was composed of animal skins, made waterproof, lashed together over poles, and set on the ground. The poles are held in place by being lashed together near the top of each pole where they all meet. An opening is left in the top, which can allow smoke to escape. They are sometimes useful in campgrounds, at special events, etc.

Teflon tape  A type of tape wrapped around threaded pipe, fittings, or equipment before screwing together to facilitate lubrication and a better seal.

temper  1. The act of mixing lime, sand, and water to make a mortar mix. 2. To moisten and mix clay to a consistency ready for forming bricks. 3. Impregnating wood with a drying oil or other oxidizing resin before curing with heat to improve its strength, hardness, water resistance, or durability. 4. Heat-treating metal to bring it to a desired hardness.

temperate  See temperate zone.

temperate zone  The geographical area or region in the northern hemisphere between the Tropic of Cancer and the Arctic Circle and in the southern hemisphere between the Tropic of Capricorn and the Antarctic Circle. Temperate indicates that the climate is moderate, without extremes in hot or cold.

temperature inversion  An atmosphere in which cold air is trapped beneath warm air.

temperature relay  A relay that opens or closes at a predetermined temperature.

tempered glass or toughened glass  (U.S.A.) Glass prestressed with heat and a sudden quenching in cool liquid to produce a compressively stressed surface layer, making a glass with a strength 2 to 5 times greater than ordinary glass.

tempered steel  Hardened steel made by heating it to a high temperature and then putting it in water a number of times.

temping  Firming loosened soil into which seeds or transplants have been placed.

template, templet  1. A pattern used to guide repetitive construction work. 2. A drafting tool made of a thin sheet of plastic, usually having shapes cut into it and facilitating the accurate and easy drawing of symbols, circles, squares, ellipses, etc. 3. A drawing symbol used repetitively.

tender  1. With regard to plants, usually refers to those with low tolerance to cold, freezing, or
tender plants

hot, dry temperatures. It is the opposite of hardy. It is any plant that is not completely hardy to the climate of an area. 2. Sometimes used to refer to plants that need to harden off before being placed outdoors. 3. A delicate or fragile plant. 4. An offer, proposal, or bid for contract.

tender plants Those plants not capable of surviving a particular climatic condition. It usually refers to not being able to withstand cold temperatures. See also tender.

tendril In botanical terms, a thread-shaped, spirally coiling, twisting organ or appendage (shoot, or modified stem) of a vine-like plant used to hold or cling to objects for support in climbing.

tennis court A playing surface for tennis made of clay, turf, concrete, asphalt, etc. They are approximately 60 × 120 feet.

tenon The shaped projecting end of a piece of material that is placed in the hole, notch, or recess (mortise) to secure a joint.

tenon saw A hand saw with a metal stiffening strip along the top of the blade and many small teeth along the bottom of its blade. It is useful in cutting miters, dovetails, etc. This saw is the same as a miter saw.

tensile force The force that tends to lengthen (pull apart) a member. (Compare with compressive force and shear force.)

tensile strength The resistance of a material to deformation or failure or being pulled apart when subjected to tension (tensile force). (Compare with compressive strength and shear strength.)

tensile stress The stress on a member caused by a force that tends to lengthen (pull apart) the member. (Compare with compressive stress and shear stress.)

tensiometer With regard to soils, a device that measures its moisture content. It has a long thin probe for inserting into the soil and a meter at its top to read the measurement.

tension The force or stress toward elongation; pulling or stretching apart.

tension wood Abnormal wood sometimes found on the upper side of hardwood branches with abnormally increased longitudinal shrinkage promoting warping and splitting.

tepal A petal or sepal where the calyx and the corolla are not well defined. They are the structures resembling petals of a flower without clearly
defined sepals and petals. An example is a magnolia flower.

terete In botanical terms, circular in cross section. It is usually tubular and tapered.

terminal In botanical terms, at the apex or end of a shoot, or growing at the end of a branch or stem.

terminal bud A bud at the end of a branch or stem. See also lateral bud.

termite shield A projection around posts, pipes, foundation, etc. that acts as a shield preventing termites from gaining access to structures.

ternate A botanical term referring to plant parts or items found in threes. Arranged in threes.

terrace 1. An embankment with a level area at its top. It is sometimes paved, planted, and furnished for leisure use. 2. A flat roof or a raised space adjoining a building. It is often used for leisure enjoyment 3. An essentially flat ground area with a vertical grade change separating it from surrounding ground elevations.

tera-cotta A reddish or reddish-yellow clay-ware or tile that is molded to shape and treated with heat in a kiln. Though hard baked, it is sometimes easily saturated with water. Ornamental pots, floor tile, roof tile, or decorations are often made of this material.

terrain 1. An area of land. 2. The geographical land features of a landscape.

terrazzzo or terrazzo concrete Marble-aggregate concrete that has been ground smooth.

terreplein 1. An earth embankment that is flat on top. 2. The level area behind the parapet of a rampart.

terrestrial 1. Living on land not normally flooded or saturated. 3. Growing in the ground.

tessellate 1. A checkered or paving-block pattern. 2. A mosaic-like pattern, as with veins of a leaf.

test plug In a drainage system, an inflatable plug able to seal off a pipe that is used to test for leaks.

test pressure In pipe systems, water pressure or air pressure that pipes and fittings are subjected to as they are tested for leaks.

tetra- A Greek prefix meaning four, sometimes used in botanical terms.
	tetrad A group of four (often used in describing plant parts).

tetradinous Occurring in tetrads.

tetradynamous A flower with four long and two short stamens.

tetramerous In plant identification and descriptions, with four parts alike.

tetra-stoon A courtyard having porticos or open colonnades on all four sides.

Texas root rot A disease caused by a fungus (Phymatotrichum omnivorum) that destroys the
outer portion of roots and cuts off water supply to the upper plant. It is common in arid and semiarid areas below 3500 ft in elevation. It thrives in areas and times of high temperatures, low organic matter, and alkaline soils.

texture  
1. In reference to soil, see soil texture.
2. The fineness or coarseness of a visual image.
3. The feel or appearance of smooth, grooved, bumpy, etc.

texture triangle  A triangular chart assisting in USDA classification of soils based on percentages of sand, silt, and clay.

thallus  A plant that lacks form or distinction into roots, stem, leaves, and does not grow from an apical point.

thatch  In grasses, a layer at the soil surface composed of dead roots and grass blades. An essentially flat ground area with a vertical grade change separating it from surrounding ground elevations. Thatch over $\frac{1}{2}$ in prevents water from reaching the soil and often harbors insects and fungi.

theodolite  A surveying instrument used for measuring horizontal or vertical angles. It is made up of an alidade equipped with a telescope, a leveling device, and an accurately calibrated horizontal circle.

therm  A quantity of heat equivalent to 100,000 Btu.

thermal break or thermal barrier  A material of low heat conductivity placed to reduce or prevent the flow of heat.

thermal conductance  The rate of heat flow through a unit area of material from one of its faces directly through to its other face under steady-state conditions.

thermal conductor  A material readily transmitting heat by means of thermal conduction.

thermal expansion  A material's change in length or volume when it is heated.

thermal insulation or heat insulation  A material with high resistance to heat flow. It is often fabricated in batts, blankets, blocks, boards, granular fill, or loose fill. Blankets of foam, in the shape of a pipe, are often used to protect exposed pipes from freezing.

thermal load  Pressure on a structure induced by changes in temperature.

thermal periodicity  The response of flowers blooming to the alternation of warm and cold as in day and night.

thermal resistance or R-value  The opposite of thermal conductance. These values are greatest with materials of good thermal resistance.

thermal shock  Sudden stress in a material as a result of abrupt temperature changes.

thermal transmittance or U-value  The rate of heat flow per unit area under steady conditions from a fluid on a warm side of a barrier to a fluid on a cold side (or visa versa), per unit temperature difference between the fluids.

thermosetting  A material such as synthetic resin that has been heated and dried to become hard and will not soften when heated again.

thermostat  An instrument with parts that move in response to changes in temperature, and thereby directly or indirectly controls temperature.

thickened edge  Most often used in reference to the edge of a sidewalk where it would otherwise be next to a curb, but instead the edge of the walk is poured extra thick to become the curb.

thickened slab  A reference often used in describing concrete flatwork (walks, patios,
floors) where the concrete is thickened, usually for supporting weight from above.

thicket A dense stand (small patch) of shrubs or small trees.
thielaviopsis A fungal disease inhabiting some soils, and can be a cause of root rot.
thinning See thinning out.
thinning out 1. Removal of entire branches back to the main trunk, a side branch, or the ground. 2. Removal of excess seedlings that are too close for healthy or normal development.
thin set The suitable bonding material placed in a thin layer (usually about 1/8 in thick) underneath tile when it is laid.
thin soil A soil that has bedrock near the surface.
thixotrophy Loss of soil cohesion or in extremes the occurrence of liquefaction of wet or saturated soils under the stress of vibration. This can occur in all but the coarsest of gravely soils.
thorn A spine, prickle, briar, or a stiff, woody, modified stem with a sharp point. (Compare with prickle and spine.)
thread The small spiral ridges and valley (roots) forming a uniform helix on the external or internal surface of a cylinder such as a screw, nut, bolt, pipe, or fitting.
threaded fitting A pipe fitting with inside or outside threads that allows it to be connected to another fitting or pipe with the opposite type of threads.
threatened species According to the U.S. Endangered Species Act, a species rapidly declining in population that is likely to become an endangered species unless assistance or mitigation of circumstances is provided.
three phase or 3PH or 3ph Refers to electricity in alternating current at the same frequency (U.S. 60Hz, Europe 50Hz) but with different phases. The phases are spaced equally at 120° (the maximum phase separation possible). A three phase conductor houses three wires, one with each phase, and a neutral or ground wire. It is the type of supply usually preferred for large pumps and motors as it is more efficient, less costly, and supplies the extra energy sometimes necessary to start them. It is usually the type of supply conductor to a building, with the individual circuits on-site usually being single phase.
threshold A raised strip fastened to a floor under a door's bottom edge. It separates flooring types and can assist in making a seal to keep out wind, water, insects, etc.
thrips Any of the order Thysanoptera, which is a very small insect that sucks the juices of plants. It may cause leaves to curl or discolor, and in severe infestations the leaves or flowers may not even open. Their presence is often noticeable by their black fecal pellets in affected areas. They may be controlled with chemicals, or with natural predators such as green lacewing larvae, or ladybird (ladybug) beetles.
throat

throat  1. In botanical terms, the open portion of a flower.  2. A groove cut or formed on the underside of the face of a wall to prevent water from flowing back along the underside to the face of the wall.

throttling  In a piping system, a valve that can control the amount of flow through it.

through bolt  A bolt that passes entirely through the materials it fastens together.

through stone  A stone with ends flush on each side of a wall and having its longest dimension perpendicular to the wall.

throw  1. The distance between a light source and the area of illumination.  2. The amount a bolt may extend beyond the surface it binds.

thrum  In plant identification and descriptions, the type of flower that has a relatively short style and long stamens. (Compare with pin.)

thrust  The amount of force exerted by weight or momentum.

thrust block  Anything that transfers water's energy within a pipe system to the earth rather than to a joint. This keeps gasketed and slip-pipe joints from coming apart under pressure. The most common material used for this purpose is concrete.

thumb  In landscape construction and excavation work, a hydraulically operated attachment to an excavation bucket allowing the operator to grasp objects between them. They are commonly found on trackhoes, mini-excavators, and backhoes.

thumb latch  A lift latch used to hold doors or gates closed.

thyrse  An inflorescence with a long, narrow panicle consisting of a series of racemously arranged small cymes similar to a lilac or horse chestnut. The main axis is racemose and the secondary axes are cymes.

tidelands  Lands located between mean high tide and mean low tide.

tie  1. A piece that connects materials, walls, branches, pipes, etc.  2. In surveying, a connection from a point of known position to a point that is to be identified.  3. The action of connecting pipes together.

tier  A row or a group of rows positioned one above the other.

tie-rod  A rod in tension, used to bind structural members together.

tie wall  1. A wall built perpendicular to the rest of the wall to increase stability.  2. A railroad tie wall.

tige  The shaft of a column extending from the base moldings to the capital.

tile  A ceramic or other clay-like material formed into varying shapes and uses, such as pieces for piping or thin flat pieces for finishing a floor, wall, or roof surface (ceramic tile, roof tile, quarry tile, etc.). Tile may be glazed or unglazed and is used both indoors and outdoors.
till  See tilling or glacial till.

tillage  1. The process of tilling. 2. The ground after it is conditioned by tilling.

tiller  See rototiller.

tilling  The act of turning over soil or mixing it by hand, with a shovel, a rototiller, a plow, etc.

tilth  A term used to describe the relative ease of tilling, or digging in, a soil as well as its impedance to seed emergence or root penetration.

timber  1. A tree or a group of trees. 2. A large wood member in a structure such as a deck, roof, or trellis, etc. 3. Any milled wood member with no dimension less than 5 in. These large wood members are often used in landscape construction to build retaining walls, planters, steps, etc. (see accompanying illustration).

timber connector  A metal connector of various types, usually with teeth, used with bolts, spikes, etc. to connect timbers in heavy construction.

timely completion  Completion of a project or a designated portion of it on or before the date required by contract.

time of completion  The date identified in the contract for substantial completion of the project.

time of concentration  In storm water drainage runoff calculations (i.e., rational method), the variable expressing the amount of time necessary for all areas of a watershed (including the most remote portion of the drainage basin) to contribute water to the watershed outlet, point of concentration, or drainage intersection.

time of haul  The amount of time from first mixing water and cement to the discharge from the cement mixer of the mixed concrete.

time-release fertilizer  A fertilizer with some provision that releases its nutrients or makes them available to plant roots in the soil over a lengthened period of time, as opposed to those that are soluble and released all at once or over a short period of time.

tin  1. A lustrous, soft, and malleable metal having a low melting point. It is often used for making alloys, solder, or in coating sheet metal, etc. 2. To coat with a layer of tin.

tingle  1. A support that reduces sag in a long string pulled tight. This is useful to identify a
tin snips

horizontal line for laying a masonry course. 2. A flexible clip used to hold a sheet of glass, metal, etc. in place.

tin snips Shears used for cutting thin sheet metal or tin.

tin snips

tint A light color made by mixing a small amount of color with a large amount of white.

tipi See teepee.

tissue culture In plant research, the aseptic culture (in flasks or test tubes) practice of growing plant cells into plant clones (for propagation) or for biochemical products, preservation, scientific research, genotype modification, etc.

TOD Abbreviation for transit-oriented development.

toe 1. A piece of pipe threaded on one end only. It is usually used to connect threaded equipment or piping systems to glued piping systems. 2. A nail driven on an angle. This is done to afford greater resistance from pulling out, or out of necessity. 3. The bottom of a retaining wall footing, which projects in front of the wall (the side open to view and not retaining material). 4. The base of an object, usually extending beyond the object. It is meant to give greater stability in standing upright. 5. In excavation, the portion of sheeting below the subgrade. 6. In welding, the area between the face of a weld and the face metal.

toed Two boards at right angles, nailed together with nails driven on an angle.

toe in The slight reduction in the outside diameter of a plastic pipe at its cut end.

toenailing or skew nailing or tusk nailing Surfaces fastened together by nailing on an angle into both surfaces (usually boards).

toggle bolt A bolt having a nut with pivoted, flanged wings that close against a spring when it is pushed through a hole, and open after emerging on the other side of the hole. They are used to fasten objects to a hollow wall or to a wall that is accessible only from one side.

toilet See water closet.

tolerance The amount of stress or disturbance a plant can withstand before damage or before death.

tomentose In botanical terms, clothed with matted woolly hairs.

tomentum In botanical terms, matted woolly hairs.

ton The weight of 2000 pounds (common or short ton), 907.2 kg, or 0.907 metric tons.

tongue-and-groove, dressed and matched, t&g In reference to lumber, this describes wood members cut with a ridge on one edge and a recessed area on the other edge so that boards can be interlocked for strength and tightness in planking, decking, etc.

tonne A weight of 1000 lb (about 2205 lb). Also, a metric ton.

tooled joint Any masonry joint where the mortar has been shaped with a tool before it sets sufficiently to resist tooling.

toothed In botanical terms, furnished with teeth or short projections of any sort on the mar-
gin; used especially when they are sharp, like saw teeth, but do not point forward.

toothed plate or bulldog plate A toothed metal plate used to connect timbers.

toothed ring A metal ring with toothed edges used to connect timber.

top back of curb The line or point on the line of the upper portion of a curb on the side away from the pavement of a road.

top dress In landscape work, applying something to the surface of the ground or to a lawn such as a mulch or manure.

top dressing 1. Application of mulch to the soil surface. 2. Application of fertilizer granules to a soil surface. 3. See surface mulch. Most often refers to the need to filter nutrients from the mulch to plant roots rather than the need to suppress weeds or conserve soil moisture. Therefore, the type of mulch referred to in top dressing is more often (and more appropriately) a mulch capable of leaching nutrients to the soil and is most often an organic mulch such as ground bark, peat moss, soil conditioner, etc.

topiary 1. The art of training, shaping, pruning, and training plants into living sculptures of predetermined shapes of other objects of geometric form (formal garden), or animals, etc. Some plants often used for this purpose are boxwoods, yews, privets, rosemary, and hollies. 2. A garden of topiary.

top lap The overlapped portion or distance of shingles in place.

top of slope A point or line where progressing up a slope it changes to horizontal or it begins to slope downhill.

topography 1. The physical features of the surface of the earth including those natural and man-made. 2. The detail and depiction on maps, charts, or plans of the surface of the earth by contour lines, or any means that shows the relative elevations, shapes, or steepness of grade, etc.

topsoil 1. The A horizon in the soil profile. It is the upper mineral horizon with organic matter incorporated into it, usually causing it to be darker than the subsoils. It is usually of favorable soil structure, and contains many organisms favorable to plant growth. Usually 90% or more of the roots are found in this soil as it provides water, aeration, gaseous exchange, texture favorable to root penetration, nutrients, and organisms favorable to the rhizosphere. This soil may be nonexistent on some land, just a few inches thick, or several feet thick depending on the land's history and climate. This soil is what nearly all plants thrive in. In its ideal mixture for most plants, this soil is comprised of approximately 45% mineral material, 5% organic matter, 25% water, and 25% air. In construction work, it is usually stripped and stockpiled for future use in landscape construction. 2. A soil prepared or mixed of various elements suitable for or preferred for plant growth and used in containers or to spread over the subgrade in landscapes.

topsoiling The act of placing topsoil on an area of landscaping.

topsoil mix A composition of several elements intended to imitate topsoil and provide for the necessities of the roots of a plant.

topsoil stripping The clearing of vegetation and removal of the A horizon of soil. It is usually placed in a pile called a stockpile, for later use in spreading areas of new landscape on the site. Stripped soil seldom retains much of its original structure. For this reason, soil should not be stripped unless it is in a friable condition,
torch or toward the dry range, but not when it is moist or flooded.

torching Lime mortar applied under roofing slate.

torii A monumental gateway that stands alone with two pillars holding aloft a horizontal, straight crosspiece and another crosspiece above it that usually curves upward at each end. These are common at entries to Shinto shrines.

torose In plant identification and descriptions, a plant part that is alternately contracted and expanded.

 torque Force tending toward rotation.

torsel A timber, steel, or stone piece supporting one end of a beam or joist and distributing load.

torsion The twisting or rotating of a structural member around its longitudinal axis by two equal and opposite torques at each end of the member.

torsional strength The resistance of a material to being twisted or rotated.

torsional stress An increase in the potential for breaking, deforming, or in some way failing due to the force of twisting.

toshnailing Nailing at an angle to conceal the heads.

total dissolved phosphorous (TDP) A measure of total phosphorus (both organic and inorganic) in water.

 total dynamic head Pressure in feet; the summation of suction pipe friction loss, suction lift, suction entrance loss, discharge pipe friction loss, discharge lift, sprinkler operating pressure, and miscellaneous fittings loss.

to the weather An expression describing materials or surfaces exposed to the weather and not protected by other material. An example is the outside of a brick wall as opposed to the framing it is attached to and protects.

tot lot A children’s playground.

tower A structure or building much taller than wide.

townscape 1. A view of a town or city from a particular point. 2. The appearance of streets, landscapes, buildings, etc. within a town, city, etc.

toxic Descriptive of a substance that will cause harm or death to a living organism.

toxicity The ability of a substance to have a poisonous effect on growth, reproduction, or life of organisms.

toxin A poisonous substance.

trace elements Those elements necessary for plant growth, excluding the macronutrients of nitrogen, phosphorus, and potash. They are also called micronutrients.

tracing paper A translucent paper used for tracing and for original drawings.

track An oval path with run extensions at some corners where sprinting, running, hurdles, and other athletic field activities are often also accommodated. A common ¼ mi running track with its run extensions is usually about 670 ft long (oval 535 ft) with a 260 ft width.

trackhoe A tractor with a long hydraulically operated arm and bucket capable of digging much like an arm and hand, and moving about on steel or tracks. See also mini-excavator.

track loader A tractor with a bucket held in front of it by two arms that allow it to be tilted,
raised, or lowered, and moving about on rubber or steel tracks.

tractor  An engine-driven vehicle, on wheels or tracks, for pushing or pulling trailers, attachments, or tools, or for digging.

tractor loader or tractor shovel  A tractor with a bucket for digging, elevating, and dumping its bucket load (usually at the height of a dump truck).

trade  1. An occupation, skill, or craft usually involving manual skill. 2. The classifications of work in the construction industry, such as masonry, carpentry, irrigation, landscaping, etc.

traffic calming  A concept usually involving reduction of vehicle speeds, providing more space for pedestrians, or improving the local traffic environment.

traffic paint  Durable paint made to withstand vehicular traffic, yet be visible at night. It is used to mark roadways, traffic lanes, crosswalks, parking lots, etc.

traffic signs  Those signs directing motorized vehicles for safety and order, including stop signs, speed limit signs, etc.

transfer of development credits  See transfer of development rights.

transfer of development rights  A process providing for relocation of potential development. Usually this relocation is from land areas where proposed land use or environmental impacts are considered undesirable (the donor site or sending site) to another (receiving) site chosen on the basis for its ability to accommodate additional units of development in excess of that for which it is zoned.
transfer of development rights easement

A legal covenant that protects the subject land in perpetuity from development beyond any development rights reserved subject to the underlying zone at the time the covenant is signed and provides for enforcement of the covenant in exchange for transferring development rights to another site.

transfer of development rights receiving area
The area of land within which development rights transferred from TDR sending site can be used for increasing development opportunities (dwelling units or square footage).

transfer of development rights sending area
A site from which TDRs can be transferred to a receiving site.

transformer
An electrical device used for transforming, increasing, or decreasing the voltage of electrical currents.

transit
A surveying instrument useful in measuring land to delineate angles, distances, and differences in elevation. It is usually set on a tripod and acts as a telescope capable of turning 360°.

transit light-rail
The portion of passenger railroad operations that carries passengers within urban areas, or between urban areas and their suburbs. It differs from a railroad in that railroad passenger cars generally are heavier, the average trip lengths are usually longer, and the operations are carried out over tracks that are part of the railroad system.

transit-oriented development
Moderate or high-density, usually mixed-use, developments located along transit routes that emphasize pedestrian-oriented environments or encourages the use of public transportation.

transit pipe
A pipe made of asbestous cement material that is now difficult to use because of the contamination potential. It was once used for city mains and large irrigation systems in sizes of 4 in or larger.

translucent
A material that passes light through it, but diffuses it so that images seen through it are not perfectly clear.

transmissivity
The ability or potential of a material to transmit radiant energy.

tansom
A horizontal or transverse structural member in a structure.

transpiration
The process by which water is drawn from soil by osmotic pressure of root systems of plant material and moved through the plant to the leaves where it is vaporized to the atmosphere. It is often thought of as simply the moisture released from a plant’s leaves. This loss of water in the form of vapor is mostly from leaves through stomata or tiny pores, but it also occurs to a lesser extent through similar openings in stems, called lenticels, and from other parts of the plant. Under favorable conditions this water is replaced by water absorbed by the roots when the relative humidity of the atmosphere is considerably below 100%. If the loss of moisture through transpiration exceeds replacement from the roots for any extended period of time, then soft tissues in the plant wilt and die and the firmer tissues dry and die. If wilting has not extended for too long and water becomes available to the roots the plant may live, but harm usually comes from this interruption of photosynthesis. The rate of water transpiration loss increases with exposure to wind, low humidity, or higher temperatures as well as other factors. Temperature and humidity are usually the most influential.
transplant  1. A plant that is being, will be, or has been transplanted. 2. The act of transplanting.

transplanted  In the landscape and plant nursery industries, the past tense of transplanting, or digging up and moving a plant from one place to another, intending for it to grow in a new condition of rooting space or type.

transplanting  In the landscape and plant nursery industries, the act of digging up a plant and moving it from one place to another, intending for it to grow in the new condition of rooting space or type.

transplant shock  Any deterioration in the health of a plant due to its being transplanted.

transported soil  Soil deposits moved into place by water, glaciers, or wind.

transverse  In botanical terms, at a right angle to, across the main axis from, or directed across, such as something crosswise.

transverse load  Pressure applied perpendicularly to the longitudinal axis of a structure or member.

trap  In plumbing or a system of piping used for drainage, a device that maintains a water seal against sewer gases, air, odors, etc. by collecting water to prevent gases from traveling past its location.

trapeze hanger  A horizontal rigid member for supporting pipes that is suspended by rods from a structure above it.

trapeziform  In botanical terms, no two lines being parallel to one another.

trash  1. Any debris that is not useful. 2. A mixture of combustible waste that may include paper, cardboard, wood boxes, combustible floor sweepings, etc. It may have up to 10% (by weight) of plastic or rubber scraps. It also can include 10% moisture, and about 5% incombustible solids.

traverse  A series of connected lines at various angles and directions on the earth’s surface.

tread  The horizontal surface of a step.

tree  A perennial woody plant that grows or is capable of growing a trunk with a canopy of foliage generally high enough to walk under. Many trees will not assume this form without pruning and it is not necessary for them to be pruned to be referred to as a tree. Some shrubs grow tall enough to be trained and pruned into tree forms.

tree cart  A device with two wheels, a space for b&b plants, or plants in large containers, and two handles that assists in moving heavy plant materials by hand.
tree-dozer  An attachment for a tractor with metal bars and a cutting blade useful for clearing small trees and bushes from a site.

tree grate  A metal, decorative grate surrounding a tree in a paved area, flush with the surrounding paving. These are useful because they facilitate planting trees in paved areas by allowing air, water, etc. access to the tree roots.

tree guying  The practice of attaching wires by several methods from a fixed object on the ground plane or below and to a tree a few feet above the ground to prevent the tree from blowing over. This method is usually used for large caliper trees, for clump trees, or for evergreen trees. When it is used for large caliper, single-deciduous shade trees, the wires are attached at about the first branching. Guy wires should always be attached at about the same height to avoid twisting the trunk or the root ball. Guy wires may be held in the ground with short ground level stakes, buried stakes, buried steel plates with eyelets, eyelets fastened in pavement, etc. The guy wires are usually marked with ribbon or PVC pipe to prevent pedestrians from tripping on them. Guy wires may be twisted to tighten them or they may make use of a turnbuckle. Where wires are attached to the tree they must be enclosed in a bendable protective medium where they are wrapped around the tree to protect the tree from the wire digging into the bark. Guying is not always preferred or necessary. See also tree staking.

treehopper  A leaping homopterous (sucking) insect of the family Membracidae, Melizoderidae, or Aetalionidae that primarily feeds on the sap of shrubs or trees. It comprises about 3200 species.

tree line  1. The upper elevation limit of tree survivability. 2. The edge of a large group of trees where woods or forest ends, and meadow, grassland, or savannah begins.

tree staking  The practice of pounding stakes (metal, bamboo, or wood) near trees and attach-
ing a wire or string to the tree to prevent the tree from moving or tipping in wind. This practice is common on small caliper trees, though it is not always necessary or desirable. Trees can be damaged by rubbing on stakes, the trees can become dependant on stakes or they can grow around the wire attachments if left too long. Also, they can be a hazard to pedestrians. Wires should be wrapped or placed in a protective medium where they are attached to the tree to protect the tree bark from damage. See also tree guying.

tree surgeon One who is trained in treating damaged or diseased trees (usually an arborist).

tree surgery Cutting or boring tree branches, trunks, or roots.

tree wrap A 3 to 6 in wide strip, usually in a roll, of burlap or strong paper used to wrap the trunks of newly planted trees to protect against borers, or sunscald. See southwest sunscald. Tree wrapping can cause as much damage as it prevents. It can harbor sucking insects, encourage fungus by keeping the trunk wet, and hide activities of boring insects.

trellis 1. An open framework, latticework, or design of wood or steel in a vertical wall or horizontal overhead. 2. A support of connected members for vines.

trench A linear hole, channel, depression, long thin excavation, or a cut with steep sides dug in the ground. They are useful in irrigation, planting, or outdoor lighting. They are dug for irrigation and outdoor lighting systems for installing wiring or pipes underground. In planting they are used to plant seeds or plants. Trenches for tree planting in confined spaces with paving all around (restricting root growth) can be useful to prevent windfall or stunting of growth. Trenches are dug between trees and backfilled with rooting medium (usually a soil) allowing roots to extend and intertwine with other trees.

trench box or trench shield A heavily constructed device with walls on each side used in deep trenches to protect workers in the bottom of the trench from cave-ins. It can be moved along as work proceeds in the trench.

trencher 1. One who digs trenches. 2. A machine with a bucket conveyor, rotating cutting wheel, or a large rotating chain that can cut the earth as its cutting tool rotates and is lowered into the ground. It piles the earth to each side of the cut or in the direction of the cut it makes while propelling itself backward or forward to leave a trench.

trenching Digging narrow linear holes in the ground usually for a piping system.

trenching shovel A narrow shovel useful in trenching because it does not take as much effort to force through soil as wider shovels, and it disturbs less soil in trenching. This type of shovel is often preferred in digging trenches for underground sprinkler systems.

tri-, triplo- A Latin or Greek prefix sometimes used in botanical terms meaning three.

triangular spacing A reference in sprinkler layout design in which head-to-head coverage is obtained by heads being laid out in a pattern that is triangular if imaginary lines were drawn between heads in plan view.

tributary In landscape concerns, a stream contributing water to another stream or water body.

trichotomous A botanical term that refers to a plant part forking into threes.

trifoliate or trifoliolate or trifoliately compound In botanical terms, three leaves or
trigeneric

leaflets grouped in threes. (Compare with simple, pinnate, bipinnate, palmate.)

trigeneric Plants with parents representing three different genera.

trigonous A botanical term meaning with three angles.

trilocular A botanical term that means with three locules.

trim 1. To lightly prune or shear, usually to a shape. 2. A visible element that covers or protects joints, edges, or ends of another material. 3. To slowly or finely adjust a device such as a flow in a gate valve. 4. The visible woodwork or molding of a space including baseboards, cornices, casings, etc.

trimerous A botanical term that means with three similar parts.

trimmer Any tool used to trim plants.

trinomial With reference to a scientific name (botanical name), three names identifying a plant, usually the genus, species, and then a variety, subspecies, or cultivar name. See also binomial and monomial.

tripartite A botanical term, a plant part divided into three portions.

tripinnatifid Three times pinnately cleft.

tripod level A level composed of a telescope containing crosshairs (one being horizontal) and a frame attached to a usually three-legged, adjustable stand that allows the instrument to be turned in all directions while remaining level. This instrument is useful in determining elevations and grades.

triquetrous A botanical term that refers to a plant part with three sharp, acute, or projecting angles.

trivet A short support for a surveying instrument used where a tripod is too tall.

tropical A climate where temperatures remain above freezing all year, and the plants suited to the climate, receiving adequate moisture and nutrients to grow all year.

tropical plant A plant that is found native in regions of the earth having tropical climates.

tropism A plant’s growth response or bending toward or away from a stimulus such as light or gravity. See also phototropism, and geotropism.

trowel 1. A flat hand tool having a handle and a broad steel blade. It is used to apply, spread, or shape moldable materials such as mortar, green concrete, plaster, etc. 2. A flat, thin sometimes curving or pointed, smoothing or digging tool with a handle.

troweling Working a moldable material with a trowel.

true In propagation, an indication that a plant can be reliably counted on to be similar to its parent when self-pollinated.

true breeding A description of a plant that can self-pollinate to produce offspring similar to the parent.

true bulb This bulb is an underground stem with an embryo near the basal plate surrounded
by fleshy scales that protect the embryo and store food for it. Dry scales forming a papery covering make up the tunic or outer covering. Examples are daffodils, tulips, and lilies. See also rhizomes, roots, tubers, and corms.

true north  The direction from any point on the earth to the geographic North Pole.

truncate  In botanical terms, ending abruptly, as if cut off, with the apex (or base) straight or nearly so. (Compare with leaf base descriptions of cuneate, obtuse, cordate, auriculate, sagittate, hastate, attenuate, oblique.)

trunk  The woody portion (including bark) of a tree from ground level usually to the first significant live branch.

trunk line  A sewer line that has other sewer branches dispensing into it.

trunk sewer  A sewer with many contributing tributary branches that serves as an outlet for a large area.

truss  1. An assemblage of wood or steel members forming a rigid framework usually of triangular shapes. The most common trusses are those used to hold up a roof. 2. A tight cluster of flowers or fruit.

try square  A square with its two arms fixed at 90° serving as a guide for marking lines at right angles to an edge or surface, as a measuring device, or as a tool for checking straightness or squareness of edges, faces, members, etc.

tube  1. A small container in which cuttings or seedlings are held. 2. A pipe.

tuber  A type of bulb with a short, fat, underground stem flattened, rounded, or irregular in shape. It does not creep like a rhizome and is usually knobby with growth buds. Growth buds (eyes) are usually scale-like with a bud on its axil. Large tubers can be divided and replanted.

tubercle  In botanical terms, a small, wart-like or knobby projection or prominence on a plant that is usually distinct in color or texture from the organ on which it is found.

tuberculate  A botanical term meaning bearing tubercles.

tuberous  Thickened like a tuber.

tuberous roots  A type of bulb with thickened roots (not stems as with most bulbs) for food storage. They are much like tubers in appearance but do not have growth buds. They can be divided in the same way as rhizomes and tubers by cutting sections with a portion of the old stem base attached. The growth buds are in the old stems.

tubling  A small plant raised in a container called a tube.

tubs  Containers holding soil and plant roots that are moveable and usually placed for display of plants.

tubular  In botanical terms, a hollow cylinder form.

tuck pointing or tuck and pat pointing or tuck joint pointing  Finishing of old masonry
joints by cleaning them out, and then filling them with mortar left projecting slightly from the interstice, or with a fillet of putty or lime.

tufa A porous limestone that holds moisture and is usually gray. It is often used in masonry construction and sometimes used for cultivating alpine plants.

tuff or volcanic tuff A porous low-density rock of volcanic particles.

tufted Grasses with spike-like foliage or grasses that have a fine texture with upright leaves originating at a basal clump and growing upward and outward without much arching or weeping. An example is Blue fescue. (Compare with mounded (2), upright grasses, upright divergent grasses, upright arching grasses, and arching.)

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turion  A botanical term identifying detachable winter buds.

turnaround  A space, path, or circular area that permits the turning around of a vehicle without the necessity of backing up.

turnbuckle  A device used between two cables, lines, etc. for connecting and tightening. It is made up of a right screw and a left screw coupled by means of a link.

turnkey job  A job where the contractor completely supplies all furnishings of a building, park, or project so that it is ready for immediate use.

turn under  The process of turning a portion of the soil surface upside down and burying any organic material (especially plants or remains)

as an organic fertilizer or soil improvement. It can be accomplished by shovel, tractor plow, disc, etc.

tussock  A slightly raised area in a marsh or bog that has a solid ground of intertwined roots, etc. They are often comprised of sedges or grasses.

twig  A small branch of a woody tree or shrub.

twine  A strong string of two or more strands twisted together. The most used and accepted type in landscape construction is that which is made of decomposable materials so that it may be used in balled-and-burlapped situations or in tying up palm fronds, etc. When it disintegrates, it is no longer binding to the plant parts.

twining  In botanical terms, ascending or climbing by coiling around a support, which is sometimes another plant, especially in a natural setting. Examples are the hop vine or Virginia creeper.

two-way reinforcement  Reinforcing bars set in a grid pattern with bars at right angles to one another.

type-DWV tubing  A copper tubing with thinner walls than other types of copper tubing. It is not generally used for liquids under pressure. It is generally used for drainage, vent lines, etc.
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UBC  Abbreviation for uniform building code.

U-bend  A pipe expansion bend in the shape of the letter U.

UBG  Abbreviation for urban growth boundary.

U-bolt  A rod (iron bar) bent in the shape of the letter U with threads on each of the ends.

uf  Abbreviation for underground feeder (wire for direct burial).

U-factor  See thermal transmittance.

UL  Abbreviation for Underwriters’ Laboratories, Inc.

ULI  Abbreviation for Urban Land Institute.

UL label  Information affixed or inscribed on construction materials or devices showing evidence that the product has an approved rating by the UL. This approval is based on performance tests, from a production lot manufactured with materials and processes essentially identical to those of representative products that have been tested for fire hazard, electrical hazard, or other safety features. These products are also subject to reexamination services of UL.

ultimate strength  The maximum value of tension, compression, or shear that a material can sustain before failure.

ultraviolet light (UV)  A component of sunlight that is beyond the visible spectrum of light, having a wavelength less than that of visible light and longer than X-rays.

umbel  In botanical terms, the umbrella-like form of inflorescence, or having flower stalks arise from the same point. Some umbels have a flat top to their flower head.

umbellate  In botanical terms, having umbels.

umbo  A blunt or rounded part or protuberance on the end or side of a plant organ, as with the scales of many pinecones.

unburnt brick  A brick that is sun-dried instead of kiln-dried.

uncinate  A hooked end, or bent like a hook at the tip.

unclassified excavation  An excavation with a single unit price for removal, regardless of the proportion of earth material (common excavation) and solid rock material.

unconsolidated backfill  Any fill material not properly compacted.

uncoursed  Masonry having continuous horizontal joints.

underbrush  Woody plants growing beneath taller plants.
undercloak

undercloak  A course of plain tiles or slate on a roof used under the first course at the eave edges.

undercourse  An undercloak.

undercut  1. In stonework, a drip edge made by various means. 2. In earthwork, a dangerous area in a cut where there is earth or rock material directly above the cut. 3. To place a cut in a tree trunk to direct the fall of the tree when cutting it down.

underdrain  A drainpipe installed in porous fill, for draining water.

underfloor  See subfloor.

underground feeder  An electrical wire with a coating capable of withstanding the chemical forces of being buried underground.

underground guying  The stabilization of a transplanted tree with guy wires tied to deadmen or anchor bolts underground and the wires passing at right angles over boards laid across the top of the root ball to distribute pressure across the root ball.

undergrown  1. Plants with underbrush. 2. An undersized plant or one that is not fully mature.

undergrowth  1. Any plants growing beneath other plants. 2. Any branches or growth on a plant below the level it is desirable or expected.

underlay  In placement of waterproof liners for water features, material placed before the liner to assist in protecting the liner from puncture.

underlayment  1. A material, often plywood, placed on a subfloor to provide a smooth, even surface for the finish. 2. A material, usually felt, covering a roof deck before shingles are applied. 3. A soft material such as wet newspapers, felt, or a rubber sheet laid on the bare surface of ground in preparation, and as protection, for laying a sheet of rubber or plastic (as a waterproof membrane) in constructing water features.

underpinning  The rebuilding or deepening of an existing foundation to provide additional support.

underplant  To plant small plants underneath the canopy or crown of larger ones.

underplanting  Placement of one plant beneath another, especially those beneath trees.

undersanded concrete  A concrete mix with an insufficient portion of fine aggregate to produce optimum properties for working and finishing fresh concrete.

understock  The rooted plant on which a scion (bud or shoot) of another plant is placed in budding, grafting, or inarching. This portion of a grafted or budded plant furnishes roots and sometimes a branch or two for the plant.

Underwriters Laboratories, Inc. (UL)  A nonprofit organization affiliated with the National Board of Fire Underwriters that classifies, tests, and inspects electrical devices for compliance with the National Electrical Code.

undeveloped land  Land in its natural state.

understory  1. Plants growing under the crown of a large shade tree or the canopy of a forest. 2. Any plant other than trees. Sometimes landscape architects draw a planting plan for trees and a separate planting plan for all other plant material (understory plant material) to keep the graphics easier to read.

undulate  In botanical terms, wavy or wavy-margined. (Compare with entire, crenate, dentate, serrate, lobed, pinnatifid.)
uni- A Latin prefix sometimes used in botanical terms, meaning one.

**uniform building code** A reference to the published Uniform Building Code (National Building Code in the United States). This is prepared by the Building Officials and Code Administrators International, whose address is 4051 West Flossmoor Rd., Country Club Hills, IL 60478.

**uniform construction index** An outline of building trades and products, separated into 16 divisions under the *uniform system* arranged by trade and construction sequence.


**uniform grading** A particle-sized distribution of aggregate with all pan fractions present and no size or group of sizes being overly represented.

**uniformity coefficient** A coefficient referencing the size distribution of a granular material.

**uniform load** A load evenly distributed over a structure or member.

**uniform system** Coordination of specification’s technical data and construction operations organized in 16 divisions based on the relationship of place, trade, function, or material.

**union** 1. In *grafting*, the point at which the *scion* is joined to the stock. 2. In sprinkler irrigation, a special coupler between pipes that allows the uncoupling of the pipe at a later date. It is made of two pipe portions that connect to the ends of each pipe to be joined and a third portion that is a *threaded fitting* over the two end pieces. It is held on the end of one pipe by a flange on the piece (fitting) on its end and screws onto the fitting on the end of the other pipe. When it is connected and turned, it pulls the two pipes together for a seal made by tightening (turning) it.

**union joint** A pipe joint made with a *union*.

**unisexual** In botanical terms, being of one sex (e.g., a flower being only male or female, with *stamens* or *pistils*, but not both).

**United States of America Standards Institute** See **American National Standards Institute**.

**universal motor** A motor that can operate either on alternating current or on direct current.

**unit price** A price per unit of measurement for materials or services.

**unit water content** 1. The quantity of water per unit volume of fresh concrete. 2. The amount of water on which the water-cement ratio is based, not including water absorbed by aggregates.

**universal soil loss equation** An equation for the prediction of soil loss from land. The equation is: $A = R \times K \times L \times S \times C \times P$. $A$ is the computed soil loss per unit area (tons per acre per year). $R$ is the rainfall factor, which is the number of erosion-index units in a normal year’s rainfall. The erosion
index is a measure of the erosive force of a specific rainfall event. K is the soil-erodibility factor, which is the erosion rate per unit of erosion index for a specific soil in cultivated continuous fallow (the worst possible condition) on a 9% slope that is 72.6 ft long. L is the slope-length factor, which is the ratio of soil loss from a field slope length to that of a 72.6 length of the same soil-type slope. S is the slope-gradient factor, which is the ratio of soil loss from the field gradient to that from the 9% slope. P is the erosion-control practice factor, which is the ratio of soil loss with contouring, strip-cropping, or terracing in a pattern perpendicular (or nearly so) to the slope as compared to that with straight-row farming parallel to the slope (up and down the slope).

**unreinforced** In construction, concrete not containing reinforcing bars or welded wire fabric.

**unsound wood** Decayed wood.

**UPC** Abbreviation for Uniform Plumbing Code.

**upheaval** The upward push of an earthen mass.

**upland** Land higher in elevation, upslope, and a significant distance from the ocean, a river, or other water body and its flood zone.

**upright** A plant with a form that is vertical and usually having ascending branches. This form is found in trees, shrubs, and grasses. Trees of this form (and some shrubs) are often identified as columnar or fastigate.

**upright arching grass** A grass form with foliage that ascends vertically and arches or weeps at its top. (Compare with mounded (2), upright grass, tufted, upright divergent grass, arching.)

**upright divergent grass** See upright spreading.

**upright grass** Any grass that has an erect form with foliage growing vertically in a tight pattern.

**upright spreading** or **upright divergent** Plants that have a somewhat narrow vase shape or V shape. Trees of this shape have branches that start at the ground or the first branching and spread further the higher they are from the ground. It is not broad (nearly as wide as tall), and usually has ascending branches and approaching columnar or fastigate. (Compare with round, columnar, fastigate, oval, broadly spreading, weeping, pyramidal.) Grasses of this form that grow up and out in a stiffly ascending
pattern become more erect and tall than tufted grasses. (Compare with mounded (2), upright grass, tufted, upright arching grass, arching.)

The part of a roof surface that turns up against a vertical surface.

A change in the zoning for a specific area creating higher residential densities.

An area within a city, or an area that is comprised mostly of buildings and paving.

1. City street lined with buildings. 2. Urban physical features that have an effect on airflow, sunlight, humidity, water percolation, heating, cooling of air, soils, etc.

The climate in and near urban areas. It is often warmer, more or less humid, shadier, and has more reflected light than the climate of the surrounding land areas.

The designs of cities and their components. Those who often assist in this task are land planners, civil engineers, landscape architects, transportation engineers, and architects.

A plan for a highly developed land area (usually a city or town) that is prepared for the installation or maintenance of trees.

A perimeter line defined around an urban growth area preventing further growth of the urban form or defining a limited area to accommodate anticipated growth for a specific number of years. This is a management technique designed to prevent sprawl.

The process of covering a significant portion of a land area with buildings or impervious pavements.

In botanical terms, urn-shaped.

The floor area of a building after deducting the area of lobbies, corridors, rest rooms, utility rooms, etc.

Abbreviation for American National Standards Institute.

The system of units (inch, foot, pound, quart, mile, etc.) commonly used in the United States.

Abbreviation for United States Department of Agriculture.

Lines and facilities associated with the provision, distribution, collection, transmission, or disposal of water, storm, and sanitary sewage, oil, gas, power, information, telecommunication, telephone, etc.

An outdoor post installed by or for a telephone or electric utility company to support conductors and other electrical or telephone distribution devices.

A low- to medium-horsepower tractor often used to pull attachments for rototilling, grading, spreading mulch, scarifying, etc.

A small, thin-walled, one-seeded, somewhat inflated, bladdery fruit.

See thermal transmittance.

A filter on glass or plastic blocking or reducing ultraviolet light from sunlight passing through it.
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V 1. Abbreviation for volt. 2. Abbreviation for valve.

vacuum circuit breaker An electrical circuit breaker with switch contacts enclosed in a vacuum.

vaginate In botanical terms, surrounded by a sheath, usually made up of leaf stems.

valley The trough, gutter, or low area formed by the intersection of two inclined planes of a roof surface.

valley flashing Sheet metal used to line a valley on a roof.

valley gutter An open gutter with a sloping side in a roof valley.

valley tile A special-shaped roof tile laid in a valley on a roof.

valute The stationary housing or casing of the impeller of a centrifugal pump.

valute with flexible coupling pump A centrifugal pump with the distinctive feature of the pump having its own impeller shaft mounted on one end of a frame and the electric motor on the other end with a flexible coupling connecting the two shafts.

valve An apparatus that controls flow, especially of water. It is capable of opening or closing and is often also capable of being adjusted to various amounts of flow. In irrigation, it may be operated by hand or by a controller via a solenoid.

valve adapter In irrigation, a replacement top to convert a manual valve to an automatic valve.

valve body The casing that attaches to pipes and surrounds valve components.

valve bonnet The top of a valve that is bolted or screwed onto the body.

valve box A box (usually concrete, plastic, or fiberglass) containing valves. In irrigation systems, they are usually buried with the lid showing.

valve box

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valve in head

valve in head  A sprinkler head in which the valve is actuated by the controller for turning the head off and on and is built into the sprinkler head. Most are currently electrically operated, but some are still hydraulically actuated. These types of heads are usually large and capable of spraying long distances. They are commonly used on golf courses and in large lawn areas of parks.

valve key  A long, slender, metal rod with a handle forming a T shape and an end that is placed down on a valve in the ground to turn off, on, or adjust the flow of water or other fluids by turning. See also sprinkler key and stop and waste key.)

valve seat  The opening edge of the port against which a disc or wedge sits to stop water flow within a valve.

valve stem  The central threaded shaft within a valve.

vane  A device designed to rotate in the wind, indicating wind direction. See weather vane.

vane pump  A type of rotary pump capable of causing the flow or compression of a fluid.

vapor pressure  The pressure exerted by a liquid's vapor or gaseous state when it is in equilibrium with its liquid state. When a liquid is at a temperature above its freezing point, it forms a vapor at its free surface, creating pressure. This pressure increases or decreases directly with temperature. When the vapor is at equilibrium, any additional pressure, decrease in temperature, or addition of vapor will cause the liquid to precipitate. This pressure is important with regard to pumps because if the pressure in the suction line falls below vapor pressure, it will cause the fluid to vaporize and produce bubbles of vapor. When these bubbles reach higher pressures in a pump, they collapse violently (cavitation), often doing harm to the pump.

variance  An allowable exception to an ordinance or law. It is a waiver from compliance with a specific provision of a city ordinance granted to a particular property owner because of the practical difficulties or unnecessary hardship that would be imposed by the strict application of that provision of the ordinance. The granting of variances traditionally is the responsibility of the zoning board of appeals or board of adjustment.

variegated  Leaves with markings of various colors not the same as the primary color of the leaf, but particularly leaves with yellow or white markings (especially at the edges).

variety  1. A subgroup of plants within a species having at least one identifiable characteristic that makes them distinctly different from others of the same species. This is the lowest or final botanical classification within a botanical (scientific) name. However, sometimes a strain of the variety is given afterward in the name. 2. A naturally occurring variant of a wild species of plant.
**varnish** A protective cover for surfaces made of resinous matter dissolved in alcohol (or another volatile liquid) or in oil that is applied as a thin coating where it dries, becoming hard, transparent, and glossy.

**varnish stain** A varnish with a transparent coloring.

**varved clay** Thin layers of silt and clay deposited in water bodies during different times of year. When the clay becomes dry, there is usually some color variation between layers.

**vascular** A term used to describe plants that have xylem and phloem.

**vascular plants** Plants with cells arranged into a pipe-like system of tissue that conveys fluids (sap). Woody plants of this sort are composed of xylem and phloem vascular tissues.

**vascular tissue** The tissue of a leaf, root, stem, or flower stem including the xylem and phloem that conducts water and organic substances throughout the plant.

**vault** 1. A spatially extended arch or interconnected, extended arches covering a space. 2. In utility construction, a buried concrete space of various sizes, but usually large enough for a person to enter through a manhole to access equipment such as pumps, backflow preventers, pressure reducers, etc. They are also sometimes used for changing large storm sewer or sanitary sewer pipe directions. This term is sometimes used interchangeably with manhole, though they are separate items.

**vault light** See pavement light.

**v.c. pipe** Abbreviation for vitreous clay pipe.

**V-cut** 1. Lettering inscribed in stone with acutely triangular cuts. 2. A cut in wood that is V-shaped.

**vegetation** Any plant, or grouping of plants.

**vegetative buffer** 1. An area extending landward from a lake, stream, or from the edge of wetland that provides adequate conditions and native vegetation for the performance of the functional properties of a stream corridor and other hydrological areas. 2. An area of vegetation acting as a buffer.

**vegetative cap** Also known as a phytocap. Plants growing over contaminants to protect them from leaching.

**vein** The vascular tissue conducting a path (especially if easily visible), forming a thread-like structure within the plant tissue.
vellum

like rib or channel framework or network as in a leaf or flower.

vellum A slightly rough, translucent paper used for drafting or drawing upon.

velocity In irrigation and water feature design, the speed of water flow within pipes in feet per seconds (fps). The speed in a piping system must be controlled to avoid damage to the system. The common maximum flow designed for is usually 5 fps. A designer must use caution when designing a system where the water velocity exceeds 5 fps. See water hammer.

velutinous A botanical term describing a plant part with a surface that has a fine, soft, short pubescence, or a velvety, dense, hairy covering (indumentum).

venation A pattern, arrangement, or system of veins in a leaf.

vendor A person or organization furnishing materials or equipment for a project.

veneered plywood 1. A thin layer of wood glued or attached over a less attractive wood. 2. Any thin layer placed over another surface.

venous Having to do with, or being comprised of, veins.

vent In excavation and piping, a pipe providing airflow to or from a drainage system.

vental In botanical terms, belonging to the anterior or inner face of an organ; the opposite of dorsal.

ventral edge In botanical terms, belly side, on the lower side, or downside.

ventricose In botanical terms, swollen on one side or mostly on one side.

vermicompost A compost produced with the aid of earthworms.

vermiculite A natural clay material (silicate clay) or mica product expanded by heat to produce a lightweight sponge-like material capable of holding water and air. It is used for insulation, soil conditioning, as a rooting medium for plants, as a product in synthetic soil formulas, in lightweight soil mixes (for use in planters on buildings or parking structures), or a lightweight concrete mix.

vermiculite Raising and producing earthworms, including their by-products.

vernal Relating to spring, or fresh like spring.

vernalization A cold period necessary for some plants to grow or bloom, or for seeds to sprout.

vernation Within a plant’s bud, the pattern or arrangement of leaves.

verrucose A botanical term that means warty, nodular, or covered with wart-like bumps.

vertical grain A reference to lumber that is cut from a tree with its end’s shortest dimension perpendicular to the growth rings. This produces a grain in the face (largest dimension) of the board that is mostly straight. Looking at the end of the board one will see grain lines parallel to its shortest dimension. See also flat grain.

vertical pump or vertical turbine pump 1. A long, slender pump designed to pump water from deep wells by being placed in an upright underground pipe. 2. A centrifugal pump with the distinctive feature of the motor being mounted aboveground with a drive shaft extending down to the pump at the water source elevation.

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verticil A whorl of leaves or flowers as arranged in a circular pattern around a stem.

verticillate In botanical terms, whorled or arranged in verticils.
Verticillium wilt  A soil-borne fungus (genus Verticillium) that causes wilting of a plant by plugging the water-bearing tissues of the plant. It can infest a soil for years without a host plant. Growing wilt-resistant plants helps to avoid this disease.

Very poorly drained soils  These are soils in which water is removed so slowly that the water table remains at or near the surface nearly all of the time. These soils occupy mostly level or depressed lands.

Veseid  In botanical terms, glutinous, or sticky.

Vespertine  In plant identification and descriptions, opening or functional in the evening.

Vestibule  A small foyer leading into a larger space.

Vest-pocket park  A park built on a small plot of land, usually within an urban setting.

V.G.  Abbreviation for vertical grain.

Vibrating roller  A motorized heavy roller that rapidly, slightly jumps up and down. It is useful for compacting soils, base courses, etc.

View  1. To observe or examine. 2. Within one’s vision and capable of being seen; usually in context of a negative (undesirable) or positive (desirable) view. What is positive or negative in view is often different from person to person, but some views are almost universally good or bad. 3. A pictorial representation or a picturesque setting or beautiful, or interesting area within sight.

Villa  A historically Italian design of an estate with its dwelling, outbuilding, and decorative garden.

Village green  An open space or park, historically located at the center of a village. They are still found in some towns today and were sometimes converted to a park from a common area where livestock were kept for the town.

Villous  In botanical terms, shaggy with long, often bent or curved (not matted), soft hairs. (Compare with hirsute, sericeous, and tomentose.)

Vine  A plant needing support for its stem that climbs by twining, or by tendrils, or creeps along the ground in a sprawling mass.

Vinyl  A plastic of various types.

Virgate  Plant parts that have a long slender shape like a rod or wand.

Virus  An extremely minute entity only capable of reproducing within the cells of plants or animals. They cause a number of serious plant diseases including phloem necrosis, lily mosaic, etc.

Viscid  Plant parts that are sticky, sweaty, greasy, or slimy.

Viscidulous  Plant parts that are slightly or a little sticky, sweaty, slimy, or greasy.

Viscometer  A device measuring viscosity that is often used to measure fresh concrete viscosity.

Viscosity  The thickness of a liquid. This is important in pumping and pressure loss calculations as fluids such as water will require more pressure to move when they carry suspended particles.

Vise  A tool that holds objects fast while they are worked on. Its rotating handle moves one jaw toward another, fixed jaw on a screw shaft so they can hold objects firmly.

Vision light  A clear glass window.

Vision-light door  A door with one small window in the upper portion.
vista

1. An unobstructed distant view within one's range of vision without turning the head.
2. A view that is framed by vegetation, buildings, a window, etc.

vitamin B₁ A vitamin that is essential for metabolism, widespread in plants and used as a stimulant to encourage root growth.

viticulture The growing and cultivating of grapes, especially in vineyards for wine making.

vitreous The degree to which a material is resistant to water absorption.

vitrified brick Brick that has been glazed in a kiln so that it is waterproof.

vitrified-clay pipe or v.c. pipe A pipe made of clay-type materials, glazed and hardened under heat, so that they are essentially impervious to water (5% or less) and resistant to chemical corrosion. They are often used underground for drainage systems or sewer pipes.

viviparous In botanical terms, germinating or producing young that are still attached to the parent plant. These are often produced instead of flowers.

V-joint or vee joint A V-shaped, recessed masonry joint formed in mortar with a V-shaped metal tool.

VOC Abbreviation for volatile organic compound.

void An unfilled space in materials or fluids.

void-cement ratio The ratio of air and water volume to cement volume.

void ratio The ratio of the volume of void space to the volume of solid particles in a soil, base course, etc.

vol. Abbreviation for volume.

volatile The condition of a substance that evaporates quickly and is flammable.

volatilization The transfer of a chemical from an aqueous state or liquid to a gas.

vole A small rodent of the microtus or related genera that is brownish with a short tail, short ears, and a blunt nose. They eat roots and stems of plants, and burrow underground to have young. They often follow mole tunnels.

volt (v) A unit of measurement denoting electrical pressure. It is the electrical pressure required to force one amp of current flow in a circuit against one ohm of resistance in the same circuit.

voltage The amount of volts. The potential difference or pressure of electricity caused by higher electric charge at one point in a conductor or electrical system than at another point.

voltage regulator An automatic electrical control device with an output of a constant voltage even when the supply line voltage may vary.

voluntary standard A standard with no obligation to comply.

volunteer plant A plant that germinates and appears without a landscaper or gardener having intended for it to do so.

vortex emitter In drip irrigation, an emitter with a whirlpool inside having a lower pressure at the center where there is provided a small hole (orifice) that controls the amount of water emitted by the size of the hole. Elevation differences and friction loss in pipe distribution can affect the output of emitters. These emitters are less sensitive than most to pressure variations. These emitters tend to clog with small particles and need high-quality filtration. See also emitter.

VP Abbreviation for vent pipe.

VS See V-joint.
W 1. Abbreviation for wire. 2. Abbreviation for watt. 3. Abbreviation for west. 4. Abbreviation for width. 5. Abbreviation for with.

w/ Abbreviation for with.

wale, waler, whaler A horizontal timber used to brace an upright member.

walk 1. A pedestrian path. 2. A paved surface for foot traffic following a street.

walking-stick insects Grasshopper relatives with extremely thin bodies and legs. They usually do little damage to plants.

walkway A footpath.

wall An upright surface providing enclosure.

wall anchor 1. A metal tie for anchoring beams or joists to a wall or larger structural member. 2. A wrought-iron clamp, often decorative, on the exterior of a brick building connected to an opposite wall by a rod of iron to prevent the wall from moving apart. 3. See wall tie.

wallboard A rigid sheet made of wood-pulp or gypsum used as a surface on walls.

wall bracket A bracket used to support piping, electrical components, or lighting fixtures.

wall garden Plants in the joints of a stone wall, where soil pockets are available.

wall thickness In pipes, the measurement of the thickness of the wall of the pipe usually given to three decimal places. Pipes of the same nominal size may have different wall thicknesses and different pressure ratings (maximums).

wall tie A metal strap or other device used to secure masonry facing to a backup wall, etc. It is usually mortared into joints of masonry work and may also be attached with screws into the backup wall.

walnut A tough, strong, dark brownish-black wood that does not split easily and takes a high polish.

wane With regard to lumber, a board that is not complete or true to its cut dimension because a linear piece of one corner of the board is missing.

warm season grasses Any grass that grows best in hot weather (80 to 95°F), growing vigorously from spring to summer, after which it flowers and tends toward dormancy in the fall (i.e., Zoysia, Bermuda, St. Augustine, etc.). These grasses tend to change color in fall and are dormant during winter. The classification of grasses as cool or warm season is somewhat arbitrary as grasses perform differently from climate to climate. Grasses growing throughout the winter months in a mild climate may become completely dormant in a colder climate.
warm season plants

Plants that thrive in warm weather such as some grasses, many vegetables, and most annual flowers.

warping  Deviation of a surface from its original shape.

warping joint  A joint allowing warping of pavement slabs when moisture or temperature changes occur.

warranty  See guarantee.

wash  The slope on outdoor steps facilitating water drainage. It is usually expressed in portions of an inch per foot (i.e., ½ in/ft).

washer or flat washer  A metal piece that is usually a flat ring shape used under a bolt head that surrounds its shank and extends beyond the bolt head to spread load, protects the surface from being crushed by the force of the bolt, ensures tightness, and relieves friction.

waste pipe  A drainpipe receiving waterborne discharge, but not receiving fecal matter.

waste well  1. See leaching cesspool. 2. A well collecting surface waters, providing for the water to be dispensed and absorbed into the ground.

water-based paint  A paint that may be thinned or diluted with water.

water basin  A soil mound a few inches high usually formed at the drip edge of a plant for holding water to supply roots while preventing its runoff. These are commonly formed around plants at transplanting to aid in water retention.

water closet  1. A fixture used to receive human excrement capable of flushing with water through a waste pipe. A toilet. 2. An enclosure containing a toilet.

water cock  A water outlet valve operated by turning a handle.

waterfall  A flowing body of water (stream, river, etc.) falling through the air without its undersurface contacting the ground.

water farming  See hydroponics.

water feature  A water body or fountain that is often a focal point or of prominent importance in its surroundings. It may be still or moving water with fountains, waterfalls, and informal or formal designs.

water garden  A garden of pools with aquatic and other water-loving plants.

water hammer or water surge  A sudden rise in pressure usually caused by suddenly opening or closing a valve or valves, or by air in the pipe system, and by cycling of a pump. This stopping of water with momentum and usually higher than reasonable velocity causes pipes to jump, make banging noises, and will eventually cause damage to pipes and devices attached to them. It can be corrected by turning valves off slowly, by adding a shock absorber (a vertical pipe or pipes filled with air to act as a shock absorber), by adding a surge suppression device, by increasing pipe sizes to reduce the velocity of water, or by installing air vents on the piping.

water-hammer arrester  A device utilized in a pipe system to eliminate water hammer.
**water harvesting**  Any technique or combination of techniques resulting in storm or flood waters being captured for later use or for return to the water table.

**water horsepower (Whp)**  The horsepower theoretically (does not take into account a particular pump's efficiency capability) needed for a pump to provide the required pressure and flow for a particular need. It may be found by multiplying the total dynamic head by the gallons per minute needed, and dividing it by 3960.

**watering devices**  Any number of items for the distribution of water, including, but not limited to, drip emitters, soaker hoses, root irrigators, sprinklers, etc.

**watering programs**  See program.

**water meter**  A mechanical device that measures the volume of water passing through a pipe or outlet. It is useful to suppliers of water as it allows them to assess and bill for water use.

**water mold**  Any of many fungi causing root rot. These molds are encouraged and spread by standing water. Many times plants are overwatered when some negative symptom is observed. The only symptom that calls for more water is wilting. Too much water bringing on root rot is the most common cause of plant death. It is usually easily detected by digging in the root zone and smelling the soil and roots. Root rot occurs in anaerobic conditions causing the affected area to smell much like a sanitary sewer. When a dead plant is pulled completely out from the soil, the stench many times is unmistakable and obvious. Sometimes it is necessary to hold soil from the root ball in your hand and put it to your nose to detect the smell. The most frequent cause of root rot is the use of a different soil than the existing soil in the backfill or amendments to the soil backfill. Either may cause a soil interface difficulty with water transfer.

**waterproof**  Material or construction that is impervious to water.

**waterproofing**  A material applied to a surface that will not allow water to penetrate through it.

**water pump**  See pump.

**water ramp**  A series of pools with water flowing from one to another.

**water repellant**  A surface that sheds most of its water and is resistant to water penetration, but not completely.

**water requirement**  Generally, the amount of water required by plants for satisfactory growth during the season, the week, the month, or the day. Water requirements vary with climatic conditions, soil moisture, other soil characteristics, and with plant types.

**water resistant**  Material that will withstand limited exposure to water before allowing it to penetrate.

**water retentivity**  A mortar that prevents rapid loss of water by absorption in adjacent masonry units.

**water seasoning**  Preparing lumber by soaking it in water before air drying.

**watershed**  A drainage area. The surface drainage area defined by topographic boundaries that contributes storm water runoff to a lake, stream, river, pond, drainage system, estuarine waters, or oceanic waters.

**water softener**  A device that treats hard water by reverse osmosis, filters, magnets, ultraviolet light, use of salts (sodium chloride replaces calcium and magnesium ions), etc. to decrease dissolved minerals or their ability to form deposits. Water treated with salt can cause salt burn in plants, especially over time. Some plants are highly susceptible, while others are tolerant of salts.
waterspout

waterspout  A duct, pipe, or device discharging rainwater from a roof or gutter.

water sprout  Strong, extremely vigorous, vertical green shoot growth from the stem, or sometimes the branches, of a tree.

water stop  A waterproof material placed across a joint to prevent the passage of water.

water table  The geomorphic plane at the upper limit (or transition zone in finer soils) of water beneath the surface of the ground. This elevation of water generally tends to follow the surface of the ground.

watertight  A material, container, pipe system, etc. that prevents the movement of water (moisture) out of it or through it.

water tank  An enclosed water storage container, usually elevated to provide constant pressure to pipes.

water test  A check of a water system under pressure to determine if there are leaks in the piping system.

water vapor transmission  The rate of water vapor flow through a unit area of material between two parallel surfaces under specified conditions.

water volume  Amount of water expressed.

water wand  An attachment to a hose that gives the user an extended reach with control of water volume, force, or pattern of water delivery for watering plants.

waterway  A shallow depression, usually of concrete, allowing water to cross a roadway or driveway, etc. instead of flowing across in a sheet pattern. These are common at street intersections where water gathered by raised curbs to corners must cross a paved surface. A waterway can carry water from one curb to another.

water wick  Glass, wool, nylon or other substances used to move water from a supply of water to the location of a plant. This is particularly useful for watering indoor houseplants.

watt (W)  A unit of measurement of electrical power. One watt of electrical power is equal to one volt of pressure times one ampere of current. Most electrical devices are rated according to the power they consume by this unit of measurement.

watt-hour  A unit of work equal to 3600 joules, or the power of one watt operating for one hour.

wattle  Poles intertwined with reeds or plants (willows, etc.) to create a fence, barricade, etc.

way  A street, alley, path, etc., usually with an easement established for the passage of persons or vehicles.

W.C.  Abbreviation for water closet.

WCV  Abbreviation for butterfly (wafer) check valve.

Wdr  With regard to lumber providers, an abbreviation for wider.

wearing surface or wearing course  The finished layer of surfacing that carries traffic or receives use.

weatherseal channel  An access with a top-closing channel set in mastic with its flanges oriented downward.

weathercock  A weather vane shaped like a rooster.

weathered  A term describing material that has been exposed to the elements of weather for an extended period causing it to change color, texture, etc.

weathering  1. Allowing or causing a material to become weathered in appearance or its surface to be changed by nature above- or belowground.
2. In soils, the physical and chemical disintegration or decomposition of rocks and minerals under natural conditions. 3. Wear and change in color, texture, strength, size, cohesiveness, chemical composition, or other properties of materials exposed to weather.

**weathering steel** A steel alloy that forms a self-protecting rust surface layer when exposed to outdoor elements and weather.

**weatherproof** Protected from elements of the weather or not affected by them.

**weather strip** A narrow piece of material applied to an exterior door or window to cover the joint made by it with the sill, casings, or threshold, to prevent rain, snow, cold air, etc. from entering.

**weather-struck joint or weathered joint** A horizontal masonry joint in which the mortar is indented at the lower edge of bricks and slopes outward to meet the front edge of the brick below, facilitating the rapid shedding of water.

**weathertight** Sealed from rain, snow, cold air, wind, etc.

**weather vane** A thin, usually ornamental piece of metal on a pole or spindle capable of rotating with exposure to the wind and giving an indication of wind direction. It is usually located on top of a barn or other structure.

**weaving** In shingled roofing, the alternate lapping of shingles on opposite faces in a **valley**.

**web** The cross member of a truss or girder between the upper- and lower-span members.

**webworms** Larvae of moths that feed on plants under silky webs.

**weed** 1. Any plant in an undesired location. Weeds compete for water, nutrients, and space. 2. Plants that tend to overgrow and choke out more desirable plants. 3. An undesirable, unattractive, or troublesome plant.

**weed and feed fertilizer** A substance in liquid or granules that is both **fertilizer** and a chemical control of particular types of **weeds**.

**weed barrier** A barrier placed to prevent or impede weeds from growing or germinating. Weed barriers are usually a fabric, plastic, or such. Plastic is no longer recommended in planting beds because it prevents **aeration** of the soil, causing **anaerobic** surface soil conditions that often kill plants.

**weed barrier fabric** See **weed barrier**.

**weed control** The spraying of chemicals or spreading of powders or granules to prevent weed seed germination, spreading of weed roots, or to kill weeds.

**weed eater** See **string trimmer**.

**weeding** Removal of unsightly, unwanted, out-of-place plants that are usually relatively small.
weep hole

**weep hole**  A small opening allowing water to drain from one side or surface of a material to the opposite side or surface. An example is a hole near the base of a retaining wall permitting water to drain to the outside of the wall. This assists in preventing buildup of pressure behind the wall.

**weeping**  A description of a plant with a form that allows its branches to droop or hang downward and grow toward the ground. Ends of branches are pendulous. (Compare with **round**, **columnar**, **fastigiata**, **oval**, **broadly spreading**, **upright spreading**, **pyramidal**.)

**weeping tree form**

weevil  Any of many usually small **beetles** (of *Rhynchophora*) with an elongated head that often curves downward forming a snout with jaws at its tip. Their **larvae** are destructive as they feed on roots, nuts, grain, and fruit. The adults chew on leaves and fruit at night and hide during daylight.

**weir**  A shallow space or notch along a water's edge created of hard-surfaced materials (usually of a manufactured form) to allow water to pass over it and fall. It regulates the amount of water as it flows over it with its shape, width, and texture. It is often used to control or measure water or waste water flow. Common types of weirs are v-notch, parabolic, or trapezoidal, with each of them being either sharp-crested, round-crested, or broad-crested weirs.

**weep hole**

**weeping**

**weir basin**  The containment of water directly behind (upstream of) a weir.

**weir crest**  The line directly over the weir edge where the water begins to bend and fall.

**weir nappe**  The portion of a **weir** from the basin to the edge of the fall of water, including the entire width of the weir opening.

**welded wire mesh** or **welded wire fabric**

See **wire mesh**.

**well**  A hole, pipe, or pit sunk, drilled, or dug into the earth to reach and use a supply of water.

**well-drained soil**  Any **soil** in which water is removed readily, but not rapidly. Well-drained soils usually retain optimum amounts of moisture for plant growth after rain.

**well-graded aggregate**  An aggregate composed of particle-sizes to provide high density with little void space.

**wellhead protection**  1. Methods utilized to prevent the contamination of a well within an area determined to be an influence upon the well waters. 2. In land ordinances, a control of
the area around a well by law to prevent contamination.

well house or wellhead A protective enclosure over a water well.

wellpoint Perforated vertical pipes in the ground for pumping out groundwater in lowering a water table or removing any unwanted water.

well-point system Several wellpoints connected to a main pipe that is attached to a pump. It is often used to temporarily lower a water table in an area, usually so work below the water level can take place without flooding excavations.

welt 1. A seam in sheet metal where two edges are folded together and pressed flat. 2. A strip of wood over a wood seam to increase strength.

west elevation 1. A drawing, usually to scale, showing the west-facing portion of a structure or element as it would be seen standing to the west of it and looking east to view it. 2. The elevation of a portion of ground, paving, or structure situated east of the remainder of it.

western elevation See west elevation.

western exposure 1. A slope that from top to bottom slopes downward toward the west. 2. The west-facing portion of a structure. 3. The area to the west of any nearly vertical surface that has a changed microclimate effected by it with regard to heat or cold, or brightness of sunlight or shadow.

western hemlock A whitish-brown or yellowish-brown, fairly low density softwood used for general construction and plywood.

western larch A reddish-brown, moderately strong, heavy softwood, used in general construction as timbers and flooring.

western red cedar A durable, moderately low density wood, especially for shingles and shakes.

wet-bulb temperature The temperature of a wick that is kept moist.

wet-bulb thermometer The thermometer with a bulb that is kept moist in a psychrometer.

wetland An area that is inundated or saturated by surface or groundwater at a frequency, duration, and depth sufficient to support predominance of emergent plant species (cattails, etc.) adapted to growth in saturated soil conditions.

wetland mitigation Methods of eliminating potential damage or destruction to wetlands, or creation of wetlands from uplands to offset the loss of protected wetlands.

wetland mitigation bank A preserved, restored, constructed, or enhanced wetland that has been set aside to provide compensation for losses of wetland functions caused by human activities as approved by regulatory agencies.

wetland treatment system A wetland that has been designed for reducing concentrations of one or more pollutants in water.

wet rot Decay in timber caused by fungi with a high moisture content.

wet sprinkler system A sprinkler system with its pipes under water pressure, allowing immediate use upon activation.

wettable powder A formulation of pesticide mixed with a finely ground clay to hold the pesticide in suspension when agitated with water.

wetted perimeter The distance of a stream bottom measured from the surface of one side of the stream at a point in time to the surface of the stream on the other side at the same point in time.

wetting agents A chemical in dry or wet form, also known as a surfactant. It assists water in penetrating soil more easily or causing such elements as ground bark or peat moss to absorb water faster. It seems to make water wetter.
W.F.  Abbreviation for wide flange.

wharf  A structure built over or floating upon water and used as a landing place for boats as well as for other marine transport, fishing, swimming, etc.

wheelbarrow  A handcart with a basin over a front wheel (or wheels) and two handles in back allowing it to be pushed, and also having two supporting legs in back to allow it to stand with the basin fairly level.

wheel stop  An abrupt, short rise (4 to 8 in, usually about 6 in) at the end of a parking stall that stops the wheel of a vehicle when it is parking. It may be a curb or a specially designed long concrete piece placed at the end or toward the end of a parking stall.

whip  A young tree that is usually not branched and more than 1 ft tall.

white cement  A calcite limestone cement ground finer and of a higher grade than normal cement.

whitefly  Any of numerous scale-like insects (family Aleyrodidae) with white wings whose young attach to the underside of leaves and suck on them while pupae and as adults. The pure white adults flutter erratically when disturbed. Adults are about ¼ in long.

white oak  A gray to reddish hard, heavy, durable wood used for flooring, paneling, trim, etc.

white pine  A soft, light wood that resists splitting or swelling and is often used in building construction.

white Portland cement  A Portland cement low in iron, hydrating to a white paste, and helpful in making a whiter than normal concrete.

white rot  A type of fungus decay in wood that leaves a white residue.

whitewash  A temporary white coloring brushed on surfaces.

wholesale nursery  A nursery that sells a majority or all of its products to retail outlets or to landscape contractors and not to consumers.

whorl  A cluster of three or more buds, leaves, flowers, or shoots arranged around a stem at the same level. In other words, a circle of leaves or other plant organs at a node.

whorled  In botanical terms, arranged in a circle as with leaves around a stem.

Whp  Abbreviation for water horsepower.

wide-flange beam  An I-beam with extended flanges.
wildflower  The flower of a plant seeding itself by natural means in an uncultivated ground, or any flower not cultivated, or a flower from a native or wild condition planted in a cultivated garden.

wildlife  Generally, animals that are not domesticated and are not aquatic.

wilt  With regard to plants, this means to become limp because of lack of water.

wilting  The state of a plant losing its leaf turgor, usually becoming a dull color, limp, and drooping because of lack of water supply.

wilting coefficient  See wilting point.

wilting point  The percentage of water in soil when permanent wilting of plants occurs. This is when the soil can no longer supply water at a rate sufficient to maintain the turgor of a plant, and it then permanently wilts. This is the point of moisture condition in the soil when the drainage and usage of water has reached a point that the remaining water cannot be drawn or moved to roots. The matric force acting on the water prevents molecule movement. See also micropores.

windbreak  A dense growth of vegetation (usually trees) affording protection against wind.

windfall  Trees blowing over in wind. It may refer to their tendency to do so because of their root structure, root confinement, root removal, or location.

wind load  The force exerted by wind on a structure or part of a structure.

wind shake  A crack or fissure in a log caused by wind strain during growth.

windthrow  A condition in which plants (especially trees) are thrown to the ground by wind without breaking their main stem, but instead having their roots torn or lifted out of the ground.

window boxes  Containers for growing plants, usually herbaceous, immediately below windows and usually attached to the building.

window head  In framing, the upper horizontal member of the window frame.

window well  A recess located below-grade to admit natural light to enter a below-grade window. They are often formed by a U-shaped corrugated metal sheet, but are also constructed of concrete, timbers, boulders, stone, etc.

windshield survey  A rapid, extremely general sampling method for vegetation or land use wherein information is simply gathered by observations from a moving vehicle.

wing  In botanical terms, any membranous expansion such as on a seed, or leafstalk, or along a stem or branch.

wing nut  A nut having projections so that it can be tightened with fingers.

winter  The coldest season of the year occurring between fall and spring. See also winter solstice.

winter annual  An annual plant that germinates in the fall, spends the winter as a seedling, and then flowers in the spring or summer.

winter bud  A fleshy bud that detaches from an aquatic plant and winters over at the bottom of the water and grows into a new plant the next spring.

winterization  See winterize.

winterize  To prepare an irrigation system for winter by removing water from the system. Commonly used in temperate climates where freezing temperatures in winter will burst pipes, fittings, or any device filled with water. This is commonly accomplished by forcing air through the system with a compressor, by allowing automatic drains at low points on pipes to drain, or by opening manual drains by hand.
winterizing

winterizing  See winterize.

winterkill  Plants that die as a result of exposure to cold winter conditions.

winter solstice  The shortest day of the year with the least amount of daylight hours. This day marks when winter officially begins. It is on or near December 21 or 22 in the northern hemisphere and about June 22 in the southern hemisphere.

wiper seal  With regard to landscape sprinklers, pop-up heads that have a special seal preventing contaminants from being pulled into the head as it is retracted from extension.

wire basket  In landscape construction and plant nursery stock, a steel mesh of wire holding in place a root ball of a plant. It usually has burlap or some other decomposable material inside the basket to assist in keeping soil in place around the roots. Wire baskets are usually left in place when transplanted. In planting, the upper portion of burlap or similar material should be folded back along with the wire to about one-third of the top of the root ball.

wire mesh  A web of wires arranged at right angles to each other in sheets or rolls; often used as reinforcement in concrete or masonry.

wire nut  A connector for small wires consisting of an insulating cap over a threaded metal insert. It is used by inserting wires stripped of insulation and turning until tight. It is best to twist wires together before inserting them into the nut. For waterproof coverings of connections, a variety of grease-filled caps may be used over the wire nut.

wire size  The area of an electrical conductor in section perpendicular to its length. In the United States, this is usually referred to by sizes determined by the American Wire Gauge (AWG) or thousand circular mills (MCM).

wireworm  A waxy, yellow worm about 1 in long that cuts roots, eats seeds, and bores into large roots, stems, and bulbs. The adult is a beetle.

witches’-broom  Abnormal growth of plants with much branching; often caused by viruses of fungi.

withe  1. A one-masonry-unit thick wall. 2. A flexible twig used to tie roof thatching, as on some beach shade structures, etc.

wither  To dry up and reduce in size by shriveling.

WOG  A designation for plumbing components that are of sufficient quality to be rated for use with water, oil, or gas systems.

wood  The xylem portion of a plant.

wood ashes  The residue of burned wood. It is sometimes used as a fertilizer. It is highly alkaline and should not be used on alkaline soils or acid-loving plants. It supplies potassium in the forms of potash with a content varying from 5 to 25%. It contains about 30 to 35% lime and 2% phosphoric acid (NPK 0-2-5–25).

woodland  A land area covered with woody vegetation (especially trees).

wood preservative  Preservatives include tar, creosote, pitch, sodium fluoride, etc.

woods  1. Woodland. 2. A reference to types of wood in lumber, such as pine, oak, etc.

wood screw  A screw used for driving into wood or a similar material and used for attaching elements to the material. See also oval-head wood screw, flathead wood screw, roundhead wood screw.

woody  Containing wood or wood fibers.

woolly  In botanical terms, clothed with long and tangled soft hairs.
work 1. Labor in construction, maintenance, production, etc. 2. The finished or uncompleted product of a construction effort.

working drawings Finished drawings meant for construction use.

working pressure 1. The water pressure exerted within a sprinkler pipe while one or more valves or heads allow water to escape. 2. The maximum internal water pressure designed for a system to prevent damage.

workmen’s compensation insurance or workers compensation insurance Insurance covering liability of an employer to employees for compensation of injury, sickness, disease, or death arising from work while employed.

worm Any of numerous, long, soft-bodied animals. See also earthworm.

worm fence See zigzag fence.

worms See earthworms.

woven-wire reinforcement See welded-wire fabric.


wrack 1. The lowest grade of softwood. 2. A cull.

wrecking The act of demolishing a structure.

wrought Objects that have been beat with a hammer to shape them.

wrought iron A commercially pure iron valued for its corrosion resistance and used for water pipes, water tank plates, forged work, etc.

wrought-iron fence Fencing made of wrought iron that usually has a decorative character (often with curved embellishments) but is minimally made up of posts, rails, and vertical members that are often pointed.

wrt Abbreviation for wrought.

WT Abbreviation for watertight.

wt., Wt Abbreviation for weight.

wwf Abbreviation for welded wire fabric.

wwm Abbreviation for welded wire mesh.

wye A fitting for pipes allowing three pipes to be connected at an angle smaller than 90° forming a Y shape.

wye fitting See Y-fitting.

wye level A surveyor’s leveling instrument with a telescope and spirit level, mounted in Y-shaped supports. It is useful for the measurement of differences in elevation.

wythe See with (1).
x A symbol indicating a hybrid cross of two genetically different plants.

xanthophyll The yellow to orange carotenoid pigment in leaves, evident when chlorophyll is not present in a leaf or plant part.

xeric 1. Descriptive of a plant requiring little water for survival. 2. An area or soil that is deficient in moisture or is formed with little moisture (arid or desert). 3. An extremely dry habitat or ecosystem such as a desert.

xerigation Minimizing irrigation with direct slow application of water to plants usually with a drip irrigation system.

xerophytic In botanical terms, growing in dry situations and able to survive with little moisture.

xeriscaping 1. Any landscape requiring little water. The art of this type of landscape design is to make it pleasing for the user or viewer without lush plant material. 2. Landscape design and landscape maintenance principles that promote good horticultural practices and efficient use of water. The term xeriscaping is a registered trademark of the National Xeriscaping Council. The meaning is there promoted as water-conserving, drought-tolerant landscaping.

xero- A Greek prefix that means dry, useful in botanical terms.

xeromorphic A plant that has the form or appearance of a xerophyte because it has some adaptation to reduce transpiration or survive desiccation.

xerophyte A plant that is adapted for life and growth with a limited water supply, usually by limiting its transpiration rate, or having extra water storage available within the plant. They are well suited to xerigation. An example of such a plant is a cactus.

xfer Abbreviation for transfer.

xfmr Abbreviation for transformer.

X HVY, xhvy Abbreviation for extra heavy.

XL Abbreviation for extra large.

XXH Abbreviation for double extra heavy.

xylem 1. In woody plants, the inner portion of the cambium layer (live conductive tissue) and the woody portion to the center of the stem. This layer conducts water and some nutrients to other portions of the plant. This is the supporting structure of woody plants. 2. The vascular tissue in any plant conducting water and nutrients primarily from the roots to the shoot and leaves. See also phloem.
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Y  Abbreviation for wye.

yard  1. The outside area around a building. In commercial buildings, it is usually in reference to an outside storage or work area. In residential buildings, it is usually in reference to any area immediately surrounding the house. In land planning, it is usually made to a particular side of the building such as a side yard, front yard, or backyard. 2. English or U.S. length measurement equal to 3 ft, or 36 in, or 0.9144 m. Abbreviation is shown as yd.

yardage  1. The cubic yards excavated or filled.
  2. An area expressed in square yards.

Y-branch or wye branch  A pipe fitting branch in the shape of the letter Y.

yd.  Abbreviation for yard(s).

yd²  Abbreviation for square yard(s).

yd³  Abbreviation for cubic yards. A cubic yard is a volume equal to a cube with each side measuring 3 ft and comprised of 27 c.f.

year ring  See annual ring.

yellowing  A loss of chlorophyll in a plant or its leaves caused by lack of water, plant diseases, or a fungi that is yellow in color.

yellow pine  A hard, resinous wood used as flooring and in general construction.

yelm  A bundle of reeds or straw used as thatching for a roof.

yet  A term for a massive gate.

Y-fitting or wye fitting  A pipe fitting, connecting pipes in a Y shape.

yoke  The horizontal member forming the rough framing of a window, door, or other opening in a wood-framed wall.

yr  Abbreviation for year.

Y-strainer or wye filter  A device in the shape of a Y passing fluid through a strainer or filter before allowing it to enter the rest of a pipe system to remove particles or debris.
zenith The point that is directly overhead to an observer.

zenith angle An angle formed between a line from the earth's center to a point directly overhead and a beam of incoming solar radiation. The angle created at this intersection is dependent upon the date and location of the measurement on the earth's surface.

zero-slump concrete Freshly mixed concrete with little water so it has no measurable slump.

zigzag fence A fence constructed of split rails that (in plan) alternates direction.

zinc 1. A micronutrient found in soils that is necessary for plant growth. It assists in formation of growth-promoting substances in the plant. 2. A blue, white, or bluish-white metallic substance that is malleable when pure but in the most available form is rather brittle at normal temperatures and becomes malleable when heated. It is often used to prevent rusting or disintegration of iron or steel by coating them with this material in galvanizing.

zinc chloride A caustic salt used as a wood preservative or as a drying agent.

zinc chromate or zinc yellow A yellow pigment used in paints and primers to inhibit rust.

zonal A soil, or relating to a soil or major soil group, characterized by well-developed features from climate and organisms, especially vegetation.

zonation A visible progression of plant or animal communities in response to water depth changes or other environmental factors.

zone 1. In sprinkler irrigation, an area of landscape watered by one sprinkler valve. It may also be referred to as a station or a circuit. 2. An area of land with similar normal annual temperatures in each season, allowing for the likelihood of certain plants being hardy to that area. 3. A designation for allowable land uses given by a governing body having jurisdiction over such affairs with regard to a specific area of land.

zoological garden A park containing plant material, but primarily designed for exhibiting wild animals.

Z tie A Z-shaped reinforcing strip useful as a support bracket, tied (fastened) to a structural wall to a masonry veneer.

zygomorphic In botanical terms, capable of division into two symmetrical halves when cut lengthwise through the axis (middle or center).

zygote With regard to plants, a fertilized egg becoming an embryo in a seed.
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APPENDIX

The meaning of botanical names other than the genus is often of interest and broadens one’s understanding. They can be helpful in revealing a plant’s area of native habitat and some significant feature that set a plant apart from other closely related plants, and they allow one to better identify or remember the plant. For those reasons, the meaning of some botanical names are provided below. Those reflecting the names of people and those used for genus are not listed. This is not a comprehensive list, but covers many of the most common names.

**abbreviatus**  shortened, abbreviated

**abellophyllum**  shrubs in the olive family

**abrotanifolius, abrotanifolia, abrotanifolium**  having leaves that resemble Southernwood

**abruptus**  abrupt

**abyssinicus, abyssinica, abyssinicum**  native of Abyssinia (Ethiopia)

**acanthifolius, acanthifolia, acanthifolium**  having leaves that resemble those of *Acanthus*

**acaulis, acaule**  stemless or almost stemless

**acephalus, acephala, acephalum**  without a head

**acer, acris, acre**  sharply pointed, or sharp and shocking to the taste

**acerifolius, acerifolia, acerifolium**  having leaves like a maple (acer)

**acerosus**  needle-shaped

**achilleifolius, achilleifolia, achilleifolium**  foliage like yarrow (*Achillea millefolium*)

**acicularis, aciculare**  needle-like, long, narrow, and pointed

**acidissimus, acidissima, acidissimum**  harshly acidic or sour

**acidosis, acidosa, acidosum**  acid or sour

**aconitifolius, aconitifolia, aconitifolium**  having leaves resembling monkshood (*Aconitum*) leaves

**aculeatissimus, aculeatissima, aculeatissimum**  tapered with a long, narrow point

**aculeatus, aculeata, aculeatum**  prickly

**acuminatifolius, acuminatifolia, acuminatifolium**  having leaves tapered to long, narrow points

**acutangulus, acutangula, acutangulum**  having sharp angles

**acutifolius, acutifolia, acutifolium**  having sharply pointed leaves

**acutilobus, acutiloba, acutilobum**  having sharp-pointed lobes

**acutipetalus, acutipetala, acutipetalum**  having sharp-pointed petals

**acutissimus, acutissima, acutissimum**  sharply pointed to an extreme; very acute

**acutus, acuta, acutum**  sharply pointed
adenophorus

**adenophorus** bearing glands

**adiantifolius, adiantifolia, adiantifolium** foliage like the Maidenhair fern (*Adiantum*)

**adiantoides** like the Maidenhair fern (*Adiantum*)

**adnatus, adnata, adnatum** united, joined, or attached

**adonidifolius, adonidifolia, adonidifolium** foliage like that of *Adonis*

**adpressus, adpressa, adpressum** pressed together

**adscendens, adscending** pointing or moving upward

**adsurgens** rising in an upright form, ascending

**aduncus** hooked

**aegyptiacus, aegyptiaca, aegyptiacum; aegypticus, aegyptica, aegypticum** Egyptian

**aequalis, aequale** equal

**aequilobus, aqueiloba, aqueilobum** equally lobed

**aequitrilobus, aequitriloba, aequitrilobum** having three lobes that are equal

**aesculifolius, aesculifolia, aesculifolium** having leaves similar to a buckeye or horse chestnut (*Aesculus*)

**aestivalis, aestivale** of summer

**aestivus, aestiva, aestivum** developing or becoming ripened in summer

**aethiopicus, aethiopica, aethiopicum** African or Ethiopian

**aetnensis, aetnense** of Mount Etna, in Sicily

**affinis, affine** related or similar to; of, or related

**africanus, africana, africanum** African

**agavoides** resembling an *Agave*

**ageratifolius, ageratifolia, ageratifolium** having leaves like *Ageratum*

**ageratoideas** resembling *Ageratum*

**aggregatus, aggregate, aggregatum** grouped or clustered

**agrarius, agraria, agrarium** associated with fields

**agrestis, agreste** of the fields

**agrifolius, agrifolia, agrifolium** having rough leaves

**aizoides** resembling *Aizoon*

**alabamensis, alabamense** from Alabama

**alatus, alata, alatum** winged

**albescens** whitish, or becoming white

**albicans** off-white, becoming white

**albicaulis** having white stems

**albidus, albida, albidum** whitish, or white

**albiflorus** white-flowered

**albifrons** having white fronds

**albiplenus, albiplena, albiplenum** having double white flowers

**albipinnus, albipina, albipinum** having white spines

**albispinus, albispina, albispinum** having white spines

**albomaculatus, albomaculata, albomaculatum** spotted with white

**albopictus, albopicta, albopictum** painted with white

**albopilosus, albopilosa, albopilosum** white and hairy

**alboplenus, alboplena, alboplenum** having double white flowers
albovariegatus, albovariegata, albovariegatum white variegations
albus, alba, album white
alcicornia elk-horned
aldenhamensis, aldenhamense began at Aldenham, a garden near London, England
aleppicus, aleppica, aleppicum of Aleppo (Haleb), Syria
aletris blazing star
alexandria from Alexandria, Egypt
algeriensis, algerienne of Algeria
alleghaniensis, alleghaniense of the Allegheny mountain area
alliaceus, alliacea, alliaceum onion-like flavor, scent, or resemblance
alnifolius, alnifolia, alnifolium having leaves like alder
aloides or alooides Aloe
aloifolius, aloifolia, aloifolium having leaves like Aloe
alpestris, alpestre of mountains at altitudes most often below timberline; nearly alpine
amicola mountain dweller
alpinus, alpina, alpinum of mountains at altitudes most often above timberline; alpine
alternifolia alternate-leaved
altissima tallest
amarus, amara, amarum bitter
amazonicus, amazonica, amazonicum of the Amazon river area
ambiguus, ambigua, ambiguum doubtful, ambiguous, vague, unsure
ambrosioides looking like Ambrosia
amelloides looking like amellus
americanus, americana, americanum of North or South America
amethystinus, amethystina, amethystinum amethyst colored (violet-colored)
ammophilus, ammophila, ammophilum loving sand
amoenus, amoena, amoenum pleasing
ampelopsis woody vines
amphibious, amphibia, amphibium able to grow on land and in water
amplexicaulis, amplexicaule, amplexicaulum grasping
amplexifolius, amplexifolia, amplexifolium grasping
amurensis, amurene from the Amur river area
amygdaliformis, amygdaliforme shaped like an almond
amygdalinus, amygdalina, amygdalinum almond-like
amygdaloides looking like an almond
anacanthus, anacantha, anacanthum without thorns
anacardioidea looking like the cashew nut tree (Anacardium)
anagroides looking like Anagyris
aniceps two-headed, two-edged
anglicus English from England
angularis, angulare angular
angulatus, angulata, angulatum angular, angled
angulosus, angulosa, angulum having many corners or angles

angustifolius, angustifolia, angustifolium having narrow leaves

anisatus, anisata, anisatum like anise

anisodorus, anisodora, anisodorum like anise

anisophyllus, anisophylla, anisophyllum having pairs of leaves, one larger than the other

annularis, annulare ring-like

annulatis, annulata, annulatum with rings

annuus, annua, annuum annual

anopetalus erect-petals

antarcticus, antarctica, antarcticum associated with the South Pole region

anthemoides resembling Anthemis (chamomile)

anthyllidifolius, anthyllidifolia, anthyllidifolium having leaves similar to Anthyllis

antiquorum of the ancients

antirrhiniflorus, antirrhiniflora, antir-rhiniflorum having flowers like a snapdragon (Antirrhinum)

antirrhinoides looking like snapdragons (Antirrhinum)

apenninus, apennina, apenninum from the Apennine mountains

apertus, aperta, apertum bare, exposed, uncovered, showing, or open; not having petals

apetalus, apetala, apetalum not having petals

aphyllus, aphylla, aphyllum not having or apparently not having leaves

apiculatus, apiculate, apiculatum having a small usually sharp point

apifolius, apifolia, apifolium having foliage similar to celery

appendiculatus, appendiculata, appendiculatum having appendages

appressus, appressa, appressum pressed against

apricus, aprica, apricum loving the sun

apterus, aptera, apterum not having wings

aquaticus, aquatica, aquaticum; aquaticus, aquatile growing in or next to water

arabicus, arabica, arabicum; arabus, araba, arabum Arabian

arachnoides, arachnoideus, arachnoidea, arachnoideum with hairs like a spiderweb

araliifolius, araliifolia, araliifolium having leaves like Aralia

arborescens, arborus, arborea, arboreum somewhat like, or much like, a tree

arbusculus, arbuscula, arbusculum much like a small tree

arbutifolius, arbutifolia, arbutifolium having leaves looking like those of Arbutus

arcticus, arctica, arcticum from the Nth Pole region

arcuatus, arcuata, arcuatum curved, arched, or bent

ardens glowing

arenarius, arenaria, arenarium loving sand

argenteoguttatus, argenteoguttata, argenteoguttatum spotted with silver
argenteomarginatus, argenteomarginata, argenteomarginatum silver edged
argenteovariegatus, argenteovariegata, argenteovariegatum having silver variegations
argenteus, argentua, argenteum silvery
argentinus, argentina, argentinum of Argentina
argutus, arguta, argutum having sharp teeth or notches
argyraeus, argyraea, argyreaum silvery
argyrites having silver specks
argyrocomus, argyrocoma, argyrocomum having silvery hairs
argyroneurus, argyroneura, argyroneum having silvery veins
argyrophyllus, argyrophylla, argyrophyllum having silvery leaves
aridus, arida, aridum growing in dry places
arifolius, arifolia, arifolium having leaves like Arum
ariliifolius, ariifolia, ariifolium having leaves like wild ginger (Asarum)
aristatus, aristate, aristatum having a beard or bristles
arizonicus, arizonica, arizonicum of Arizona
asper, aspera, asperum rough, course
asperatus, asperata, asperatum roughened, bumpy, jagged
aspericus, auperiaca, auperiaca having rough stems
asperifolius, asperifolia, asperifolium having rough leaves
asperrimus, asperrima, asperrimum extremely rough or bumpy jagged
aspodeloides looking like asphodel (Asphodelus)
asplenifolius, asplenifolia, asplenifolium having leaves looking like those of spleenwort (Asplenium)
assurgens ascending
assurgentiflorus, assurgentiflora, assurgentiflorum having flowers in ascending clusters
asteroides looking like Asters
astilboiades looking like Astilbe
asturicus, asturica, asturicum; asturiensis, asturiense from Asturia, Spain
aromaticus, aromatica, aromaticum aromatic or fragrant or sweet smelling
artemisioides looking like Artemisia
articulatus, articulata, articulatum having joints
arundinaceus, arundinacea, arundinaceum reed-like
arvensis, arvense of cultivated fields
asarifolius, asarifolia, asarifolium having leaves like wild ginger (Asarum)
ascendens sloping upward
asiaticus, asiatica, asiaticum Asian
ascendens sloping upward
asiaticus, asiatica, asiaticum Asian
asphodeloides looking like asphodel (Asphodelus)
assurgentiflorus, assurgentiflora, assurgentiflorum having flowers in ascending clusters
asteroides looking like Asters
astilboiades looking like Astilbe
asturicus, asturica, asturicum; asturiensis, asturiense from Asturia, Spain
atlanticus

atlanticus, atlantica, atlanticum from areas close to the Atlantic Ocean or the Atlas Mountains, North Africa

atratus, atrata, atratum blackened

atriplicifolius, atriplicifolia, atriplicifolium having leaves like Atriplex

atropurpureus, atropurpurea, atropurpureum dark purple

atrorubens dark red

atosanguineus, atosanguinea, atosanguineum dark blood red

atroviolaceus, atroviolacea, atroviolaceum dark violet

atrovirens dark green

attenuatus, attenuate, attenuatum narrowing to a point

aubrietioides looking like Aubrieta

augustifolium having foliage

augustissimus, augustissima, augustissimum majestic, outstanding, or prominent

augustus, augusta, augustum majestic, outstanding

aurantiacus, aurantiaca, aurantiacum; aurantis, aurantia, aurantium having an orange color

aurantifolius, aurantifolia, aurantifolium having leaves resembling orange (Citrus aurantium) plants

auratus, aurata, auratum decorated with gold

aureomaculatus, aureomaculata, aureomaculatum gold spots

aureomarginatus, aureomarginata, aureomarginatum having edges with gold

aureoreticulatus, aureoreticulata, aureoreticulatum having gold veins

aureovariegatus, aureovariegata, aureovariegatum having variegations of gold

aureus, aurea, aureum golden

auricomus, auricoma, auricomum having golden hairs

auriculatus, auriculate, auriculatum having an ear-like appendage or appendages

australiensis, australiense Australian

australis, australis southern

austriacus, austriaca, austriacum Austrian

autumnalis, autumnale of autumn

axillaries, axillare carried or produced in axils

axillary in an axil

azaleoides looking like azaleas

azoricus, azorica, azoricum of the Azores

azureus, azurea, azureum sky-blue, azure

babylonicus, babylonica, babylonicum from Babylonia

baccans berry-like or having berries

baccatus, baccata, baccatum berry-like

baccifer, baccifera, bacciferum bearing berries

bacillaris, bacillare stick-like

balcanicus, balcanica, balcanicum of the Balkan Peninsula

baldensis, baldense from Monte Baldo, Italy

balearicus, balearica, balearicum of the Balearic Islands
balsameus, balsamea, balsameum of balsam
balsamiferus, balsamifera, balsamiferum bearing balsam
balticus, baltica, balticum of the Baltic Sea area
bambusoides looking like bamboo
banaticus, banatica, banaticum of Banat, Romania
barbadensis, barbadense of Barbados, West Indies
barbatus, barbata, barbatum having beard-like long, weak hairs; bearded; barbed
barbigerus, barbigera, barbigerum possessing bars or beards
barbinervis, barbinerve with barbed or bearded veins
barbulatus, barbulata, barbulatum lightly bearded or having a beard with short hairs
baselloides looking like Basella
basilaris, basilare concerning the base
basilicus, basilica, basilicum royal, princely, imperial
batatas the Carib Indian name for sweet potato
bavaricus, bavarica, bavaricum from Bavaria
belgicus, belgica, belgicum of Belgium or the Netherlands
belladonna beautiful lady (referring to the plant historically used to beautify the eyes)
bellidifolius, bellidifolia, bellidifolium having leaves like Bellis
bellidiformis, bellidiforme with the form of a daisy (Bellis)
bellidoides looking like Bellium
bellus, bella, bellum beautiful
benedictus, benedicta, benedictum blessed, having a good reputation
bengalenis, bengalense of Bengal, India; also spelled benghalensis
bermudianus, bermudiana, bermudianum of Bermuda
berolinensis, berlinense of Berlin, Germany
bessarabicus, bessarabica, bessarabicum of Bessarabia
betaceus, betacea, betaceum looking like beets
betonicifolius, betonicifolia, betonicifolium having leaves like betony (Stachys betonica)
betulifolius, betulifolia, betulifolium having leaves like a birch (Betula)
betulinus, betulina, betulinum betuloides, looking like bling birch (Betula)
bicolor of two colors
bicornis, bicone; bicornutus, bicornuta, bicornutum having two horns
bidentaltus, dientalta, dientaltum with two teeth
biennis, bienne biennial
bifidus, bifida, bifidum divided into two parts; twice cut
biflorus, biflora, biflorum having twinned flowers
bifolius, bifolia, bifolium having twinned leaves
bifurcatus, bifurcate, bifurcatum forked with two usually almost equal branches; twice forked
bignonioides  like *Bignonia*

**bijugus**, **bijuga**, **bijugum**  two pairs united

**bipinnatus**, **bipinnata**, **bipinnatum**  twice-pinnate

**bisectus**, **bisecta**, **bisectum**  two equal parts

**biserratus**, **biserrata**, **biserratum**  two teeth

**biteminus**, **bitemina**, **biteminum**  having three divisions

**bivalves**, **bivalve**  having two valves

**blandus**, **blanda**, **blandum**  mild, pleasant, bland

**blepharophyllus**, **blepharophylla**, **blepharophyllum**  leaves fringed like eyelashes

**bolivianus**, **boliviana**, **bolivianum**  of Bolivia

**bombycinus**, **bombycina**, **bombycinum**  silky

**bonariensis**, **bonariense**  from Buenos Aires, Argentina

**borbonicus**, **borbonica**, **borbonicum**  from Reunion Island, formerly Bourbon.

**borealis**, **boreale**  northern

**borinquenus**, **borinquena**, **borinquenum**  of Puerto Rico (formerly called Borinquen)

**borneensis**, **borneense**  of Borneo

**botryoides**  resembling a bunch of grapes, a cluster

**brachiatus**, **brachiata**, **brachiatum**  branching nearly at right angles

**brachyanthus**, **brachyantha**, **brachyanthum**  having short flowers

**brachybotrys**  short-clustered

**brachycarpus**, **brachycarpa**, **brachycarpum**  having short fruits

**brachycerus**, **brachycera**, **brachycerum**  short-horned

**brachypetalus**, **brachypetala**, **brachypetalum**  short-petaled

**brachyphyllus**, **brachyphylla**, **brachyphyllum**  having short leaves

**brachysiphon**  having short tubes

**bracteatus**, **bracteata**, **bracteatum**  with bracts

**bracteosus**, **bracteosa**, **bracteosum**  having conspicuous bracts

**brasiliensis**, **brasiliense**  from Brazil

**brassicifolius**, **brassicifolia**, **brassicifolium**  having leaves like cabbage (*Brassica*)

**brevicaulis**  short-stemmed, brief stems

**brevifolius**, **brevifolia**, **brevifolium**  having short leaves

**brevipedunculatus**, **brevipedunculata**, **brevipedunculatum**  having a short flower stalk (peduncle)

**brevipes**  short-footed, or short (brief) stalked

**brevis**, **breve**  short

**breviscapus**, **breviscapa**, **breviscapum**  having a short flower stalk (scape)

**brevistylius**, **brevistyle**  having a short style

**brilliantissimus**  brilliant to a maximum

**britannicus**, **britannica**, **britannicum**  of Great Britain

**briziformis**, **briziforme**, **brizoides**  like quaking grass (*Briza*)

**bronchialis**, **bronchiale**  for treating bronchitis

**bryoides**  moss-like
buccinatorius, buccinatoria, buccinatorium; buccinatus, buccinata, buccinatum resembling a crooked horn

buddleoides like Buddleia
bulbifer, bulbifera, bulbiferum having bulbs
bulbiformis, bulbiforme bulb-shaped
bulbosus, bulbosa, bulbosum bulbous or quite swollen
bulgaricus, bulgarica, bulgaricum from Bulgaria
bullatus, bullata, bullatum blistered or puckered (bullate)
burmanicus, burmanica, burmanicum from Burma, now Myanmar
buxifolius, buxifolia, buxifolium having leaves like boxwood (Buxus)
byzantinus, byzantina, byzantinum from Istanbul (Byzantium)
cachemiricus, cachemirica, cachemiricum from Kashmir
calabricus, calabrica, calabricum of Calabria, Italy
calamifolius, calamifolia, calamifolium with reed-like foliage
calathinus, calathina, calathinum basket-like
calcaratus, calcarata, calcaratum having spurs
calcareous, calcaea, calcareum loving lime
calcicola growing in soil with lime
calendulaceus, calendulacea, calendulaceum orange-colored as with flowers of Calendula
californicus, californica, californicum of California
callianthus, calliantha, callanthum having beautiful flowers
callicarpus, callicarpa, callicarpum having beautiful fruit
callimorphus, callimorpha, callimor-phum beautifully made or shaped
callistachyus, callistachya, callistachyum beautiful spikes
callistegiodes like Calystegia
callizonus, callizona, callizonum having beautiful bands or zones
callosus, callosa, callosum calloused, tough-surfaced, or thick-skinned
calocephalus, calocephala, calocephalum having a beautiful head
calophyllus, calophylla, calophyllum with beautiful leaves
calycinus, calycina, calycinum calyx-like
cambricus, cambrica, cambricum of Wales (Cambria)
camelliflorus, camelliflora, camelliflorum with flowers like Camellia
campaniflorus, campaniflora, campaniflorum flowers shaped like bells
campanuloides like Campanula
campestris, campestre of the fields, or plains
camphorates

camphorates, camphorate, camphoratum like camphor, or associated with camphor
camphylcarpus, camphylcarpa, camphylcarpum with curved or bent fruits
camtschatscensis, camtschatscense; camtschaticus, camtschatica, camtschaticum of Kamchatka
canadensis, canadense of Canada
canaliculatus, canaliculata, canaliculatum grooved
canariensis, canariense from the Canary Islands
cancellatus, cancellata, cancellatum latticed or crossed
candelabrum candelabra-like
candicans shining or wooly-white
candidissimus, candidissima, candidissimum very white
candidus, candida, candidum shining or pure white
canescens having off-white or whitish-gray hairs
caninus, canina, caninum pertaining to dogs or inferior
cannifolius, cannifolia, cannifolium having leaves like Canna
cantabricus, cantabrica, cantabricum from Cantabria, Spain, or the Cantabrian mountains of Spain
cantabrigiensis, cantabrigiense from Cambridge, England
capensis, capense from the Cape of Good Hope, South Africa
caperatus, caperata, caperatum wrinkled
capilliformis, capilliforme hair-like
capitatus, capitata, capitatum having dense heads
cappadocicus, cappadocica, cappadocicum of eastern Asia Minor (Cappadocia)
capreolatus, capreolata, capreolatum having tendrils
capreus, caprea, capreum relating to goats
capsular, capsulare resembling capsules
cardaminifolius, cardaminifolia, cardaminifolium having leaves like Cardamine
cardinalis, cardinale bright red, cardinal red
carduaceus, carduacea, carduaceum like a thistle
cardunculus, carduncula, cardunculum resembling a small thistle

caribaeus, caribea, caribaeum from the Caribbean region

carinatus, carinata, carinatum keeled
carinthiacus, carinthiaca, carinthiacum from Carinthia (Austria)
carminatus Carmine
carmineus, carminea, carmineum carmine

carneus, carnea, carneum flesh colored pink
carnosus, carnosa, carnosum fleshy
carolinianus, caroliniana, carolinianum; carolinensis, carolinense; carolus, carolina, carolinum from North or South Carolina
carpaticus, carpatica, carpaticum

carpathicus of the Carpathian Mountains
carpenteria  *Philadelphus*-like shrub

carpinifolius, carpinifolia, carpinifolium  with hornbeam-like leaves

carthusianorum  from monks of the Carthusian Monastery of Grande Chartreuse of Grenoble, France

cartilaginous, cartilaginea, cartilagineum  like cartilage

caryophyllus, caryophylla, caryophyllum  having an aromatic smell like walnut leaves, or cloves

cashmerianus, cashmeriana, cashmerianum  from Kashmir

castaneus, castanea, castaneum  chestnut-colored

catalpifolius, catalpifolia, catalpifolium  with leaves like *Catalpa*

cataractae; cataractarum  from a waterfall or waterfalls

catawbiensis, catawbiense  from the Catawba area of the Blue Ridge Mountains of North America

catharticus, cathartica, catharticum  with purgative qualities

cathayanus, cathayana, cathayanum  from China (Cathay)

caucasicus, caucasica, caucasicum  from the Caucasus

caudatus, caudata, caudatum  having a tail or tails

caulescens  stemmed

cauliflorus, cauliflora, cauliflorum  having flowers on the trunk or stem

cavus, cava, cavum  hollow

centifolius, centifolia, centifolium  having many leaves

centranthifolius, cetranthifolia, centranthifolium  having leaves like *Centranthus*

ccephalatus  bearing heads

ccephalonicus, cephalonica, cephalonicum  from the island of Cephalonia in Greece

ccephalotes  like a small herd

cerasifer, cerasifera, cerasiferum  cherry-like fruits

cerasiformis, cerasifore  shape resembling cherries

cerifer, cerifera, ceriferum  waxy

cerinthoides  looking like *Cerinthe*

cernuus, cernua, cernuum  dropping

cchalcedonicus, chalcedonica, chalcedonicum  Chalcedon (Asia Minor)

cchamaedrifolius, chamaedrifolia, chamaedrifolium  with leaves like chamaedrys

cchasmanthus, chasmantha, chasmanthum  having wide-open, gaping flowers

ccheilanthus, cheilantha, cheilanthum  having lipped flowers

cchelidonoides  looking like *Chelidonium*

cchilensis, chilense  from Chile

cchiloensis, chiloense  from Chiloe Island, off the coast of Chile

cchinensis, chinene  Chinese

cchionanthus, chionantha, chionanthum  having snow-white flowers

cchlorochilon  with a green lip
chromatella  with color

chrysanthoides  looking like Chrysanthemum

chrysanthus, chrysantha, chrysanthum  with golden flowers

chrysocarpus, chrysocarpa, chrysocarpum  with golden fruit

chrysocomus, chrysocoma, chrysocomum  having golden hair

chrysolepis, chrysolepe  having golden scales

chrysoleucus, chrysoleuca, chrysoleucum  gold with white

chrysophyllus, chrysophylla, chrysophyllum  golden-leaved

cichoriaceus, cichoriacea, cichoriaceum  looking like chicory (Cichorium)

cicutifolius, cutifolia, cutifolium  having leaves like water-hemlock (Cicuta)

ciliata  margins with hairs, fringed

circinata  coiled

cirrose  bearing a tendril

cistiflorus, cistiflora, cistiflorum  having flowers like Cistus

cistifolius, cistifolia, cistifolium  having leaves like Cistus

citratus, citrate, citratum  looking like Citrus

citrifolius, citrifolia, citrifolium  having leaves resembling Citrus

citriniflorus, citriniflora, citriniflorum  having lemon-yellow flowers

citrinus, citrina, citrinum  lemon or yellow color or like a lemon

citriodorus, citriodora, citriodorum  lemon-scented

citroides  looking like Citrus

clandestinus, clandestina, clandestinum  hidden

clausus, clausa, clausum  closed

clavatus, clavata, clavatum  club-shape

clavellatus, clavellata, clavellatum  a small club shape

clematideus, clematidea, clematideum  looking like Clematis

clethroides  looking like Clethra

clypeatus, clypeata, clypeatum  with the shape of a Roman shield

clypeolatus, clypeolata, clypeolatum  shield-shaped

cneorum  Daphne, low evergreen shrubs

cocciferus, coccifera, cocciferum  having berries, or host to berry-like scale insects

coccineus, coccinea, coccineum  bright red

cochlearifolius, cochlearifolia, cochlearifolium  having leaves like Cochlearia

cochlearis, cochleare  spoon-shaped

cochleatus, cochleata, cochleatum  spiral shaped like the shell of a snail

coelestinus, coelestina, coelestinum; coelestis, coeleste  sky-blue

coeerulescens  bluish or turning blue

coeeruleus, coerulea, coeruleum  blue

cognatus, cognata, cognatum  closely related

colchicus, colchica, colchicum  from Colchis, near the Black Sea
collinus, collina, collinum  from the hills
coloratus, colorata, coloratum  colored
columbarius, columbaria, columbarium  having to do with doves, or dove-like
columbianus, columbiana, columbianum  from British Columbia or the Columbia River area
columnaris, columnare  columnar
comatus, comata, comatum  having a tuft
commelina  plants like wandering Jew
commixtus, commixta, commixtum  mixed
communis, commune  common, general, or communal in habit
commutatus, commutata, commutatum  changed or changing
comosus, comosa, comosum  with a tuft, or long hair
compactus, compacta, compactum  compact, dense
complantus, complanta, complantum  flat
complexus, complexa, complexum  complex, embraced, or circled
complicatus, complicate, complicatum  complicated
compositus, composita, compositum  compound, several parts
compressus, compressa, compressum  compressed
concavus, concave, concavum  hollowed, indented
conchifolius, conchifolia, conchifolium  having leaves like seashells
concinnus, concinna, concinnum  neat or elegant
concolor  of one color, uniform in color
condensatus, condensata, condensatum; condensus, condensa, condensum  crowded
confertiflorus, confertiflora, confertiflorum  with crowded, pressed together, dense flowers
confertus, conferta, confertum  crowded or dense
conformis, conforma, conformus  to type; or similar to related types
confusus, confusa, confusum  confusing
congestus, congesta, congestum  congested
conglomeratus, conglomerata, conglomeratum  crowded, or dense
conjugatus, conjugata, conjugatum; conjugalis, conjugale  united in twos
conjunctus, conjuncta, conjunctum  united
connatus, connata, connatum  twin or having opposite leaves joined at bases
consanguineus, consanguinea, consanguineum  related
consolidus, consolida, consolidum  solid or stable
conspersus, conspersa, conspersum  scattered
conspicuus, conspicua, conspicuum  conspicuous, obvious
constrictus, constricta, constrictum  constricted, tight, small
contortus

contortus, contorta, contortum twisted, contorted

contractus, contracta, contractum contracted

controversus, controversa, controversum controversial

convallaroides similar to lily-of-the-valley (Convallaria)

convolvolaceous, convolvulea, convolvulaceum looking like Convolvulus

copallinus, copallina, copallinum gummy or with resin

corallinus, corallina, corallinum coral-red color

corchorus plants supplying jute

cordatus, cordata, cordatum heart-shaped

cordifolius, cordifolia, cordifolium with heart-shaped leaves

cordiformis, cordiforme a heart shape

cordyline plants resembling dracaenas

coreanus, coreana, coreanum from Korea

coriaceus, coriacea, coriaceum thick, leathery, tough

coriarius, coriaria, coriarium like leather, tough

corniculatus, corniculata, corniculatum having small horns

cornutus, cornuta, cornutum horned or shaped like horns

corollatus, corollata, corollatum looking like a corolla

coronans; coronatus, coronata, coronatum crowned

coronarius, coronaria, coronarium for garlands, belonging to a crown

coronopifolius, coronopifolia, coronopifolium having leaves like Coronopus

corrugatus, corrugata, corrugatum wrinkled, or in folds

corsicus, corsica, corsicum from Corsica

cortusoides looking like Cortusa

coruscans glittering, sparkling

corylifolius, corylifolia, corylifolium having leaves like Corylus

corymbiflorus, corymbiflora, corymbiflorum having flowers in corymbs

corymbosus, corymbosa, corymbosum with corymbs

costatus, costata, costatum ribbed, ridges

cotinifolius, cotinifolia, cotinifolium leaves like Cotinus

cotinoides looking like Cotinus

crassicaulis, crassicaule having thick stems

crassifolius, crassifolia, crassifolium thick-leaved

crassipes thick or big stemmed, or thick or big footed

crassus, crassa, crassum thick or fleshy

crataegifolius, crataegifolia, crataegifolium with leaves resembling hawthorn (Crataegus)

crataegoides resembling hawthorn (Crataegus)

crenatiflorus, crenatiflora, crenatiflorum having scoloped flowers
crenatus, crenata, crenatum having rounded teeth or scallops

crenulatus, crenulata, crenulatum being somewhat scalloped

crepitans rustling as with leaves in wind, or crackling

cretaceus, cretacea, cretaceum chalky or having to do with chalk

cretensis, cretense; creticus, retica, ceticum from Crete

crinita with long hairs

crinitus, crinita, criniteum having long, usually weak hairs

crispatus, crisata, crisatum; crispus, crispa, crispm curling wrinkles, or crisped close stiff curls, or wavy

cristatus, cristata, cristatum with tassel-like tips, or a showy tuft; a crest; comb-like

critifolius, crithmifolia, crithmifolium leaves like Crithmum

crocatus, crocata, cruciatum; croceus, crocea, croceum orange, saffron, or yellow

crotonifolius, crotonifolia, crotonifolium having leaves looking like Croton

cruciatus, cruciata, cruciatum resembling the shape of a cross

cruciferus cross-bearing

cruentus, cruenta, cruentum blood coloring, bloody

crustatus incrusted

crystallinus, crystallina, crystallinum like a crystal

cstenoides like a comb

cucullaris, cucullare; cucullatus, cucullata, cucullatum hood-like

cucumerifolius, cucumerifolia, cucumerifolium having leaves resembling cucumber

cultratus, cultrata, cultratum; cultriformis, cultriforme shaped like a knife's blade

cuneatus, cuneata, cuneatum shaped like a wedge

cuneiformis, cuneiforme wedge shaped

cupreatus, cupreata, cupreatum; cupreus, cuprea, cupreum color of copper or coppery appearing

cupressifolius, cupressifolia, cupressifolium having leaves like cypress (Cupressus)

cupressiformis, cupressiforme; cupressinus, cupressina, cupressinum; cupressoides looking like cypress (Cupressus)

curassavicus, curassavica, curassavicum from Curacao, Netherlands

curtus, curta, curtum made short

curvatus, curvata, curvatum curved

curvifolius, curvifolia, curvifolium with curved leaves

cuspidatus, cuspidata, cuspidatum having stiff, sharp points

cuspidifolius, cuspidifolia, cuspidifolium with leaves of a stiff, sharp point

cyananthus, cyanantha, cyananthum flowers of blue

cyaneus, cyanea, cyaneum blue
### cyanocarpus

cyanocarpus, cyanocarpa, cyanocarpum  with blue fruits
cyanophyllus, cyanophylla, cyanophyllum  leaves of blue
cyatheoides  looking like Cyathea
cyclamineus, cyclaminea, cyclamineum  looking like Cyclamen
cyclanthera  tender vines
cylindraceus, cylindracea, cylindraceum; cylindricus, cylindrical, cylindricum  cylindrical
cymbiformis, cymbiforme  shaped like a boat
cymosus, cymosa, cymosum  with flowers in cymes
cynaroides  looking like Cynara
cyprius, cypria, cyprium  from Cyprus
cytisoides  looking like a broom (Cytisus)
dacrydioides  looking like Dacrydium
daetlyifer, dactylifera, dactyliferum  looking like fingers
daetlyoides  looking like fingers, finger-like
dahuricus, dahurica, dahuricum; dauricus, dauria, dauricum; davuricus, davurica, davuricum  from Dahuria (Siberia)
dalmaticus, dalmatica, dalmaticum  from Dalmatia
damascanus, damascene, damascenun  of Damascus
danaeifolius, danaeifolia, danaeifolium  having leaves like Danae
daphnoides  looking like Daphne
dasyacanthus, dasyacantha, dasyacanthum  thick spines
dasyanthus, dasyantha, dasyanthum  having shaggy flowers
dasyacarpus, dasyacarpa, dasyacarpum  with hairy fruits
dasyclus, dasyclada, dasycladum  with shaggy branches
dasyphyllus, dasypylla, dasypylum  shaggy-leaved
dasystemon  having hairy stamens
daucifolius, daucifolia, daucifolium  leaves like a carrot (Daucus)
dealbatus, dealbata, dealbatum  whitened, a coating of white powder
debris, debile  weak or frail
decandrus, decandra, decandrum  with 10 stamens
decapetalus, decapetala, decapetalum  10 petals
decaphyllus, decaphylla, decaphylum  having 10 leaves
deciduus, decidua, deciduum  deciduous
decipiens  deceptive, cheating, not true
decinatus, declinata, declinatum  declined or bent downward
decompositus, decomposita, decompositum  more than one division
decorbatus, decorata, decoratum; decorus, decora, decorum  decorative or becoming decorative
decorticans  having shedding bark
decumanus, decumana, decumanum  immense, gigantic
decumbens  having trailing stems with erect tips; reclining at base with tips erect

decurrens  running or extending down the stem

decussate  alternate leaf pairs at right angles

deflexus, deflexa, deflexum  bent down

deformis,iforme  deformed, not normal in appearance or function

defectus, defecta, defectum  dejected, humbled

deflectus, deflecta, deflectum  chosen

delicatissimus, delicatissima, delicatissimum  very delicate

delicatus, delicata, delicatum  delicate

deliciosus, deliciosa, deliciousum  delicious

delphinanthus, delphinantha, delphinanthum  having flowers like Delphinium

delphinensis, delphinense  from Dauphine, France

delphinifolius, delphinifolia, delphinifolium  with leaves like Delphinium

deltoides; deltoideus, deltoidea, deltoidum  triangular shaped

demersus, demersa, demersum  submerged

demissus, demissa, demissum  hanging, fragile

dendroideus, dendroidea, dendroideum  like a tree

dendrophilus, dendrophila, dendrophilum  loving trees

densatus, densata, densatum; densus, densa, densum  compact in shape; dense

densiflorus, densiflora, densiflorum  flowered densely

densifolius, densifolia, densifolium  densely leaved

dentatus, dentata, dentatum; dentifer, dentifera, dentiferum; dentosus, dentosa, dentosum  having teeth

denticulatus, denticulata, denticulatum  lightly toothed

denudatus, denudata, denudatum  naked

dependens  hanging

depressus, depressa, depressum  flat

desertorum  from a desert

deusus, deusta, deustum  burned, scorched

diabolicus, diabolica, diabolicum  devilish

diachanthus, diacantha, diacanthum  having paired spines

diandrus, diandra, diandrum  having paired or two stamens

dianthiflorus, dianthiflora, dianthiflorum  having flowers like Dianthus

diaphanus, diaphana, diaphanum  transparent, see-through

dichotomus, dichotoma, dichotomum  many paired forks

dichrohromus, dichroma, dichromium; dichrous, dichroa, dichroum  having two separate colors

dictyophyllus, dictyophylla, dictyophyllum  with leaves with obviously netted venation

didymus, didyma, didymium  paired or in twos, or stamens in twos
**difformis**

* difformis, difforme * having unusual or strange form

* diffusus, diffusa, diffusum * loosely spreading

* digitatus, digitata, digitatum * a shape like a hand that is open

* dilatatus, dilata, dilatum; dilatatus, dilata, dilatum * expanded, spread apart, dilated

* dimorphus, dimorpha, dimorphum * with two types of flowers having leaves or fruit on a plant

* dioicus, dioica, dioicum; dioecious * having male and female reproductive organs on a single plant

* dipetalus, dipetala, dipetalum * having two petals

* diphyllus, diphylla, diphylum * with two leaves or leaflets

* diplopterichus, diploptericha, diplopterichum * having two kinds of hair

* dipterocarpus, dipterocarpa, dipterocarpum * having two-winged fruits

* dipterus, diptera, dipterum * two-winged

* disciformis, disciforme * disc-shaped

* discoideus, discoidea, discoideum * disc-like, not having ray florets

* discolor * two different colors

* disperses, dispersa, dispersum * scattered

* dissectus, dissecta, dissectum * deeply cleft

* dissimilis, dissimile * not like those typical of the genus

* dissitiflorus, dissitiflora, dissitiflorum * having flowers loosely arranged

* distachyus, distachya, distachyum * having two spikes

* distans * separated with space

* distichous * in two vertical ranks

* distichus, disticha, distichum * two-ranked

* distortus, distorta, distortum * poorly shaped

* distylus, distyla, distylum * with two styles

* diurnus, diurna, diurnum * flowering in the day

* divaricatus, divaricata, divaricatum * spreading, widely

* divergens * spreading wide from the middle

* diversicolor * diverse colors

* diversiflorus, diversiflora, diversiflorum * diversely flowered, variable leaves

* diversifolius, diversifolia, diversifolium * diversely leaved

* diversiformis, diversiforme * having various forms

* dodecandrus, dodecandra, dodecandrum * 12 stamens

* dolabratus, dolabrata, dolabratum; dolabriformis, dolabriforme * hatchet shape

* domesticus, domestica, domesticum * domesticated; used as houseplants

* doronicoides * looking like *Doronicum*

* drabifolius, drabifolia, drabifolium * leaves like *Draba*

* dracaenoides * looking like *Dracaena*

* draco * pertaining to a dragon
dracocephalus, dracocephala, dracocephalum  dragon head shape

dracunculoides  looking like tarragon  
(Artemisia dracunculus)

dracunculus  a little dragon

drupaceous, drupacea, drupaceum; drupifer, drupifera, dupiferum  bearing drupes (fleshy fruits)

drynarioides  the genus of ferns Drynaria

dryophyllus, dryophylla, dryophyllum  having leaves like an oak leaf

dubius, dubia, dubium  dubious, or not conforming

dulcis  sweet

dumosus, dumosa, dumosum  brushy or shrubby

duplex; duplicatus, duplicatum  double, two

durabilis, durabile  lasting, continuing

dysentericus, dysenterica, dysentericum  once used to treat dysentery

ebenaceus, ebenacea, ebenaceum  ebony-like

ebenus, ebena, ebenum  ebony, black, dark

ebracteatus, ebracteata, ebracteatum  without bracts

eburneus, eburna, eburnum  ivory or white

echinatus, echinata, echinatum  hedge-hog-like; surfaced with prickles or spines; bristly

echinocarpus, echinocarpa, echinocarpum  having prickly or spiny fruits

echinosepalus, echinosepala, echinosepalum  having prickly or spiny sepals

echinospermus, echinosperma, echinospermum  having prickly or spiny seeds

echoioides  looking like Echium

edulis, edulise  edible

effusus, effusa, effusum  straggly or loosely spreading

elaeagnifolius, elaeagnifolia, elaeagnifolium  having leaves looking like those of Elaeagnus

elasticus, elastica, elasticum  elastic

elatior  taller, or higher

elatus, elata, elatum  tall

elegans; elegantulus, elegantula, elegantulum  elegant, beautiful

elegantissimus, elegantissima, elegantissimum  more elegant

ellipsoidalis, ellipsoidale  ellipsoid

ellipticus, elliptica, ellipticum  elliptical

elongatus, elongata, elongatum  elongated, lengthened

emarginatus, emarginata, emarginatum  notched at the apex

emeticus, emetica, emeticum  inducing vomiting

eminens  eminent or obvious

empetrifolius, empetrifolia, empetrifolium  having leaves like Empetrum

enneacanthus, enneacantha, enneacanthum  nine spines

enneaphyllus, enneaphylly, enneaphyllum  with nine leaves or leaflets
ensatus, ensata, ensatum shaped like a sword

ensifolius, ensifolia, ensifolium having sword-shaped leaves

ensiformis, ensiforme resembling a straight sword; long and pointed

entelea corkwood

epigaeus, epigaea, epigaeum growing close to the ground

equestris, equestre associated with horses

equinus, equina, equinum of horses

equisetifolius, equisetifolia, equisetifolium leaves like a horsetail (Equisetum)

erectus, erecta, erectum upright

eriacanthus, eriacantha, eriacanthum wooly spined

eriantherus, erianthera, eriantherum wooly anthers

erianthus, eriantha, erianthum wooly flowers

ericaeus, ericaea, ericaeum relating to heaths (Erica)

ericifolius, ericifolia, ericifolium having leaves like a heath (Erica)

ericoides looking like a heath (Erica)

erigenia harbinger of spring

erigenus, erigena, erigenum originated in Ireland (Erin)

erinaceus, erinacea, erinaceum looking like a hedgehog

eriobotryoides Eriobotrya

eriocarpus, eriocarpa, eriocarpum wooly fruited

eriocephalus, eriocephala, eriocephalum wooly headed

eriophorus, eriophora, eriophorum wool-bearing

eriostachys a wooly spike

eriostemon a wooly stamen

erosus, erosusa, erosum a jagged margin; edge looking as if gnawed

erraticus, erratica, erraticum unusual, sporadic, or uncommon

erubescens blushing, red, or reddish

erythrocalyx a red calyx

erythrocarpus, erythrocarpa, erythrocarpum red fruit

erythrocephalus, erythrocephala, erythrocephalum red-headed

erythropeterus, erythropetera, erythropeterum with red wings

erythrosorus, erythrosora, erythrosorum with red spore cases

esculentus, esculenta, esculentum edible or having to do with eating

etruscus, etruscum of Tuscany (Etruria), Italy

eucalyptoides looking like Eucalyptus

euchlorus, euchlora, euchlorum good green

eugenioides looking like Eugenia

eupatorioides resembling Eupatorium

euphorbioides resembling Euphorbia

europaeus, europaea, europeam European
evectus, evecta, evectum  extended, elongated
exaltatus, exaltata, exaltatum  very tall, high
exasperatus, exasperata, exasperatum  rough
excavatus, excavata, excavatum  hollowed
exellens  excellent, excelling
excelsus, excelsa, excelsum  tall
excisus, excisa, excisum  cut out or cut from
eximius, eximia, eximium  distinguished, prominent, unusual
exoniensis, exoniense  of Exeter, England
exoticus, exoticum  foreign, not native
expansus, expansa, expansum  expanded
exsertus, exserta, exsertum  exserted, projected
extensus, extensa, extensum  extended beyond
exudans  exuding, secreting
fabaceus, fabacea, fabaceum  looking like the broad bean (Vicia faba); bean-like
fagifoliis, fagifolia, fagifolium  leaves like a beech (Fagus)
falcatus, falcata, falcatum; falciformis, falciforme  shaped like a sickle
falcifolius, falcifolia, falcifolium  having leaves shaped like sickles
falciformis  sickle-shaped
fallax  false, deceptive
farinaceous, farinacea, farinaceum  mealy, grainy, floury; containing starch
farinosus, farinose, farinosum  mealy, grainy, or powdery
fascicularis, fasciculare; fasciculatus, fasciculata, fasciculatum  clustered, in a bundle
fastigiatuus, fastigiat, fastigium  of columnar form; close erect branches; erect
fastuosus, fastuosa, fastuosum  proud, stately
fatius, fatua, fatuum  not good, lacking taste or interest
febrifugus, febrifuga, febrifugum  reducing fever
fenestralis, fenestrale  window-like openings
ferocactus  fiercely spiny gobular cacti
ferox  ferocious, extremely thorny
ferrugineus, ferrugineum  rust color
fertilis, fertile  fruitful, productive
festalis, festale; festinus, festina, festinum  festive
festivus  festive, gay, bright
ficifolius, ficifolia, ficifolium  having leaves like a fig (Ficus)
ficoides; ficoides, ficoide, ficoideum  looking like a fig (Ficus)
filamentosus, filamentosa, filamentosum; filarius, filaria, filarium  having threads, or being thread-like
filicaulis, filicaule  a thread-like stem
filicifolius, filicifolia, filicifolium  fern-like leaves
filiferus  bearing threads
filiformis, filiforme  thread-like
filipendulus, filipendula, filipendulum  looking like meadowsweet (*Filipendula*)
fimbriatus, fimbriata, fimbriatum  with a small fringe
fimbriatus, fimbriata, fimbriatum  fringed
firmus, firma, ffirmum  strong, firm
fissilis, fissile; fissuratus, fissurata, fissuratum; fissus, fissa, fissum  fissured, or cut in two
fistulosus, fistulosa, fistulosum  pipe-like, hollow
flabellatus, flabellata, flabellatum  like a fan
flabellifer, flabellifera, flabelliferum  bearing a fan
flabelliformis, flabelliforme  shape like a fan
flaccidus, flaccida, flaccidum  weak, soft, tender
flagellaris, flagellare; flagelliformis, flagelliforme  like a whip
flammaeus, flammaea, flammaeum  flame-colored, or resembling a flame
flavens  yellow
flaveolus, flaveola, flaveolum  yellowish
flavescent  yellowish, or becoming yellow
flavicomus, flavicoma, flavicomum  yellow hair
flavidus, flavida, flavidum  yellowish
flavispinus, flavispina, flavispinum  having yellow spines
flavissimus, flavissima, flavissimum  intensely yellow
flavus, flava, flavum  yellow
flexicaulis, flexicaule  having yellow spines
flexilis, flexile  flexible
flexuosus, flexuosa, flexuosum  zigzag, twisted, or tortuous
floccosus, floccose, floccosum  wooly
flocculus, flocculosa, flocculosum  somewhat wooly
flore-albo  with white flowers
florentinus, florentina, florentinum  from Florence, Italy
flore-pleno  with double flowers
floribundus, floribunda, floribundum; floridus, florida, floridum; florifer, florifera, floriferum  bearing flowers abundantly; prolific flowers
floridanus, floridana, floridanum  from Florida
floridus  flowering freely
floriferous  blooming freely
fluitans  floating
fluminensis, fluminense  from Rio de Janeiro (*Flumen Januarii*), Brazil
fluvialis, fluviale; fluvialitis, fluvialtile  having to do with running water
foemina  feminine
foeniculaceus, foeniculacea, foeniculaceum; foeniculatus, foeniculata, foeniculatum  like fennel (*Foeniculum*)
foetidissimus, foetidissima, foetidissimum  very ill-scented
foetidus, foetida, foetidum  ill-scented, smelling badly
foliaceus, foliacea, foliaceum  leaf-like
foliates, foliata, foliatum  having leaves
foliolatus, foliolata, foliolatum; foliolosus, foliolosa, foliolosum  having leaflets
foliosus, foliosa, foliosum  leafy
folicularis, folliculare  having follicles
fontanus, fontana, fontanum; fontinalis, fontinale  from fountains or springs
formosanus, formosana, formosanum  from Taiwan (Formosa)
formosissimus, formosissima, formosissimum  very beautiful
formosus, formosa, formosum  beautiful
fourcroydes  looking like Furcraea
foveolatus, foveolata, foveolatum  slightly pitted
fragariflorus, fragariflora, fragariflorum  having flowers like those of strawberries; colored strawberry (Fragaria)
fragarioides  resembling a strawberry (Fragaria)
fragilis, fragile  brittle, fragile, or quick to wilt
fragrans  fragrant
fragrantissimus, fragrantissima, fragrantissimum  very fragrant
fraxineus, fraxinea, fraxineum  like the ash (Fraxinus)
fraxinifolius, fraxinifolia, fraxinifolium  having leaves like those of ash (Fraxinus)
frigidus, frigida, frigidum  from cold regions; frigid areas
frondosus, frondosa, frondosum  leafy
fructescent  fruitful
fructifer, fructifera, fructiferum  fruitful, bearing fruit
frutescens; fruticans; fruticosus, fruticosum  shrubby
fruticosus  shrubby
fucatus, fucata, fucatum  painted, dyed, or colored
fuchsioides  looking like Fuchsia
fugacious  withering quickly
fulgens; fulgidus, fulgida, fulgidum  shining, glistening, resplendent
fulvescens  turning yellowish-brown
fulvus, fulva, fulvum  reddish-orange, tawny
fumarifolius, fumarifolia, fumarifolium  leaves similar to fumitory (Fumaria)
funebris, funebris  relating to or befitting a funeral
funiculatus, funiculate, funiculatum  a slender cord
furcans; furcatus, furcata, furcatum  forked
furfuraceus, furfuracea, furfuraceum  mealy or scurfy
fuscatus, fuscata, fuscatum  brownish
fuscoius  grayish-brown
fusiformis, fusiforme  spindle shape
galacifolius, galacifolia, galacifolium  leaves like Galax
galegifolius, galegifolia, galegifolium  with leaves like goat’s rue (Galega)
gallicus, gallica, gallicum  French
gandavensis, gandavense  relating to Ghent, Belgium

gangeticus, gangetica, gangeticum from near the Ganges River, India

garganicus, garganica, garganicum from Monte Gargano, Italy

geminatus, geminate, geminatum paired, in twos

geminiflorus, geminiflora, geminiflorum paired or several flowers together

gemmatus, gemmata, gemmatum jeweled

gemmifer, gemmifera, gemmiferum having buds

generalis, generale usual, prevailing, most often

genevensis, genevense of Geneva, Switzerland

geniculatus, geniculata, geniculatum bent like a knee

genistifolius, genistifolia, genistifolium leaves like Genista

geometricus, geometrica, geometricum; geometrizans having formal markings

georgianus, georgiana, georgianum from Georgia, U.S.

georgicus, georgica, georgicum from Georgia of the former U.S.S.R.

geraniifolius, geraniifolia, geraniifolium having leaves like Geranium

geranioides looking like Geranium

germanicus, germanica, germanicum from Germany

gibberosus, gibberosa, gibberosum having a hump

gibbiflorus, gibbiflora, gibbiflorum flowers with a bump on one side

fibbosus, gibboa, gibbosum; gibba, gibbum enlarged, or swollen on a side

gibraltaricus, gibraltarica, gibraltaricum of Gibraltar

giganteus, gigantea, giganteum very large or tall, gigantic

gigas giant, immense

glabellus, glabella, glabellum; glabrate, glabratum; labracescens; glabriusculus, glabriuscula, glabriusculum mostly without hairs

glaber, glabera, glaberum without hairs

laberrimus, laberrima, laberrimum having no hairs

glabra smooth, without hairs

glacialis, glaciale from areas of glaciers, or very cold regions

glandiformis, glandiforme gland-like

glandulifer having glands

glanduliflorus, glanduliflora, glanduliflorum having glands on flowers

glandulosus, glandulosa, glandulosum glandular, or having secreting organs

glaucescens gray, bluish-gray, or bluish-white from a light coating of waxy or thin powder; glaucous

glaucifolius, glaucifolia, glaucifolium foliage

glauciifolius, glauciifolia, glauciifolium leaves that look like Glaucium leaves

glaucophyllus, glaucophylla, glaucophyllum leaves that look like Glaucium leaves
glaucus, glauca, glaucum  gray, whitish, grayish, or bluish-grayish coating of thin, waxy powder that rubs off

globiferus, globifera, globiferum  globe-shaped clusters

globosus, globosa, globosum  a globe shape

globularis, globulare  small sphere or globe

globulifer, globulifera, globuliferum  having clusters of small globes

globulosus, globulosa, globulosum  small and shaped like globes; spheres

glomeratus, glomerata, glomeratum  clustered in somewhat spherical heads

gloriosus, gloriosa, gloriosum  glorious

gloxinioides  *Gloxinia*

glumaceus, glumacea, glumaceum  with glumes (chaffy bracts on flowers of grasses)

glutinous, glutinosa, glutinosum  sticky

glyciniioides  looking like soybean (*Glycine*)

glyptostroboides  looking like *Glyptostrobus*

gnaphaloides  looking like *Gnaphalium*

gracilentus, gracilenta, gracilentum  slender, narrow

graciliflorus, graciliflora, graciliflorum  slender or graceful flowers

gracilior  more graceful

gracilipes  having a narrow stalk

gracilis, gracile  graceful, or gracefully slender

gracilistylus, gracilista, gracilistem  having a narrow style

gracillimus, gracillima, gracillimum  most graceful

graecus, graeca, graecum  of Greece

gramineus, graminea, gramineum  grass-like

graminifolius, graminifolia, graminifolium  with leaves like grass

grandiceps  with a large head

grandicusps, grandicuspe  having big points

grandidentatus, grandidentata, grandidentatum  having big teeth

grandiflorus, grandiflora, grandiflorum  having large flowers

grandifolius, grandifolia, grandifolium  large leaves

grandiformis, grandiforme  large

grandis, grande  large

graniticus, granitica, graniticum  growing in granite-like rocks or cliffs

granulatus, granulata, granulatum  tubercles or knobs like grain

granulosus, granulosa, granulosum  granular

gratissimus, gratissima, gratissimum  very gratifying

gratus, grata, gratum  gratifying

graveolens  very fragrant, heavy scented

griseus, grisea, griseum  gray

groelandicus, groelandica, groelandicum  from Greenland

guianensis, guianense  from Guiana, South America

gummifer, gummifera, gummiferum  producing, containing, or exuding gum

gummosus, gummosa, gummosum  gummy
guttatus

**guttatus, guttata, guttatum**  speckled, spotted, or splotched

gymnocarpus, gymnocarpa, gymnocarpum  with naked fruits

gyrans  in circles

haematodes  color of blood-red

halimifolius, halimifolia, halimifolium  blood-red flowers

halophilus, halophila, halophillum  loving salt

hastatus, hastata, hastatum  shape of a halberd or spear on spearhead

hebephyllus, hebephylla, hebephyllum  downy leaves

hederaceus, hederacea, hederaceum  like ivy (*Hedera*)

hederifolius, hederifolia, hederifolium  having ivy-like leaves

helianthoides  like Helianthus

hellenicus, hellenica, hellenicum  from Greece

helveticus, helvetica, helveticum  from Switzerland

helvolus, helvolta, helvolum  light brownish-yellow

hemisphaericus, hemisphaerica, hemisphaericum  hemispherical

hepaticifolius, hepaticifolia, hepaticifolium  having leaves like *Hepatica*

heracleifolius, heracleifolia, heracleifolium  having leaves like *Heracleum*

herbaceus, herbacea, herbaceum  herbaceous, with no woody growth

hesperus, hespera, hesperum  of the West

heteracanthus, heteracantha, heteracanthum  variously spined

heteranthus, heterantha, heteranthum  variously flowered

heterocarpus, heterocarpa, heterocarpum  variously fruited

heterolepis, heterolepe  variously scaled

heteromorphus, heteromorpha, heteromorphum  having variety of form

heteropetalus, heteropetala, heteropetalum  variety of petals

heterophyllus, heterophylla, heterophyllum  variety of leaves

hexagonus, hexagona, hexagonum  hexagon shape (six)

hexapetalus, hexapetala, hexapetalum  having six petals

hexaphyllus, hexaphylla, hexaphyllum  having leaves in sixes

hians  gaping

hibernalis, hibernale  pertaining to winter, hibernation

hibernicus, hibernica, hibernicum  from Ireland (*Hibernia*)

hibiscifolius, hibiscifolia, hibiscifolium  having leaves like *Hibiscus*

hiemalis, hiemale  of winter

himalaicus, himalaica, himalaicum; himalayensis, himalayense  from the Himalayas

hippocastanum  specific species name of horse chestnut, of the *Aesculus* genus

hippophaeoides  like Hippophae
hirsutissimus, hirsutissima, hirsutissimum
very hairy

hirsutulus, hirsula, hirsutulum a little hairy

hirsutus, hirsute, hirsutum hairy, coarse stiff hair

hirtellus, hirtella, hirtellum rather hairy

hirtus, hirta, hirtum hairy

hispanicus, hispanica, hispanicum from Spain (Spain)

hispicus, hispa, hispidum bristly or bristly with hairs

hollandicus, hollandica, hollandicum from Holland

holocarpus, holocarpa, holocarpum whole fruits that are not lobed or split

holochrysus, holochrysa, holochrysum wholly, or completely golden

hololeucus, hololeuca, hololeucum wholly white

hondovnsis, hondense from Hondo, Japan

horizontalis, horizontale horizontal form

horridus, horrida, horridum prickly

hortensis, hortense; hortorum; hortulanus, hortulana, hortulanum of gardens

humifusus, humifusa, humifusum sprawling

humilis, humile low or dwarf

humulifolius, humulifolia, humulifolium having leaves like hops (Humulus)

hungaricus, hungarica, hungaricum from Hungary

hupehensis, hupehense from Hupeh, China

hyacinthinus, hyacinthina, hyacinthinum purplish-blue; resembling hyacinths (Hyacinthus)

hyalinus, hyaline, hyalinum transparent, somewhat transparent, or partially transparent

hybridus, hybrida, hybridum hybrid

hydrangeoides like Hypericum

hyemalis, hyemale of winter

hylocereus a night-blooming cereus

hypericifolius, hypericifolia, hypericifolium having leaves like Hypericum

hypericoides like Hypericum

hypnoides like hypnum moss

hypochondriacus, hypochondriaca, hypochondriacum somber

hypogaeus, hypogaea, hypogeum underground, underneath

hypoglaucus, hypoglaucum, hypoglaucus glaucous

hypoleucus, hypoleuca, hypoleucum white underneath

hypophyllus, hypophylla, hypophyllum under a leaf

hyssopifolius, hyssopifolia, hyssopifolium with leaves like hyssop (Hyssopus)

hystrix bristly

ianthinus, ianthina, ianthinum violet-blue

ibericus, iberica, ibericum from the Iberian Peninsula or from Georgia, former U.S.S.R., or Iberia (Spain, Portugal)
iberideus, iberidea, iberideum like Iberis
iberidifolius, iberidifolia, iberidifolium leaves like Iberis
idaeus, idaea, idaeum From Mount Ida in Asia Minor
ignescens; igneus, ignea, igneum fiery-red color
ilicifolius, ilicifolia, ilicifolium having leaves like holly (Ilex)
illecebrosus, illecebrosa, illecebrosum enticing, attractive
illustratus, illustrata, illustratum illustrated, detailed
illustris, illustre brilliant, shining
illyricus, illyrica, illyricum from ancient Illyria
imbricatus, imbracata, imbracatum overlapping like tiles on a roof
immaculatus, immaculata, immaculatum without spots or blemish, immaculate
immersus, immersa, immersum growing while immersed in water
impeditus, impedita, impeditum tangled, halted, or hindered
imperialis, imperiale imperial, showy, royal
impressus, impressa, impressum depressed, sunken, impressed
impudicus, impudica, impudicum shameless, lewd
inaequalis, inaequale unequal
inapertus, inaperta, inapertum closed
incanus, incana, incanum hoary, grayish, or whitish, sometimes with age and sometimes with hair
incarnatus, incarnata, incarnatum flesh-colored
incertus, incerta, incertum doubtful, uncertain
incisifolius, incisifolia, incisifolium cut leaves
incisus, incisa, incisum cut deeply and usually irregularly
inclinatus, inclinata, inclinatum bent downward, inclined
incomparabilis, incomparabile incomparable, excelling
inconspicuous, inconspicua, inconspicuum not conspicuous
incurvatus, incurvata, incurvatum curving inward
indentatus indented, toothed
indicus, indica, indicum from India
indivisus, indivisa, indivisum not divided
induratus, indurata, induratum hard, durable
inebrians intoxicating, inebriating
inermis, inerme without prickles
infactorius, infectoria, infactorium colored or dyed
infestus, infesta, infestum troublesome, infested
inflatus, inflata, inflatum swollen, inflated
inflexus, inflexa, inflexum bent inward, flexed inward
infundibuliformis, infundibuliforme funnel-shaped, or formed
ingens enormous
indorus, indora, indorum not scented, no odor
innoxius, innoxia, innoxium harmless
inquinans stained or flecked
inscriptus, inscripta, inscriptum inscribed
insignus, insigna, insignum remarkable, distinguished
insipidus, insipida, insidium insipid
insulaus, insulana, insulanum; insularis, insulare from islands
intactus, intacta, intactum intact
integer, integra, integrum entire
integrifolius, integrifolia, integrifolium with entire or undivided leaves
intermedius, intermedia, intermediate
interruptus, interrupta, interruptum not continuous, interrupted
intertextus, intertexta, intertextum intertwined
intortus, intorta, intortum twisted
intricatus, intricata, intricatum tangled
introrsus, introrsa, introrum turned inward
inundatus, inundata, inundatum growing in ground likely to be inundated with water, flood areas
involucratus, involucrata, involucratum a circle of bracts surrounding a flower cluster
involutus, involuta, involutum rolled inward
ioanthus, ioantha, ioanthum violet-colored flowers
ioensis, ioensa, ioensum from Iowa
ionopsidium diamond flowers
iricus, irica, iricum from Ireland
iridescens iridescent
iridiflorus, iridiflora, iridiflorum leaves like Iris
iridioides like Iris
irritans irritating
irroratus, irrorata, irroratum minutely spotted, sprinkled
isabellinus, isabellina, isabellinum yellowish
islandicus, islandica, islandicum of Iceland
isophyllus, isophylla, isophyllum leaves of equal size or form
istriacus, istriaca, istriacum from Italy, Yugoslavia
italicus, italicca, italicum from Italy
ixia hardy bulbous herbs
ixioides like Ixia
ixocarpus, ixocarpa, ixocarpum sticky fruits
jamaicensis, jamaicense from Jamaica, West Indies
japonicus, japonica, japonicum from Japan
jasmineus, jasminea, jasmineum; jasminoides like jasmine (Jasminus)
javanicus, javanica, javanicum from Java
junceus, juncea, junceum like rushes (Juncus)
juniperifolius

juniperifolius, juniperifolia, juniperifolium leaves like juniper (Juniperus)

juniperinus, juniperina, juniperinum like a juniper

kalmiiflorus, kalmiiflora, kalmiiflorum flowers like mountain laurel (Kalmia)
kamtschaticus, kamtschatica, kamtschaticum from Kamchatka

kansuensis, kansuense Kansu, China

kashmirianus, kashmiriana, kashmirianum from Kashmir

kermesinus, kermesina, kermesinum carmine, vivid red, scarlet, or crimson

kewensis, kewense from the Royal Botanic Gardens, Kew, England

kiousianus, kiousiana, kiousianum from Kyushu, Japan

koreanus, koreana, koreanum; koriaensis, koriaense from Korea

kiusianus, kiusiana, kiusianum from Kyushu, Japan

lactucifolius, lactucifolia, lactucifolium leaves like lettuce (Lactuca)
lacustris, lacustre of lakes

laetiflorus, laetiflora, laetiflorum bright flowers

laetivirens bright green

laetus, laeta, laetum bright

laevicaulis, laevicaule smooth stems

laevigatus, laevigata, laevigatum; laevis, laeve smooth

lagodechianus, lagodechiana, lagodechianum from Lagodechi, Kaukasus, in Georgia, Russia

lamellatus, lamellata, lamellatum layered

lanatus, lanata, lanatum wooly

lanceolatus, lanceolata, lanceolatum; lanceus, lancea, lanceum, lanceolate lance- or spear-shaped

lancifolium leaves lance-shaped

laniger, lanigera, lanigerum; lanosus, lanosa, lanosum lanceolate, lance or spear-shaped

lantana, lanata, lantatum wooly

lantanoaides lantana-like

lanuginosus wooly, downy

lapponicus, lapponica, lapponicum from Lapland, above the Arctic Circle

laricinus, laricina, laricinum like larch (Larix)

lasiacanthus, lasiacantha, lasiacanthum wooly and spined

lasiandrus, lasiandra, lasiandrum wooly stamens

lasiocarpus, lasiocarpa, lasiocarpum wooly or rough fruit
lasiopetalus, lasiopetala, lasiopetalum  
wooly petals

latiflorus  broad-flowered

latifolius  broad-leaved

latisquamus  with broad scales or bracts

latus  broad, wide

lenticularis, lenticulare; lentiformis,  
  lentiforme  lens-shaped

lentus, lenta, lentum  tough and pliable

leonurus, leonura, leonurum  like a lion’s tail

leonardinus, leopardina, leopardinum  
  spotted like leopards

lepidophyllus  scaly-leaved

lepidotus, lepidota, lepidotum  scaly

lepidus  graceful, elegant

leptocaulis, leptocaule  slender-stemmed

leptocladius, leptoclada, leptocladium  
  slender branching

leptolepis  thin scales

leptopetalus, leptopetala, leptopetalum  
thin petals

leptophylus, leptophyla, leptophylum  
thin leaves

leptosepalus, leptosepala, leptosepalum  
thin sepals

leptostachys, leptostachya, leptostachyum  
  having slender spikes

leucanthus, leucantha, leucanthum  
  having white flowers

leucocaulis, leucocaule  having white stems

leucochilus, leucochila, leucochilum  
  having white lips

leucodermis, leucoderme  having white skin

leuconeurus, leuconeura, leuconeurum  
  having white veins

leucopetalus, leucopetala, leucopetalum  
  having white petals

leucophyllus, leucophylla, leucophylum  
  white leaves

leucostachys, leucostacha, leucostachum  
  white spikes

leucotrichus, leucotricha, leucotrichum  
  white hairs

libani; libanoticus, libanotica, libanoticum  
  from Mount Lebanon, Lebanon

libericus  of Liberia

liburnicus, liburnica, libernicum  from Croatia (Liburnia)

lignosus, lignose, lignosum  woody, having lignin

ligularis, ligulare; ligulatus, ligulata,  
  ligulatum  strap-like

ligusticifolius, ligusticifolia, ligusticifolium  
  leaves like lovage (Ligusticum)

ligustrinus, ligustrina, ligustrinum  leaves  
  like privet (Ligustrum)

likiangensis, likiangense  from the Lichiang  
  Mountains, China

lilaceus, lilacea, lilaceum  like a lily  
  (Lilium)

lilacinus, lilacina, lilacinum  lilac-color

liliflorus, liliflora, liliflorum  flowers like a  
  lily (Lilium)

lilifolius, lilifolia, lilifolium  leaves like a lily  
  (Lilium)
limensis, limense from Lima, Peru
limophilus, limnophila, limnophilum of swamps
limoniifolius, limoniifolia, limoniifolium leaves like sea-lavender (Limonium)
limosus, limosa, limosum of marshlands, or growing in wet ground
linariifolius, linariifolia, linariifolium leaves like Linaria
linearifolius, linearifolia, linearifolium having linear leaves
linearis, lineare narrow, having nearly parallel, linear sides
lineatus, lineate, lineatum lined, striped
linguiformis, linguiforme; lingulatus, lingulata, lingulatum tongue-shaped
lingulatus tongue-shaped
liniflorus, liniflora, liniflorum flowers like flax (Linum)
linifolius, linifolia, linifolium leaves like flax (Linum)
littoralis, littorale; littoreus, littorea, littoreum from seashores, coastal, between high and low water marks
lividus, livida, lividum bluish-gray, lead color
lobatus, lobata, lobatum lobed
lobelioides resembling Lobelia
lobulatus, lobulata, lobulatum having lobes that are small
lomariifolius, lomariifolia, lomariifolium leaves like Lomaria
longebracteatus, longebracteata, longebracteatum having long bracts
longependunculatus, longependunculata, longependunculatum having long peduncles (flower stalks)
longicaulis, longicaule having long stalks
longicomus, longicoma, longicomum having long hairs
longicuspis, longicuspe long-pointed
longiflorus, longiflora, longiflorum having long flowers
longifolius, longifolia, longifolium having long leaves
longihamatus, longihamata, longihamatum having long hooks
longilobus, longiloba, longilobum having long lobes
longipes having long stalks; long footed
longipetalus, longipetala, longipetalum long petals
longisepalus, longisepala, longisepalum having long sepals
longispinus, longispina, longispinum having long spines
longissimus, longissima, longissimum very long
longistylus, longistyla, longistylum with long styles
longus, longa, longum long
lophanthus, lophantha, lophanthum having crested flowers
louisianus, louisiana, louisianum from Louisiana
lucens; lucidus, lucida, lucidum bright, shining, clear, lucent
ludovicianus, ludovicana, ludovicianum from Louisiana
lukiangensis, lukiangense from Lukiang, China

lunatus, lunata, lunatum; lunulatus, lunulata, lunulatum crescent shape

luridus, lurida, luridum grayish-yellow, orange, pale, ghastly, or highly colored

lusitanicus, lusitanica, lusitanicum from Portugal (Lusitania)

luteolus, luteola, luteolum yellowish

lutescens turning yellow or yellowish

luteus, lutea, luteum yellow

luxurians luxuriant

lychnidifolius, lychnidifolia, lychnidifolium leaves like Lychnis

lycopodioides like club-moss (Lycopodium)

lydius, lydia, lydium from Asia Minor

lyratus, lyrata, lyratum fiddle shape, lyre shape

lysimachioiedes resembling Lysimachia

macedonicus, macedonica, macedonicum from Macedonia

macracanthus, macracantha, macracanthum large spines

macradensus, macradensa, macradensum large glands

macrandrus, macandra, macrandrum; macrantherus, macranthera, macrantherum large anthers

macranthus, macrantha, macranthum large flowers

macrobotrys large grape-like clusters

macrocarpus, macrocarpa, macrocarpum large fruits

macrocephalus, macrocephala, macrocephalum large heads

macrodontus, macrodonta, macrodontum large teeth

macrophyllus, macrophylla, macrophyllum large leaves

macrorrhizus, macrorrhiza, macrorrhizum large roots

macrospermus, macrosperma, macrospermum large seeds

macrostachyus, macrostachya, macrostachyum large spikes

maculatus, maculata, maculatum; maculifer, maculifera, maculiferum; maculosus, maculosa, maculosum spotted, spots

madagascariensis, madagascariense from Madagascar

magellanicus, magellanica, magellanicum from near the Straits of Magellan

magnificus, magnifica, magnificum magnificent, distinguished

majalis, majale May flowers; of May

majesticus, majestica, majesticum majestic

major; majus, maja, majum big, large

malabaricus, malabarica, malabaricum from Malabar, India

malacoides soft or sticky or gelatinous, or mallow-like

maliformis, maliforme apple shape

malvaceus, malvacea, malvaceum like mallow (Malva)

malviflorus, malviflora, malviflorum flowers like those of mallow (Malva)
mammiformis, mammiforme  shaped like a nipple
mammillatus, mammillata, mammillatum; mammillaris, mammilare; mammosus, mammosa, mammosum breast-like or shaped like a nipple
mandshuricus, mandshurica, mandshuricum from Manchuria
manicatus, manicata, manicatum long sleeves
manipurensis, manipurense from Manipur, India
margaritaceus, margaritacea, margaritaceum; margaritus, margarita, margaritum pearly or like pearls
margaritifer, margaritifera, margaritiferum pearl bearing
marginalis, marginale; marginatus, marginata, marginatum margined, margins of different color
marilandicus, marilandica, marilandicum from Maryland
maritimus, maritima, maritimum of the sea
marmoratus, marmorata, marmoratum; marmoreus, marmorea, marmoreum marbled, mottled, splattered
maroccanus, maroccanca, maroccanum from Morocco
mas; masculus, mascula, masculum masculine, male, sedate
masculatus masculine
matronalis, matronale relatively Roman festival of the matrons on March 1
mauritanicus, mauritana, mauritianum from Mauritius
maxillaries, maxillare jaws or jaw-like
maximus, maxima, maximum biggest
medicus, medica, medicum medicinal
mediopictus, mediopicta, mediopictum striped in the middle
mediterraneus, mediterranea, mediterranum from near the Mediterranean Sea
medius, media, medium intermediate
medullaris, medullare; medullus, medulla, medullum pithy
megacalyx having a large calyx
megacanthus, megacantha, megacanthum large spines
megacarpus, megacarpa, megacarpum large fruits
megalanthus, megalantha, megalanthum large flowers
megalophyllus, megalophylla, megalophyllum large leaves
megapotamicus, megapotamica, megapotamicum from the big river
megarrhizus, megarrhiza, megarrhizum big roots
megaseifolius, megaseifolia, megaseifolium leaves like Bergenia (Megasea)
megaspermus, megasperma, megaspermum big seeds
megastachyus, megastachya, megastachyum big spike
megastigmus, megastigma, megastigmum a big stigma
meleagris, meleagre  spotted like a guinea
    bird, speckled
meliodorus, meliodora, meliodorum  smell resembling honey
mellitus, melita, melitum  honey-sweet
meloformis, meloforme  melon shape
membranaceous, membranacea, membranaceum  membranous
meridianus, meridiana, meridianum;  meridionalis, meridionale  of midday
metallicus, metallica, metallicum  metallic
mexicanus, mexicana, mexicanum  Mexican
micans  glittering
micracanthus, micracantha, micracanthum  small thorns
micranthus, micrantha, micranthum  small flowers
microcarpus, microcarpa, microcarpum  small fruits
microcephalus, microcephala, microcephalum  a small head
microchilus, microchila, microchilum  a small lip
microdasys  small and shaggy
microglossus, microglossa, microglossum  a small tongue
microlepis, microlepe  small scales
micropetalus, micropetala, micropetalum  small petals
microphyllus, microphylla, microphyllum  small leaves

microsepalus, microsepalala, microsepalum  small sepals
microspermus, microsperma, microspermum  small seeds
militaris, militare  having to do with soldiers
millefolius, millefoliata, millefolium;  millefolius, millefolia, millefolium  many leaves or leaflets
mimosifolius, mimosifolia, mimosifolium  leaves like those of Mimosa
mimosoides  looking like Mimosa
miniatus, miniata, miniatum  bright red
minimus, minima, minimum  smaller, dwarf
minor  smaller
minutiflorus, minutiflora, minutiflorum  minute or tiny flowers
minutifolius, minutifolia, minutifolium  minute or tiny leaves
minutissimus, minutissima, minutissimum  most minute or tiny
minutus, minuta, minutum  very small
mirabilis, mirabile  wonderful, extraordinary
missouriensis, missouriense  from Missouri
mitis, mite  mild, spineless
mitratus, mitrata, mitratum  a headdress;  worshipful cap; mitered or turbaned
mitriformis, mitriforme  miter-like
mixtus, mixta, mixtum  mixed
modestus, modesta, modestum  modest
moldavicus, moldavica, moldavicum  from the Danube Basin
molle

molle  native of Peru
mollicomus, mollicoma, mollicomum  having soft hairs
mollis, molle  soft, or having soft hairs
mollissimus, mollissima, mollissimum  with much softness; very soft hairs
moluccanus, moluccana, moluccanum  from the Molucca Islands
monacanthus, monacantha, monacanthum  having one spine
monadelphus, monadelpha, monadelphum  having stamens’ filaments attached, in one bundle
monandrus, monandra, monandrum  one stamen
mongolicus, mongolica, mongolicum  from Mongolia
monilifer, monilifera, moniliferum  a necklace
moniliformis, moniliforme  necklace-like
monocepalus, monocephala, monocephalum  one head
monogynus, monogyna, monogynum  one pistil
monopetalus, monopetala, monopetalum  one petal
monophyllus, monophylla, monophyllum  one leaf
monosepalus, monosepala, monosepalum  one sepal
monospermus, monosperma, monospermum  one seed
monostachyus, monostachya, monostachyum  one spike
monostrosus, monostrosa, monostrosum  monstrous, not normal, or strange
montanus, montana, montanum  of mountains
monticola, monticolus  inhabiting mountains
morifolius, morifolia, morifolium  leaves like mulberry (Morus)
mosaicus, mosaica, mosaicum  a mosaic pattern, variegated
moschatus, moschata, moschatum  musk scent
moupinensis, moupinense  from Pooksing (Mupin), China
mucosus  sticky, slimy
mucronatus, mucronata, mucronatum  short terminal points, or ends; small, abrupt tip
mucronulatus, mucronulata, mucronulatum  short, hard point
multibracteatus, multibracteata, multibracteatum  having many or several bracts
multicaulis, multicaule  many or several stems
multicavus, multicava, multicavum  many or several hollows
multiceps  many or several heads
multicolor  many or several colors
multifidus, multifida, multifidum  divided many or several times
multiflorus, multiflora, multiflorum  having many flowers
multijuga  in many pairs
multilineatus, multilineata, multilineatum  having many lines
multinervis, multinerve  many veins
multiplex  many or several folds
multiradiatus, multiradiata, multiradiatum  with many rays
multiscapoideus, multiscapoidea, multiscapoideum  having many naked flower stems
muralis, murale  growing walls
muricatus, muricata, muricatum  roughened, with strong points
musaicus, musaica, musaicum  a mosaic pattern
muscipilus, muscipila, muscipilum  catching flies
muscitoxicus, muscitoxica, muscitoxicum  poisonous to flies
muscosus, muscosa, muscosum  resembling moss
mutabilis, mutabile  changeable in color or variable in some other aspect
mutatus, mutata, mutatum  changed, mutant
muticus, mutica, muticum  blunt
myosotidiflorus, myosotidiflora, myosotidiflorum  flowers like forget-me-not (Myosotis)
myriacanthus, myriacantha, myriacanthum  numerous thorns
myriocarpus, myriocarpa, myriocarpum  many fruits
myriophylloides  looking like Myriophyllum
myriophyllum, myriophylla, myriophyllum  many leaves
myrsiniformis, myrsiniformia, myrsiniformium  leaves like Myrsine
myrsinioides  resembling Myrsine
myrtifolius, myrtifolia, myrtifolium  leaves like myrtle (Myrtus)
myrtilloides  myrtle-like
mysorensis, mysorene  from Mysore, India
nankinensis, nankinense  from Nanking, China
nanus, nana, nanum  dwarf
napiformis, napiforme  shaped like a turnip
narbonensis, narbonense  of Narbonne, France
narcissiflorus, narcissiflora, narcissiflorum  flowers like Narcissus
narcissifolius, narcissifolia, narcissifolium  leaves like Narcissus
natalensis, natalense  from Natal, South Africa
natans  floating, swimming
navicularis, naviculare  shaped like a boat
neapolitanus, neapolitana, neopolitanum  from Naples, Italy
nebulosus, nebulosa, nebulosum  cloud-like; like a nebulous cloud
nectariferous  producing nectar
neglectus, neglecta, neglectum  neglected, overlooked, unnoticed
neilgherrensis, neilgherrense  from the Nilgiri Hills, India
nelumbifolius, nelumbifolia, nelumbifolium  having leaves like lotus (Nelumbo)
memoralis, memorale; nemorosus, nemorosa, nemorosum  from woodlands; of groves
nepalensis, nepalense  from Nepal
nepetoides  looking like Nepeta
neriiflorus, neriiflora, neriiflorum  flowers like oleander (Nerium)
neriifolius, neriifolia, neriifolium  leaves like oleander (Nerium)
nervosus, nervosa, nervosum  conspicuous veins, nerved
nevadensis, nevadense  from Sierra, Nevada, Spain; the Sierra Nevada Mountains of California; or the state of Nevada
nidus  a nest
nigella  love-in-a-mist
niger, nigra, nigrum  black
nigratus, nigrata, nigratum  from the area of the Nile River
niloticus, nilotica, niloticum  from the area of the Nile River
nipponicus, nipponica, nipponicum  from Japan
nitens; nitidus, nitida, nitidum  shining or bright
nitidus  shining
nivalis, nivale; niveus, nivea, niveum; nivosus, nivosa, nivosum  snow-white color, or from a snowy area
nobilis, nobile  noble, famous
noctiflorus, noctiflora, noctiflorum; nocturnus, nocturna, nocturnum  night flowering
nocturnus  of the night
nodosus, nodosa, nodosum  conspicuous nodes (joints), knobby, knotty
nodulosus, nodulosa, nodulosum  having small nodes (joints)
nonscriptus, nonscripta, nonscriptum  without markings
nootkatensis, nootkatense  from the region of Nootka Sound, British Columbia
norvegicus, norvegica, norvegicum  from Norway
notatus, notata, notatum  marked
novae-angliae  from New England
novaeboracensis, novaeboracense; novi-belgii  from New York
novae-caesareae  from New Jersey
novae-zelandiae  from New Zealand
nucifer, nucifera, nuciferum, nuciferus  bearing nuts
nudatus  nude, stripped
nudicaulis, nudicaule  naked-stemmed
nudiflorus, nudiflora, nudiflorum  naked-flowered, flowers without leaves
nudum  bare, naked
nummularius, nummularium  looking like a coin
nutans  nodding
nyctagineus, nyctaginea, nyctagineum  night-booming
nymphoides  floating heart
obconicus, obconica, obconicum  shaped like an inverted cone
obesus, obesa, obesum  fat, succulent, plump
oblatus, oblata, oblatum  flattened at the end
obliquus, obliqua, obliquum  oblique
oblongatus, oblongata, oblongatum  oblong
oblongifolius, oblongifolia, oblongifolium  oblong leaves
oblongus, oblonga, oblongum  oblong
obovatus, obovata, obovatum  an egg-shape with the broadest end upward or at the end
obscurus, obscura, obscurum  indistinct, dark or dusky, obscure
obsoletus, obsoleta, obsoletum  rudimentary, obsolete
obtusifolius, obtusifolia, obtusifolium  blunt leaves
obtusus, obtusa, obtusum  blunt, rounded
obvata  inversely ovate, shaped like an upside-down egg
occidentalis, occidentale  western, NW World
ocellatus, ocellata, ocellatum  with eye-like spots or blotches, small eyes
ochraceus, ochracea, ochraceum  ochre-colored, yellowish-brown
ochroleucus, ochroleuca, ochroleucum  yellowish-white
ocimoides  looking like basil (Ocimum)
ocymoides  looking like basil (Ocimum)
odoratissimus, odoratissima, odoratissimum  very fragrant, having an odor
odoratus, odorata, odoratum; odorifer, odorifera, odoriferum; odorus, odora, odorum  fragrant, having an odor
officinalis, officinale  medicinal virtues (real or perceived)
oleifolius, oleifolia, oleifolium  leaves like olive (Olea)
oleoides  looking like olive (Olea)
oleraceus, oleracea, oleraceum  of vegetable gardens, edible
olifer, olifera, oliferum  oil-bearing
olitorius, olitoria, olitorium  associated with culinary herbs
olivaceus, olivacea, olivaceum  light greenish-brown, olive colored, olive-like
olympicus, olympica, olympicum  of Mount Olympus
omiensis, omiense  of Mount Omi, China
ophioglossifolius, ophioglossifolia, ophioglossifolium  leaves like adder’s tongue fern (Ophioglossum)
oppositifolius, oppositifolia, oppositifolium  having opposite leaves
opuliflorus, opuliflora, opuliflorum  flowers like Viburnum opulus
opulifolius, opulifolia, opulifolium  leaves like Viburnum opulus
opuloides  leaves looking like Viburnum opulus
opulus  snowball, species of Viburnum
orbicularis, orbiculare; obiculatus, obiculata, obiculatum  disc-shaped
orchidaceae

**orchidaceae** orchid family

**orchideus, orchidea, orchideum; orchoides; orchoides** orchid-like

**orchidflorus, orchidflora, orchidflorum** flowers looking like those of orchids

**oreganus, oreganao, oreganum; oregonus, oregona, oregonum** from Oregon

**oreophilus, oreophila, oreophilum** of mountains

**orientalis, orientale** of the Orient, Eastern

**origanifolius, origanifolia, origanifolium** leaves like marjoram (*Origanum*)

**origanoides** looking like marjoram (*Origanum*)

**ornatus, ornata, ornatum** showy, ornate, adorned

**ornithocephalus, ornithocephala, ornithocephalum** shaped like a bird’s head

**ornithopodus, ornithopoda, ornithopodum** looking like the foot of a bird

**orthobotrys** erect clusters

**orthocarpus, orthocarpa, orthocarpum** erect fruits

**orthocladus, orthoclada, orthocladium** straight branches

**orthoglossus, orthoglossa, orthoglossum** a straight tongue

**orthopterus, orthoptera, orthopterum** straight wings

**orthosepalus, orthosepala, orthosepalum** straight sepals

**osmanthus** fragrant-flowered, or holly olive or devilwood

**ovalis, ovale** elliptic oval

**ovatus, ovata, ovatum** egg-shaped with a wide end at the base or lower end

**ovifer, ovifera, oviferum; oviger, ovigera, ovigerum** egg-shaped structures

**ovinus, ovina, ovinum** of or looking like sheep

**oxyacanthus, oxyacantha, oxyacanthum** sharp spines

**oxygonus, oxygona, oxygonum** sharp-angled

**oxylobus, oxyloba, oxylobum** having sharp-pointed lobes

**oxyphilus, oxyphila, oxyphilum** of acid soils

**oxyphyllus, oxyphylla, oxyphyllum** sharp-pointed leaves

**pachyanthus, pachyantha, pachyanthum** with thick flowers

**pachycarpus, pachycarpa, pachycarpum** having thick seed coats

**pachyphylopus, pachyphloea, pachyphloeum** having thick bark

**pachyphyllus, pachyphylla, pachyphyllum** thick-leaved

**pachypodus, pachypoda, pachypodum** having thick-based stems

**pacificus, pacifica, pacificum** of the Pacific Ocean

**palaestinus, palaestina, palaestinum** of Palestine

**pallens; pallidus, pallida, pallidum** pale

**pallidus** pale

**palmaris, palmare** a hand’s or palm’s breadth, high or wide
palmatus, palmata, palmatum shaped like a hand with outstretched fingers

palmifolius, palmifolia, palmifolium palm-like leaves

paludosus, paludosa, paludosum; palustris, palustre from marshes

palustris growing in the marsh

panduratus, pandurata, panduratum fiddle-shaped

paniculatus, paniculata, paniculatum flowers in panicles

pannosus, pannosa, pannosum tattered or shredded

papaveraceus, papaveracea, papaveraceum looking like a poppy (Papaver)

papilliger, papilligera, papilligerum; papillosus, papillosa, papillosum having tiny, soft protuberances

pappus tuft of hairs attached to seed

papyraceous, papyracea, papyraceum papyry

papyrifer, papyrifera, papyriferum useful in making paper

paradise; paradisiacus, paradisiacal, paradisiacum of Paradise

paradoxus, paradoxa, paradoxum paradoxical

parasiticus, parasitica, parasiticum parasitic

pardalus, pardalina, pardalimum; pardinus, pardina, pardimum; pardinus, pardina, pardimum spots resembling a leopard or related to leopards' habitat

parnass; parnassicus, parnassica, parnassicum from Mount Parnassus, Greece

parnassifolius, parnassifolia, parnassifolium leaves like those of Parnassia

paronychoides resembling whiteworts

parrotia short like witch hazel

partitus, partita, partitum small bracts

parviflorus, parviflora, parviflorum small flowers

parvifolius, parvifolia, parvifolium small leaves

parvus, parva, parvum small

pastoralis, pastorale associated with shepherds or pastures

patagonicus, patagonica, patagonicum from Patagonia

patens; patulus, patula, patulum spreading

patulus spreading

pauciflorus, pauciflora, pauciflorum few flowers

paucifolius, paucifolia, paucifolium few leaves

paucinervus, paucinerva, paucinervum few veins

pavoninus, pavonina, pavoninum peacock-blue, or with a colorful patch like one on a peacock's tail feather

pectinatus, pectinata, pectinatum resembling a comb

pectinifer, pectinifera, pectiniferum having a comb

pedatifidus, pedatifida, pedatifidum; pedatus, pedata, pedatum divided like the foot of a bird
pedemontanus

pedemontanus, pedemontana, pedemontanum from Piedmont, Italy

pedunculatus stalked

pedunculosus, pedunculosa, pedunculosum many or prominent flower stalks (peduncles)

peduncularis, pedunculare; pedunculatus, pedunculata, pedunculatum distinct flower stalks (peduncles)

pellucidus, pellucida, pellucidum translucent or transparent

peltatus, peltata, peltatum peltate shaped, like a shield with the stalk attached underneath and not of the margin of the leaf

peltiformis, peltiforme like a shallow cup, pelvis-shaped

pendulinus, pendulina, pendulinum; pendulus, pendula, pendulum hanging, pendulous

penindulstid, penindulstr of a peninsula

pennatus, pennata, pennatum pinnate or feathered

pennsylvanicus, pennsylvanica, pennsylvanicum from Pennsylvania

pensilis, pensile hanging

pentagonalus, pentagona, pentagonum five angles

pentagynus, pentagyna, pentagynum five pistils, five fruits

pentandrus, pentandra, pentandrum five stamens

pentaphyllus, pentaphylla, pentaphyllum five leaves, or leaflets

pentapterus, pentaptera, pentapterum five wings

peregrinus, peregrina, peregrinum exotic, not native

perennans; perennis, perenne perennial, lasting year to year

perfoliatus, perfoliata, perfoliatum; perfosus, perfosa, perfosum, perfolate the stem apparently piercing the leaf blade

perforatus, perforata, perforatum with small holes or appearing as if so

perpusilla very small

persicifolius, persicifolia, persicifolium leaves like a peach (Prunus persica) leaf

persicus, persica, persicum from Persia

persistens persistent

persolutus like a garland

pertusus, pertusa, pertatum perforated

peruvianus, peruvianus, peruvianum from Peru

petaloideus, petaloida, petaloidum petal-like

petiolaris, petiolare; petiolatus, petiolata, petiolatum having leaves with distinct stalks, with petiole

petraeus, petraea, petraeum rock-loving

phaeocarpus, phaeocarpa, phaeocarpum dark fruit

phaeus dusky

philadelphicus, philadelphica, philadelphicum from Philadelphia

phoeniceus, phoenicea, phoeniceum Phoenicia, or purple-red

phyllomaniacus, phyllomaniaca, phyllomaniacum abundant leafy growth
picturatus, picturata, picturatum variegated, painted leaves
pictus, picta, pictum brightly colored or painted, variegated
pileatus, pileata, pileatum with a cap
pilifer, pilifera, piliferum with short, soft hairs
pirosus, pilosa, pilosum clothed with long soft hairs
pilularis, pilulare; pilulifer, pilulifera, piluliferum small spherical fruits
pimpinellifolius, pimpinellifolia, pimpinellifolium leaves like Pimpinella
pinetorum from pine forests
pinifolius, pinifolia, pinifolium leaves like a pine (Pinus)
pinnatifidus, pinnatifida, pinnatifidum pinnately divided
pinnatifolius, pinnatifolia, pinnatifolium pinnate leaves
pinnatinervis, pinnatinerve pinnate veins
pinnatus, pinnata, pinnatum feather-like
piperitus, piperita, piperitum pepper-like or hot taste, or peppermint fragrance
pisifer, pisifera, pisiferum pea-bearing
planiflorus, planiflora, planiflorum flat flowers
planifolius, planifolia, planifolium flat leaves
planipes flat stalked
planus, plana, planum flat
platanifolius, platanifolia, platanifolium leaves like a plane tree (Platanus)
platanoides like a plane tree (Platanus)
platyacanthus, platyacantha, platyacanthum wide spines
platycaulis, platycaule wide flat stem
platycentus, platycentra, platycentrum wide flat spur, wide center
platyglossus, platyglossa, platyglossum a flat tongue
platyphyllus, platyphylla, platyphyllum wide leaves
platyphyllus, platyphylla, platyphyllum wide leaves
platypodus, platypoda, platypodum having wide stalks
platyphyllus, platyphylla, platyphyllum wide leaves
platyphyllus, platyphylla, platyphyllum wide leaves
pleniflorus, pleniflora, pleniflorum double flowers
plenissimus, plenissima, plenissimum very double
plenus, plena, plenum double
plicatus, plicata, plicatum pleated, folded like a fan
plumarius, plumaria, plumarium; plumatus, plumata, plumatum plumed or feathered
plumbaginoides

plumbaginoides  like Plumbago
plumosus, plumose, plumosum  feathery
pluriflorus, pluriflora, pluriflorum  many flowers
podagricus, podagrica, podagricum  swollen at the base
podocarpa  with stalked fruits
podophyllus, podophylla, podophyllum  leaves with stout stalks
poeticus, poetica, poeticum  associated with poets
polifolius, polifolia, polifolium  gray leaves like Teucrium polium
politus, polita, politum  elegant or neat
polyacanthus, polyacantha, polyacanthum  many thorns
polyandrus, polyandra, polyandrum  many stamens
polyantha  with many flowers; kind of rose
polyanthemos; polyanthus, polyantha, polyanthum  many flowers
polybotryus, polybotrya, polybotryum  many clusters
polycanthus  many-striped
polycarpus, polycarpa, polycarpum  many fruits
polycephalus, polycephala, polycephalum  many heads
polychromus, polychroma, polychromum  many colors
polygaloides  like Polygala
polylepis  many scales
polymorphus, polymorpha, polymorphum  many forms
polypetalus, polypetala, polypetalum  many petals
polyphyllus, polyphylla, polyphyllum  many leaves
polyrrhizus, polyrrhiza, polyrrhizum  many roots
polysepalus, polysepala, polysepalum  many sepals
polystachyus, polystachya, polystachyum  many spikes
pomaceus  like a pome
pomeridianus, pomeridiana, pomeridianum  of the afternoon
pomifer, pomifera, pomiferum  apple-like fruits, bearing pome fruit
ponchirus  trifoliate or hardy orange
ponderosus, ponderosa, ponderosum  ponderous, heavy, massive
ponticus, pontica, ponticum  from the area of the southern shore of the Black Sea
populifolius, populifolia, populifolium  leaves like those of a poplar (Populus)
populneus, populnea, populneum  associated with poplars (Populus)
porcinus, porcina, porcinum  relating to pigs or their food
porophyllus, porophylla, porophyllum  holes in leaves or appearing so
porphyreus, porphyrea, porphyreum  a reddish hue
porphyrophyllus, porphyrophylla, porphyrophylhum  purple leaves
porrifolius, porrifolia, porrifolium  leaves like leeks (Allium porrifolium)
portulacaceus, portulacacea, portulacaceum resembling Portulaca
poterifolius, poterifolia, poteriiolium leaves like Poterium
praecox very early, precocious
praestans distinguished, excelling
praevernus, praeverna, praevernum before spring
pratensis, pratense of meadows
primuliflorus, primuliflora, primuliflorum flowers like primroses (Primula)
primulifolius, primulifolia, primulifolium leaves like primroses (Primula)
primulinus, primulina, primulinum primrose-yellow
primuloides like primroses (Primula)
princeps most distinguished, princely, first
prismaticus, prismatica, prismaticum like a prism, angled
proboscideus, proboscidea, proboscideum snout-like
procerus, procera, procerum tall
procumbens prostrate, spreading horizontally, trailing
profusus, profusa, profusum abundant
prolifer, prolifer, proliferum flowering freely or propagating freely, many leaved
prolificus, prolifica, prolificum free-fruiting, prolific
propinquus, propinqua, propinquum related
prostratus, prostrata, prostratum prostrate, lying flat
protrusus, protrusa, protrusum protruding
provincialis, provinciale from Provence, France
pruhoionicianus, pruhoioniciana, pruhoionicianum from Pruhonice, Czechoslovakia
pruinaus, pruinata, pruinatum; pruiniosus, pruinosa, pruinosum glistening, frosted
prunifolius, prunifolia, prunifolium leaves like plums (Prunus)
pruriens causing itching
psittacinus, psittacina, psittacinum parrot-like
psittacorum of parrots, parrot-colored
psychodes butterfly-like
ptarmica sneeze-producing
ptarmicoides resembling sneezewort
pteridoides like ferns of the Pteris genus
pubens; pubescens; pubiger, pubigera, pubigerum downy
puberulus somewhat pubescent
pubescens pubescent; hairy, short, soft, and downy
pudicus, pudica, pudicum bashful, shrinking
pulchellus, pulchella, pulchellum; pulcher, pulchra, pulchrum pretty, beautiful
pulcherrimus very handsome
pulverulentus, pulverulenta, pulverulentum dusted, having powder
pulvinatus

*pulvinatus*, *pulvinata*, *pulvinatum* cushion-like

*pumilus*, *pumila*, *pumilum* dwarf

*punctatus*, *punctata*, *punctatum* spotted, depressions spotted

*pungens* sharp points, piercing

*puniceus*, *punicea*, *puniceum* purplish-red

*purgans* purgative

*purpurascens* purplish

*purpuratus*, *purpurata*, *purpuratum* becoming purple

*purpureus*, *purpurea*, *purpureum* purple

*pusillus*, *pusilla*, *pusillum* very small

*pustulatus*, *pustulata*, *pustulatum* blistered appearance

*pygmaeus*, *pygmaea*, *pygmaeum* small or tiny, pigmy, dwarf

*pyramidalis*, *pyramidale*; *pyramidatus*, *pyramidata*, *pyramidatum* pyramidal

*pyrenaicus*, *pyrenaica*, *pyrenaicum* from the Pyrenees

*pyriformis*, *pyriforme* pear-shaped

*pyxidatus*, *pyxidata*, *pyxidatum* having a lid

*quadrangularis*, *quadrangulare*; *quadrangulatus*, *quadrangulata*, *quadrangulatum* with four angles

*quadratus*, *quadra*, *quadratum* in fours

*quadricolor* having four colors

*quadrifidus*, *quadrifida*, *quadrifidum* cut into four parts

*quadrifolius*, *quadrifolia*, *quadrifolium* leaves in fours

*quercifolius*, *quercifolia*, *quercifolium* leaves like an oak (*Quercus*)

*quinatus*, *quinata*, *quinatum* in fives

*quinqueflorus*, *quinqueflora*, *quinqueflorum* flowers in fives

*quinquefolius*, *quinquefolia*, *quinquefolium* five leaves, or five leaflets

*quinquenervis*, *quinquenerve* five veined

*quinquepunctatus*, *quinquepunctata*, *quinquepunctatum* five spotted

*quintenis*, *quintene* from Qto, Ecuador

*racemiflorus*, *racemiflora*, *racemiflorum*; *racemosus*, *racemosa*, *racemosum* flowers in racemes

*radiatus*, *radiata*, *radiatum* radiating

*radicans* stems that root

*radula* like a rasp or file

*ramiflorus*, *ramiflora*, *ramiflorum* branched flowers

*ramosissimus*, *ramosissima*, *ramosissimum* branched mulch

*ramosus*, *ramosa*, *ramosum* branched

*ranunculoides* resembling buttercups (*Ranunculus*)

*rapaceus*, *rapacea*, *rapaceum* associated with turnips (*Brassica rapa*)

*rapunculoides* looking like Rapunculus, a group now included in *Campanula*

*rariflorum*, *rariflora*, *rariflorum* scattered flowers
reclinatus, reclinata, reclinatum bent backward
rectus, recta, rectum erect
recurratus, recurvata, recurvatum; recurvus, recula, recurvum curved backward
redivivus, rediviva, redivivum returning to life, surviving again, returned
reductus, reducta, reductum reduced
reflexus, reflexa, reflectum; reflexus, reflexa, reflectum bent backward
refractus broken
refulgens refulgent, brilliant, radiant
regalis, regale regal, splendid, suitable for a king
reginae related to the queen
regius, regia, regium royal
reinformis, reinforme kidney form
religiosums, religiosum, religios sacred, associated with religion or religions
remotus, remota, remotum scattered, distant parts
repandus somewhat wavy margins
repens; reptans creeping
resediflorus, resediflora, resediflorum having flowers like mignonette (Reseda)
resedifolius, resedifolia, resedifolium leaves like mignonette (Reseda)
resinifer, resinifera, resiniferum; resinous, resinosa, resinum resinous
resiniferous producing resin
reticulatus, reticulata, reticulatum netted
retroflexus, retroflexa, retroflexum; retortus, retorta, retortum twisted back, backward flexed
retusus, retusa, retusum rounded and slightly notched apex
revolutus, revoluta, revolutum rolled backward
rex king
rhamnifolius, rhamnifolia, rhamnifolium leaves like Rhamnus
rhamnoides resembling Rhamnus
rhizophyllus, rhizophylla, rhizophyllum leaves that produce roots
rhodanthis, rhodantha, rhodanthum with rose-pink flowers; flowers like roses
rhodora Azalea-like shrubs
rhombicus, rhombica, rhombicum; rhomboidus, rhomboida, rhomboidum diamond-shaped or rhomboidal
rhytidophyllus, rhytidophylla, rhytidophyllum wrinkled leaves
ricinifolius, ricinifolia, ricinifolium leaves like the castor-bean (Ricinus)
ricinoides looking like the castor-bean (Ricinus)
rigens; rigidus, rigida, rigidum rigid
rigidifolius, rigidifolia, rigidifolium having rigid leaves
rigidus stiff
ringens gaping
riparius, riparia, riparium of riverbanks
rivalis, rivale of streamsides, pertaining to brooks
rivularis, rivulare  
brook or stream loving

robustispinus, robustispina, robustispinum  
strong spines

robustus, robusta, robustum  
strong or stout, vigorous

romanus, romana, romanum  
of Rome

rosaceus, rosacea, rosaceum  
rose-like

roseus, rosea, roseum  
rose colored

rosamarinifolius, rosamarinifolia, rosamarinifolium  
leaves like rosemary (Rosmarinus)

rostratus, rostrata, rostratum  
beaked

rosularis, rosulare  
with rosettes

rotatus, rotata, rotatum  
resembling a wheel

rotundatus, rotundata, rotundatum; rotundus, rotunda, rotundum  
rounded

rotundifolius, rotundifolia, rotundifolium  
round leaves

rubellus, rubella, rubellum; rubescens  
reddish

rubens; ruber, rubra, rubrum  
red

rubescens  
becoming reddish

rubiginous, rubiginoa, rubiginoum  
rosy, rusty

rubioideae  
resembling Rubia

rubra  
red

rubricaulis, rubicaule  
red stem

rubrofructa  
red-fruited

rufidulus  
somewhat reddish

rugosus, rugosa, rugosum  
wrinkled

rupestris, rupestre  
rock loving

rupicola  
living around rocks

rupicolus  
growing on cliffs or ledges

rupifragus, rupifraga, rupifragum  
rock breaking

ruscifoliolus, ruscifolia, ruscifolium  
leaves like the butcher's broom (Ruscus)

rusticanus, rusticana, rusticanum; rusticus, rustica, rusticum  
of the countryside

ruthenicus, ruthenica, ruthenicum  
from Ruthenia, former U.S.S.R.

rutlians  
reddish, becoming red

saccatus, saccata, saccatum  
sack shape or resembling a bag

saccharifer, saccharifera, sacchariferum  
source of sugar

saccharinus, saccharina, saccharinum  
sugary

saccharoides  
looking like sugar cane (Saccharum)

saccharum  
sugar

saccifer, saccifera, sacciferum  
bearing sacks or bags

sachalinensis, sachalinense  
from Sakhalin Island, former U.S.S.R.

sacrorum  
from sacred places

sagittalis, sagittale  
arrowhead shaped

sagittifolius, sagittifolia, sagittifolium  
leaves shaped like an arrowhead

salicaria  
like a willow

salicifoliolus, salicifolia, salicifolium  
leaves like willows (Salix)

salicinus, salicina, salicinum  
willow-like

salicornioideae  
looking like Salicornia

salignus, saligna, salignum  
willow-like
salinum, salina, salinus  in salty places
salpiglossis  painted tongue
salsuginosus, salsuginosa, salsuginosum  from salt marshes
saluenensis, saluenense  from the Salween River in China or Burma
salvifolius, salvifolia, salvifolium  Salvia-like leaves
sambucifolius, sambucifolia, sambucifolium  elder (Sambucus)–like leaves
sanctus, sancta, sanctum  holy, of a sanctuary
sanguineus, sanguinea, sanguineum  blood-red color
sapidus, sapida, sapidum  agreeable tasting, savory
sapientum  associated with wise (sapient) men, or authors
saponaceus, saponacea, saponaceum  soapy
sarcodes  flesh-like
sarmentosus, sarmentosa, sarmentosum  with runners
sarniensis, sarniense  from Guernsey (Saria) of the Channel Islands
sativus, sativa, sativum  cultivated
satureja  savory
saxatilis, saxatile; saxicola  inhabiting rocky areas
saxifrage  rockery plants
scaber, scabra, scabrum  rough
scabiosifolius, scabiosifolia, scabiosifolium  leaves like scabious (Scabiosa)
scabrous  climbing

scandens  climbing
scapiger, scapigera, scapigerum; scaposus, scaposa, scaposum  having scapes (naked, flowering stalks)
scariosus, scariosa, scariosum  shriveled, thin, and not green
sceleratus, scelerata, sceleratum  wicked, dangerous, associated with harm
schizopetalus, schizopetala, schizopetalum  cut petals
schizophyllus, schizophylla, schizophyllum  cut leaves
schollaris, schollare  school or scholarly associating
scilloides  looking like Scilla (squill)
sclerocarpus, sclerocarpa, sclerocarpum  with hard fruits
scoparius, scoparia, scoparium  brook-like
scopulorum  cliffs or crags (growing there)
scorpioides  scorpion-like
scoticus, scotica, scoticum  from Scotland
scutum  a shield
secundiflorus, secundiflora, secondiflorum  flowers on one side
secondus, seconda, secondum  one-sided; side-flowering
segetalis, segetale; segetum  from grain fields
segetum  of cornfields
selaginoides  looking like Selaginella
semperflorens  never-ending blooms
sempervirens  evergreen, always green
sempervivoides  resembling Sempervivum

sempervivoides
senecioides

senecioides  resembling Senecio

senescens  aging

senilis, senile  having white hairs, senile, old

sensibilis, sensibile; sensitivus, sensitiva, sensitivum  sensitive to touch or other stimuli, responding to and sensing touch

sensitivus  sensitive

sepiaiurus, sepiaria, sepiarium  associated with hedges

septangularis, septangulare  seven-angled

septemfidus, septemfida, septemfidum  seven cuts

septemlobus, septemloba, septemlobum  seven lobes

septentrionalis, septentrionale  northern

sericanthus, sericantha, sericanthum  having silky flowers

sericeus, sericea, sericeum  silky

sericifer, sericifera, sericiferum; sericofer, sericofera, sericoferum  bearing silk

serotinus, serotina, serotinum  blooming or ripening late

serpens  creeping, crawling, growing on the ground like a serpent

serpentinus, serpentina, serpentinum  relating to snakes or to serpentine shapes

serpyllifolius, serpyllifolia, serpyllifolium  leaves like Thymus serpyllum

serratifolius, serratifolia, serratifolium  saw-toothed leaves

serratulatus, serratulata, serratulatum  little saw-like teeth

serratus, serrata, serratum  saw-toothed, serrate

suffolius  stalk-like leaves

sessilis, sessile  having no stalk

setaceus, setacea, setaceum  having bristles, bristle-like

setifer, setifera, setiferum; setiger, setigera, setigerum; setosus, setosa, setosum  bristly

setifolius, setifolia, setifolium  having bristly leaves

setigera  bristle-bearing

sexangularis, sexangulare  six-angled

siameus, siamea, siameum  from Thialand (Siam)
sibiricus  of Siberia

siculiformis, siculiforme  dagger-shaped

siculus, sicula, siculum  from Sicily

signatus, signata, signatum  clearly marked or vividly individualized

silvaticus, silvatica, silvaticum; silvestris, silvestre  of woodlands

similis, simile  similar

simplex  branchless

simplicicaulis, simplicicaule  having branchless stems

simplicifolius, simplicifolia, simplicifolium  a simple leaf, no compound leaves, or no leaflets

simulans  resembling, being similar to

sinensis, sinense; sinicus, sinica, sinicum  from China

sinuatus, sinuata, sinuatum; sinuosus, sinuosa, sinuosum  wavy margins, sinuous margins
sitchensis, sitchense from Sitka, Alaska

smaragdinus, smaragdna, smaradgnum
emerald-green

smilacinus, smilacina, smilacinum
associated with Smilax

sobolifer, sobolifera, soboliferum creeping stems that can root

socialis, sociale forming colonies (societies), or clumps

solaris, solare liking good solar (sun) exposure

soldanelloides looking like Soldanella

solidus, solida, solidum solid

somnifer, somnifera, somniferum sleep producing

sorbifolius, sorbifolia, sorbifolium leaves resembling the mountain ash (Sorbus)

sordidus, sordida, sordidum dirty, sordid, wretched, dull; muddy color

sparsus, sparsa, sparsum few, sparse

spathulatus, spathulata, spathulatum looking like a spatula, spoon-shaped

speciosus, speciosa, speciosum showy, deceptive, alluring, not genuine, specious, good-looking

spectabilis, spectabile spectacular, remarkable

speculatus, speculata, speculatum mirror-like

sphacelatus, sphacelata, sphacelatum dead

sphaericus, sphaerica, sphaericum spherical

sphaerocarpus, sphaerocarpa, sphaerocarpum spherical fruits

sphaerocephalus, sphaerocephala, sphaerocephalum spherical heads, rounded head

spicatus spicate with spikes

spicifer, spicifera, spiciferum having spikes

spiculiflorus, spiculiflora, spiculiflorum flowers in small spikes

spinascens; spinifer, spinifera, spiniferaem; spinifex; spinosus, spinosa, spinosum spiny

spiniosus full of spines

spinossimus most spiny

spinulifer, spinulifera, spinuliferum small spines

spiralis, spirale spiral

splendens; splendidus, splendidina, splendidum splendid

spurius, spuria, spurium false, spurious, illegitimate

squalens; squalidus, squalida, squalidum dirty looking, filthy, degrading, squalid

squamatus, squamata, squamatum small scale-like leaves or bracts

squamosus, squamosa, squamosum many scales

squarrosus, squarrosa, squarrosum spreading or recurved ends

stachyoides looking like Stachys

stamineus, stamina, stamineum having conspicuous stamens, or stamens of interest

stellaris, stellare; stellatus, stellata; stellatum star-like

stenocarpus, stenocarpa, stenocarpum narrow fruit
stenocephalus

stenocephalus  narrow-headed
stenopetalus, stenopetala, stenopetalum  narrow petals
stenophyllus, stenophylla, stenophyllum  narrow leaves
stenostachyus, stenostachya, stenostachyum  narrow spikes
sterilis, sterile  sterile
stipulaceus, stipulacea, stipulaceum; stipularis, stipulare; stipulatus, stipulata, stipulatum  stipules of interest or large size
stolonifer, stolonifera, stoloniferum  with stolens
stramineus  straw color
streptocarpus, streptocarpa, streptocarpum  with twisted fruits
streptopetalus, streptopetala, streptopetalum  with twisted petals
streptophyllus, streptophylla, streptophyllum  with twisted leaves
streptosepalus, streptosepala, streptosepalum  with twisted sepals
striatus, striata, striatum  striped
strictus, stricta, strictum  erect, standing up
strigillosus, strigillosa, strigillosum  bristly hairs lying flat on a surface
strigosus, strigosa, strigosum  stiff bristles, with few or no branches
strobilifer, strobilifera, strobiliferum  cone bearing
strumarius, strumaria, strumarium; strumosus, strumosa, strumosum  having swellings

stylosus, stylosa, stylosum  having prominent or conspicuous style
suaveolens  sweetly fragrant
suavis, suave  sweet
subacaulis, subacaule  with a short stem
subalpinus, subalpina, subalpinum  from low alpine areas; nearly alpine
subauriculatus, subauriculata, subauriculatum  partially or a little eared
subcaeruleus, subcaerulea, subcaeruleum  partially or a little blue
subcanus, subcana, subcanum  graying
subcarnosus, subcarnosa, subcarnosum  somewhat fleshy
subcordatus, subcordata, subcordatum  somewhat heartshaped
subdentatus, subdentata, subdentatum  nearly toothless
subdivaricatus, subdivaricata, subdivaricatum  spreading to some degree
subelongatus, subelongata, subelongatum  lengthened to some degree
suberectus, suberecta, suberectum  nearly upright
subglaucus, subglauca, subglaucum  glaucous to some degree
subhirtellus, subhirtella, subhirtellum  somewhat hairy
submersus, submersa, submersum  submerged
subpetiolatus, subpetiolata, subpetiolatum  short leafstalks
subscandens  tends to climb
subsessilis  nearly stalkless
subterraneus, subterranea, subterraneum  underground
subulatus, subulata, subulatum  awl-shaped
subvillosus, subvillosa, subvillosum  soft hairs
succulentus, succulenta, succulentum  fleshy
suecicus, suecica, suecicum  Swedish
suffrutescens; suffruticosus, suffruticosa, suffruticosum  rather shrubby
sulcatus, sulcata, sulcatum  furrowed
sulfurus, sulfura, sulfurum; sulphureus, sulphurea, sulphureum  sulfur color or yellow
sumatranus, sumatrana, sumatranum  from Sumatra, Indonesia
superbus, superba, superbum  superb, showy
supinus, supina, supinum  prostrate, or leaning back
surculosus, surculosa, surculosum  having suckers or shoots
susianus  of Susa, an ancient Persian city
suspensus, suspensa, suspensum  hanging, dropping
sutchuenensis, sutchuenense  from Szechwan, China
sylvaticus, sylvatica, sylvaticum; sylvestre, sylvestris, sylvestre; sylvicola  from forests, forest loving
syriacus, syriaca, syriacum  from Syria
syringanthus, syringantha, syringanthum  flowers like lilacs (Syringa)
syringifolius, syringifolia, syringifolium  leaves like lilacs (Syringa)
tabularis, tabulare  flat like a table or from Table Mountain, South Africa
tabuliformis, tabuliforme  flat or table shaped
taiwanensis, taiwanense  from Taiwan
taliensis, taliense  from the Tali Mountains, China
tamariscifolius, tamariscifolia, tamariscifolium  leaves like tamarisk (Tamarix)
tanacelifolius, tanacelifolia, tanacelifolium  leaves like tansy (Tanacetum)
tasmanicus, tasmanica, tasmanicum  from Tasmania
tatsienensis, tatsienense  from Tatsienlu, China
tauricus, taurica, tauricum  from the Crimea
taxifolius, taxifolia, taxifolium  leaves like yew (Taxus)
tectorum  of roots
tenax

**tenax** strongly matted, or dense

**tenera** slender, tender, soft

**tenuicaulis, tenuicaule** having slender stems

**tenuiflorus, tenuiflora, tenuiflorum** slender flowers

**tenuifolius, tenuifolia, tenuifolium** slender leaves

**tenuipetalus, tenuipetala, tenuipetalum** slender petals

**tenuis, tenue** slender

**terebinthinaceus, terebinthinacea,**
**terebinthinaceum; terebinthininus,**
**terebinthinina, terebinthininum**

terpentine association

**teres** cylindrical

**terete** cylindrical

**terminalis, terminale** associated with boundaries, or ending abruptly, at an end

**ternatus, ternate, ternatum** clusters of three

**terrestris, terrestre** of the ground

**tessellatus, tessellate, tessellatum** checkered

**testaceus, testacea, testaceum** brick colored, dull red, light brown

**testicularis, testiculare; testiculatus,**
**testiculata, testiculatum** looking like testicles

**tetracanthus, tetracantha, tetracanthum** having spines in fours

**tetragonus, tetragona, tetragonum** with four angles

**tetrandrhus, tetrandra, tetrandrum** four stamens

**tetranthus, tetrantha, tetranthum** flowers in fours

**tetraphyllus, tetraphylla, tetraphyllum** leaves in fours

**tetrapterus, tetraptera, tetrapterum** four wings

**teucroides** resembling *Teucrium*

**texanus, texana, texanum** from Texas

**textilis, textile** used in textiles or for wearing

**thalictrifolla** leaves like *Thalictrum*

**thalictroides** resembling *Thalictrum*

**theifer, theifera, theiferum** used in tea; fragrance like tea

**thuyoides** looking like *Thuja*

**thymifolius, thymifolia, thymifolium** leaves like thyme (*Thymus*)

**thymoides** resembling thyme (*Thymus*)

**thysiflorus, thysiflora, thysiflorum** arrangements of flowers called thyrses, like lilacs or horse-chestnuts

**thyrsoidea** thyrse-like

**tibeticus, tibetica, tibeticum** from Tibet

**tigrinus, tigrina, tigrinum** striped or decorated like a tiger; tiger-toothed

**tiliaceus, tiliae, tiliaeum** looking like a linden (*Tilia*)

**tilifolius, tilifolia, tilifolium** leaves like a linden (*Tilia*)

**tinctorum** of dyers

**tinctorius, tinctoria, tinctorium** useful in dyeing with color

**tingitanus, tingitana, tingitanum** from Tangiers, Morocco
tirolensis, tirolense  from the Tyrol
titanius, titania, titanium  bigger than large
tomentosus, tomentosa, tomentosum  dense, wooly, soft hairs
toringoides  like toringo carb
torridus, torrida, torridum  inhabits hot, dry places
tortifolius  leaves twisted
tortilis, tortile; tortus, torta, tortum  twisted
tortuosus  much twisted
toxicarius, toxicaria, toxicarium; toxicus, toxica, toxicum; toxifer, toxifera, toxiferum  poisonous, toxic
translucens  translucent
transparens  transparent
transylvanicus, transylvanica, transylvanicum  from Transylvania, Romania
trapeziformis, trapeziforme  formed of four unequal sides
triumboloides  looking like poplar (Populus tremula)
tremulus, tremula, tremulum  trembling
triacanthus, triacantha, triacanthum  three spined
triangularis, triangulare; triangulatus, triangulata, triangulatum  three-angled
tricanthophorus  bearing three spines
tricaudatus, tricaudata, tricaudatum  three tails
tricephalus, tricephala, tricephalum  three heads
trichocalyx  having hairy calyxes
trichocarpus  hairy-fruited
trichogyne, trichogyna, trichogynum  hairy ovaries
trichophyllus, trichophylla, trichophyllum  hairy leaves
trichospermus, trichosperma, trichospermum  hairy seeds
trichotomus, trichotoma, trichotomum  three branches
tricoccus, tricocca, tricoccum  fruits with three deep lobes
tricolor  three colors
tricornis, tricorne  three horns
tricuspidatus, tricuspidata, tricuspidatum  three points
tridens; tridentatus, tridentata, tridentatum  three teeth
trifidus, trifida, trifidum  cut or divided into three parts
triflorus, triflora, triflorum  flowers in threes
trifolius, trifolia, trifolium  leaves or leaflets in threes
trifurcatus, trifurcata, trifurcatum; trifurcus, trifurca, trifurcum  three forks
trilobatus, trilobata, trilobatum  three lobes
trimestris, trimester  of three months
trinervis, trinerve  three veins
tripetalus, tripetala, tripetalum  three petals
triphyllus, triphylla, triphyllum  leaves in threes
tripterus

tripterus, triptera, tripterum three wings

trispermus, trisperma, trispernum seeds in threes

tristachyus, tristachya, tristachyum spikes in threes

tristis, triste dull or sad

triternatus, triternata, triternatum three times in threes

triumphans triumphant

trivialis, triviale ordinary, trivial, common

trolliifolius leaves like a globe flower (*Trollius*)

truncatus, truncata, truncatum cut squarely across

tubatus, tubata, tubatum trumpet shape

tuberosus, tuberosa, tuberosum tuberous

tubifer, tubifera, tubiferum; tubulosus, tubulosa, tubulosum tubular

umbellatus, umbellata, umbellatum bearing umbels

ulmifolius, ulmifolia, ulmifolium having leaves like elms (*Ulmus*)

ulmoides resembling elms (*Ulmus*)

umbraulifer, umbraculifera, umbraculiferum umbrella-like branching

umbrosus, umbrosa, umbrosum shade loving

uncinatus, uncinata, uncinatum hooked at ends

undatus, undata, undatum; undulatus, undulata, undulatum wavy, undulating

unguicularis, unguicularie; unguiculatus, unguiculata, unguiculatum claws contracting to an extended, narrow basal area

unicolor self-colored, one color

unidentatus, unidentata, unidentatum one tooth

uniflorus, uniflora, uniflorum one flower

unifolius, unifolia, unifolium one leaf, single leaved

unilaterals, unilaterale one side

uninervis, uninerve one vein

uniseriatus, uniseriata, uniseriatum one row

univittatus one stripe

urbanus, urbana, urbanum; urbicus, urbica, urbicum from towns, or urban environments

urceolatus, urceolata, urceolatum urn shape
urens  stinging, burning
urophyllus, urophylla, urophyllum  having leaves with long, tail-like apexes
ursinus, ursina, ursinum  associated with a bear
urticifolius, urticifolia, urticifolium  leaves like a nettle (Urtica)
urticoides  looking like a nettle (Urtica)
usitatissimus, usitatissima, usitatissimum  most useful
ustulatus, ustulata, ustulatum  burned or scorched
utilis, utile  useful; can be utilized
utriculatus, utriculata, utriculatum; utriculosus, utriculosa, utriculosum  bladder-like
uva-ursi  grape for bears
uvifer, uvifera, uviferum  grapes or grape-like fruits
vaccinifolius, vaccinifolia, vaccinifolium  having leaves like those of Vaccinium
vaccinioides  resembling Vaccinium
vacillans  variable, swaying
vagans  wandering, spread widely about, vagrant
vaginalis, vaginale; vaginatus, vaginata, vaginatum  sheathed or like such
valdivianus, valdiviana, valdivianum  from Valdivia, Chile
validus, valida, validum  strong, valid, good development
variabilis, variabile; varians; variatus, variata, variatum  variable
varicosa  swollen irregularly
variegatus, variegata, variegatum  variegated, more than one color
vegetus, vegeta, vegetum  vigorous
velutinus, velutina, velutinum  velvety
venenatus, venenata, venenatum  poisonous
venenosus, venenosa, venenosum  very poisonous
venosus, venosa, venosum  conspicuous vein
ventricosus, ventricosa, ventricosum  swollen on one side
venustus, venusta, venustum  charming, beautiful
vera  true
verbascifolius, verbascifolia, verbascifolium  leaves like Verbascum
veris  of springs; true
vermicularis, vermiculare; vermiculatus, vermiculata, vermiculatum  worm-like
vernalis, vernale  of spring
vernix  varnish
vernus, verna, vernum  spring
verrucosus, verrucosa, verrucosum  warty
verruculosus, verruculosa, verruculosum  small warts
versicolor  colored with variety
verticillaris, verticillare; verticillatus, verticillata, verticillatum  parts in whorls or tiers; circled around stem
verus, vera, verum  true to type, genuine, standard
vespertinus

vespertinus, vespertina, vespertinum of the evening

vestitus, vestita, vestitum clothed, usually with hairs, or scales

vexans irritating, wounding, harmful

vexillaris, vexillare flags or standards; standard petal in a pea flower

viburnifolius, viburnifolia, viburnifolium leaves like Viburnum

viciifolius, viciifolia, viciifolium leaves like vetch (Vicia)

villosus, villosa, villosum colored with soft hairs

viminalis, viminalis; vimentus, vimea, vimeum long, wand-like shoots

vinifer, vinifera, viniferum producing wine

vinosus, vinosa, vinosum wine-red color

violaceus, violacea, violaceum violet colored

violascens somewhat violet-colored or turning that color

virens green

vi rescens turning green

virgatus, virgata, virgatum wand-like, twiggy

virginalis, virginalis; virgineus, virginea, virgineum white, virgin white, fresh

virgianus, virginiana, virginianum; virginicus, virginica, virginicum; virginiensis, virginiense from Virginia

viridescens becoming green

viridiflorus, viridiflora, viridiflorum green flowers

viridifolius, viridifolia, viridifolium green leaves

viridissimus, viridissima, viridissimum very green

viridulus, viridula, viridulum somewhat green

viridus, viride green

viscidifolius, viscidifolia, viscidifolium sticky leaves

viscidus, viscida, viscidum; viscous, visc-cosa, viscosum viscid, sticky, or gummy

vitaceus, vitacea, vitaceum like a grape vine (Vitis)

vitalba grape or vine family

vitellinus, vitellina, vitellinum resembling yolk of an egg, dull yellow

vitifolius, vitifolia, vitifolium leaves like a grape (Vitis)

vittatus, vittata, vittatum striped lengthwise

volubilis, volubile twining

vomitorius, vomitoria, vomitorium emetic, inducing vomiting

vulgaris, vulgare; vulgata, vulgatum common, vulgar

warleyensis, warleyense from Warley Place Gardens, Essex, England

wichuralana in honor of a Russian botanist named Wichuray

wolgaricus, wolgarica, wolgaricum from the Volga River region

xanthacanthus, xanthacantha, xanthacanthum having yellow spines

xanthinus, xanthina, xanthinum yellow
xanthocarpus, xanthocarpa, xanthocarpum having yellow fruits
xantholeucus, xantholeuca, xantholeucum yellowish-white
xanthonervis, xanthonerve yellow veins
xanthophyllus, xanthophylla, xanthophyllum yellow leaves
xanthorrhizus, xanthorrhiza, xanthorrhizum yellow roots
xeranthemum everlasting, immortal
yedoensis, yedoense from Tokyo (Yedo), Japan

yunnanensis, yunnanense; yunnanicus, yunnanica, yunnanicum from Yunnan, China

zanzibariensis of Zanzibar, Africa
zebrinus, zebrina, zebrinum having stripes like a zebra
zeylanicus, zeylanica, zeylanicum from Ceylon
zonalis, zonale; zonatus, zonata, zonatum having bands or stripes horizontally, having zones differentiated