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# ILLUSTRATED CONSTRUCTION DICTIONARY





the complete source of construction terms and concepts



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Fourth Edition, Unabridged

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Fourth Edition, Unabridged

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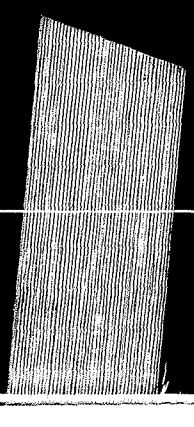
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It's the perfect resource for both the seasoned professional as well as the novice... and an invaluable tool for office staff preparing project documents and correspondence.



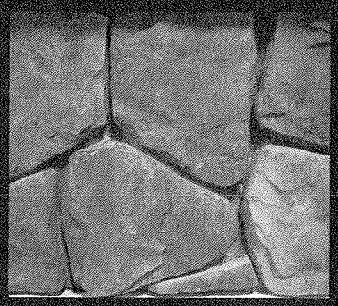
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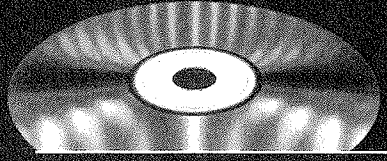
Fourth Edition, Unabridged

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Fourth Edition, Unabridged

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# Foreword

This latest edition of *RSMeans Illustrated Construction Dictionary* is a great step forward. With nearly 1,000 additional terms and hundreds of new illustrations, it covers an even wider range of construction specialties than its highly praised predecessor. It addresses all of the recent developments in building materials and processes, from green building, to historic preservation, to engineered lumber products and the newest seismic technologies. The companion CD-ROM that comes with this edition includes all of these enhancements, plus: large detailed graphics and expanded definitions.

*RSMeans Illustrated Construction Dictionary, 4th edition,* is written in the language used by the construction trades and professions today, and includes many slang, regional, and colloquial terms. Whenever possible, words or phrases are explained in non-technical language. Technical terms that are used in definitions are themselves defined as separate entries. Archaic architectural terms are purposely omitted, as this is intended to be a current construction dictionary with up-to-date terminology.

Areas that that have been significantly expanded and updated in this edition include building automation, energy and environmental conservation, "green" construction practice, and historic preservation. To identify and define these terms, the editors obtained the assistance of industry groups, associations, societies, and manufacturers, as well as published authors who are nationally recognized authorities. A list of contributors appears in the acknowledgments on the following page.

# Acknowledgments

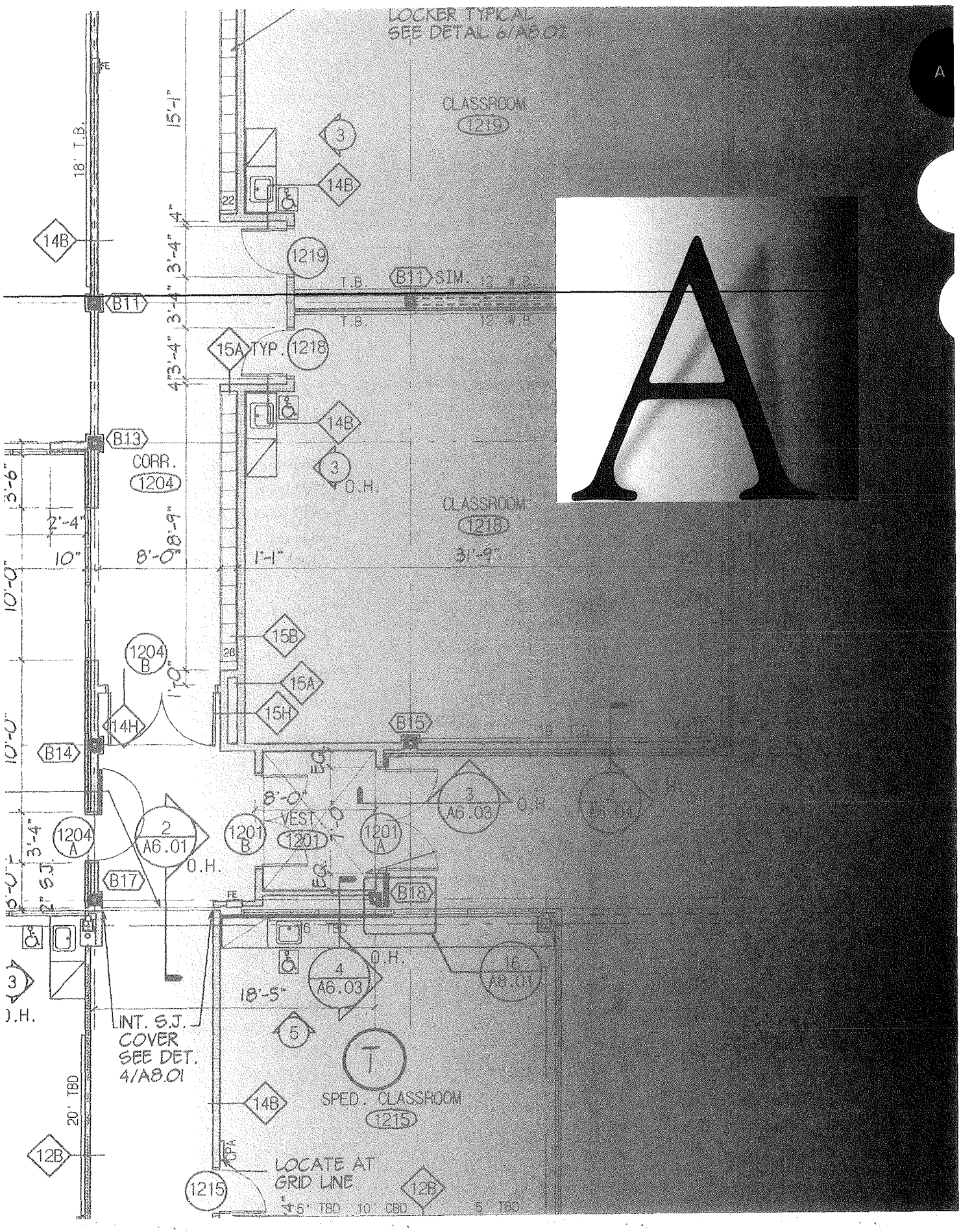
Special thanks to American Association of Cost Engineers (AACE) for allowing us to reprint some of their invaluable cost engineering terminology. These terms are indicated throughout the dictionary with an asterisk besides them.

# About the CD-ROM

The **CD-ROM** (found in the sleeve on the inside back cover of this book) contains the complete text of the print dictionary, plus some extra features.

**Searching for a Term Electronically:** Using the CD, you can search for a specific term or browse through the book's pages on-screen.

**Expanded information** is available for many terms on the CD. Some terms have larger-scale, more detailed graphics than those that appear in the printed book. Other terms are expanded with in-depth discussion of a concept or practice.


LOCKER TYPICAL
SEE DETAIL 6/A8.07
CLASSROOM
1219
CLASSROOM
1218
CORR.
1204
SPED. CLASSROOM
1215
VEST.
1201
18' T.B.
15'-1"
3'-4"
4"
T.B.
B11
SIM.
12" W.B.
15A TYP.
1218
14B
B13
O.H.
3'-6"
2'-4"
10"
8'-0"
8'-9"
1'-1"
31'-9"
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16
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18'-5"
INT. S.J.
COVER
SEE DET.
4/A8.01
5
20' TBD
12B
LOCATE AT
GRID LINE
1215
5' TBD
10' CBD
5' TBD

# A Abbreviations

*The abbreviations listed below are commonly used in the construction industry.*

**a** acre, ampere

**A** area, area square feet, ampere

**AAMA** Architectural Aluminum Manufacturers Association

**A&E** architect-engineer

**AASHTO** American Association of State Highway and Transportation Officials

**ABC** aggregate base course, Associated Builders and Contractors

**ABS** acrylonitrile butadiene styrene, asbestos-bonded steel

**ABT** air blast transformer, about

**ac, a-c** alternating current, asphaltic concrete (ac paving)

**AC** air-conditioning, alternating current (on drawings), armored cable (on drawings), asbestos cement

**ACB** asbestos-cement board, air circuit breaker

**ACC** accumulator

**Access** accessory

**ACD** automatic closing device

**ACEC** American Consulting Engineers Council

**ACGIH** American Conference of Governmental Industrial Hygienists

**ACI** American Concrete Institute, Association of Construction Inspectors

**ACM** asbestos-containing material, asbestos-covered metal

**ACS** American Ceramic Society

**ACSR** aluminum cable steel reinforced, aluminum conductor steel reinforced

**Acst** acoustic

**Actl** actual

**ad** air-dried

**AD** access door, air-dried, area drain, as drawn

**ADA** Americans with Disabilities Act

**ADAAG** Americans with Disabilities Act Accessibility Guidelines

**ADD** addendum (on drawings), addition (on drawings)

**Addit** additional

**ADF** after deducting freight (used in lumber industry)

**ADH** adhesive

**ADI** after date of invoice

**adj** adjacent, adjoining, adjust, adjustable

**ADS** automatic door seal

**af** audio frequency

**AFE** Association for Facilities Engineering (formerly the American Institute of Plant Engineers)

**AFL-CIO** American Federation of Labor and the Committee for Industrial Organization

**AFUE** Annual fuel utilization efficiency

**AG** above grade

**AGA** American Gas Association

**AGC** Associated General Contractors

**Agg, Aggr** aggregate

**AGL** above ground level

**AH, A HR, amp hr** ampere-hour

**AHERA** Asbestos Hazard Emergency Response Act

**AHU** air-handling unit

**AI** Asphalt Institute

**AIA** American Institute of Architects, Asbestos Information Association

**AIC** ampere interrupting capacity

**AIEE** American Institute of Electrical Engineers

**AIMA** Acoustical and Insulating Materials Association

**AISC** American Institute of Steel Construction

**AISE** Association of Iron and Steel Engineers

**AISI** American Iron and Steel Institute

**AITC** American Institute of Timber Construction

**AL, alum** aluminum

**Allow, ALLOW** allowance

**ALM** alarm

**ALS** American Lumber Standards

**alt** altitude

**ALT** alternate

**ALTN** alteration

**ALY** alloy

**AM** ante meridiem

**AMB** asbestos millboard

**AMD** air-moving device

**amp, Amp** ampere

**ANFO** ammonium nitrate fuel oil mix

**ANL** anneal

**Anod** anodized

**ANSI** American National Standards Institute

**AP** access panel

**APA** The Engineered Wood Association (formerly the American Plywood Association)

**APC** acoustical plaster ceiling, American Plastics Council

**APF** acid-proof floor

**API** American Petroleum Institute

**APPA** The Association of Higher Education Facilities Officers (formerly the Association of Physical Plant Administrators)

**Appd** approved

**Approx** approximate

**APR** air-purifying respirator

**Apt** apartment

**APW** Architectural Projected Window

**AR** as required, as rolled

**ARC W, ARC/W** arc weld

**ARS** asbestos roof shingles

**ART** artificial

**AS** automatic sprinkler

**ASA** American Standards Association

**asb** asbestos

**ASBC** American Standard Building Code

**asbe** asbestos worker

**ASC** asphalt surface course

**ASCE** American Society of Civil Engineers

**ASCII** American Standard Code for Information Interchange

**ASEC** American Standard Elevator Codes

**ASHRAE** American Society of Heating, Refrigeration, and Air-Conditioning Engineers

**ASIS** American Society for Industrial Security

**ASME** American Society of Mechanical Engineers

**asph** asphalt

**ASR** automatic sprinkler riser

**ASSE** American Society of Sanitary Engineering

**ASTM** American Society for Testing and Materials

**AT** asphalt tile, airtight

**ATB** asphalt-tile base

**ATC** acoustical tile ceiling; architectural terra-cotta, automatic temperature control

**ATF** asphalt-tile floor

**atm** atmosphere, atmospheric

**aux** auxiliary

**av, ave, avg** average

**AW** actual weight

**A/W** all-weather

**AW&L** all widths and lengths

**AWG** American wire gauge

**AWI** Architectural Woodwork Institute

**AWPI** American Wood Preservers Institute

**AWS** American Welding Society

**AWWI** American Wood Window Institute

# A Definitions

**abaciscus, abaculus** **1.** A tessara or small square stone used in mosaic tile. **2.** A small abacus.

**abacus** The top component of a column capital.

**abamurus** A masonry buttress for the support of a wall.

**abandon catch basin** To destroy or fill in an existing catch basin.

**abandonment** **1.** To surrender the right or claim of interest without specifically transferring it; **2.** The act of deserting one's obligations under a contract frequently manifested by removing personnel, materials, and equipment from the job site.

**abate** **1.** To cut away in stone or to beat down on metal in order to create figures or a pattern in relief. **2.** To reduce or decrease concentrations of pollutants.

**abatement** **1.** The encapsulation or removal of building materials containing pollutants (such as lead or asbestos) to prevent the release of or exposure to fibers. **2.** In lumber industry, the amount of wood lost as waste during the process of sawing or planing.

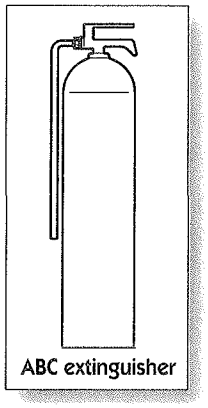
**abat-jour** A light-emitting device, such as a skylight, or sloped opening in a roof or wall designed to direct daylight downward.

**abatsons** Acoustical reflectors for directing sound waves.

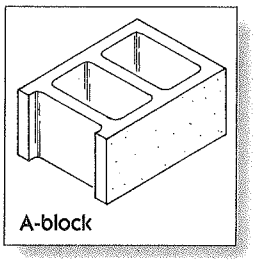
**abatvent** A wall louver that restricts wind from entering a building, but admits light and air.

**abatvoix** An acoustical reflector for a single voice, such as behind and over a church pulpit.

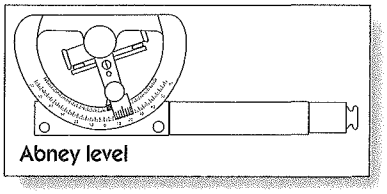
**ABC extinguisher** A fire extinguisher suitable for use on type A, B, and C fires.


ABC extinguisher

**A-block** A hollow masonry unit with one closed end commonly used at wall openings.


A-block

**Abney level** A hand-held level used for measuring elevations and vertical angles.


Abney level

**above finished floor** Datum or benchmark for measuring the height above a floor, abbreviated as AFF.

**above-grade subfloors** A floor above ground level, but with no headroom below.

**abrade** To scrape or wear away a surface by friction or striking.

**Abrams' law** The rule stating that with given materials, curing, and testing conditions, concrete strength is inversely related to the ratio of water to cement. Low water-to-cement ratios produce high strengths.

**abrasion** The process of wearing away a surface by friction.

**abrasion resistance index** A comparison of the abrasion resistance of a given material to that of rubber. The index is applied principally to aggregate handling equipment.

**abrasive** **1.** A hard material used for wearing away or polishing a surface by friction. **2.** The material that is adhered to or embedded in a surface such as sandpaper or a whetstone.

**abrasive aggregate** The aggregate used to increase the abrasiveness of the surface of a concrete slab.

**abrasive blasting** A method of cleaning surfaces with a high-pressure stream of air and an abrasive material such as sand or steel grit.

**abrasive floor** A floor with an abrasive adhered to or embedded in the surface to provide traction and prevent slipping.

**abrasive floor tile** Floor tile with an abrasive adhered to the surface.

**abrasive nosing** A strip of anti-skid abrasive adhered to or attached to the nosing of a stair tread.

**abrasive stair tread** A stair tread with an abrasive surface.

**abrasive terrazzo** A terrazzo floor with an abrasive surface rather than a high polish.

**abreuvoir** The mortar joint between masonry units.

**absolute humidity** *See* **humidity.**

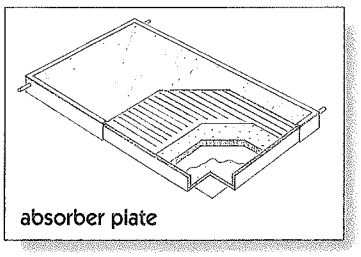
**absolute pressure** *See* **pressure.**

**absorbed moisture** Moisture that has been absorbed by a solid such as masonry.

**absorbent** **1.** A material that has an affinity for certain substances and attracts these substances from a liquid or gas with which it is in contact, thus changing the physical and/or chemical properties of the material. **2.** A substance that attracts and holds large quantities of liquid.

**absorber** **1.** A device containing liquid for the absorption of vapors. **2.** In a refrigeration system, the component on the low-pressure side used for absorbing refrigerant vapors.

**absorber plate** That part of a solar energy system that collects the solar energy.


absorber plate

**absorbing well** *See* **dry well.**

**absorption** **1.** The process by which a liquid is drawn into and fills permeable pores in a solid body, increasing its weight. **2.** The process by which solar energy is collected on a surface. **3.** The increase in weight of a porous object resulting from immersion in water for a given time, expressed as a percent of the dry weight.

**absorption air-conditioning** An air cooling and dehumidifying system powered by solar or other energy collected on absorbing plates.

**absorption bed or field (disposal field, drain field)** A network of trenches that may contain coarse aggregate and distribution pipe, and is used to distribute septic tank effluent into the surrounding soil.

**absorption chiller** Heat-operated refrigeration unit that uses an absorbent (lithium bromide) as a secondary fluid to absorb the primary fluid (water), which is a gaseous refrigerant in the evaporator. The evaporative process absorbs heat, thereby cooling the refrigerant (water) which in turn cools the chilled water circulating through the heat exchanger.

**absorption loss** **1.** Water losses that occur until soil particles are sufficiently saturated, such as in filling a reservoir for the first time. **2.** Water losses that occur until the aggregate in a concrete mix is saturated.

**absorption rate (initial rate of absorption)** **1.** The weight of water absorbed by a brick or concrete masonry unit that is partially immersed in water for one minute, expressed in grams or ounces per minute. **2.** The annual rate at which new housing or leasable space is being sold or leased. The absorption rate of a prior year often is used to predict the needs for next year. (A gross absorption rate measures the consumption of new housing/space only.)

**absorption refrigeration system** **1.** A cooling system in which the refrigerant vapors that enter an absorber are released into a generator by the application of heat. **2.** A cooling system powered by heat from solar absorbers.

**absorption trench** *See* **absorption bed.**

**absorption-type liquid chiller** A system using an absorber, condenser, and associated accessories to cool a secondary liquid.

**absorptive lens** A filter lens designed to mitigate the effects of glare and reflected light.

**ABS plastic pipe** Acrylonitrile-butadiene-styrene plastic pipe, which is resistant to heat, impact, and chemicals.

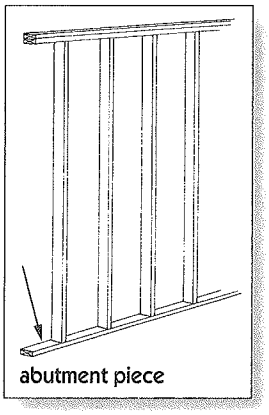
**abstract of bids** A list of the bidders for a sealed bid procurement indicating the significant portions of their bids.

**abstract of title** A deed for a parcel of land showing encumbrances and a history of ownership.

**abut** To join or touch at one edge or end without overlapping.

**abutment (butment)** **1.** The structure that supports the end of a bridge or arch or that anchors the cables of a suspension bridge. **2.** The surface at which one member meets another.

**abutment piece** In structural framing, the horizontal member that distributes the load of vertical members and is thus the sole plate of a partition.


abutment piece

**abuttals** The properties adjacent to a parcel of land or body of water and which mark the boundaries of that land or water body.

**abutter** A property owner contiguous or within a specified distance from a parcel of land.

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

**abutting tenon** In carpentry, one of two wood members that meet in a common mortise.

**Abyssinian well** *See* **wellpoint.**

# A

**Accelerated Cost Recovery System (ACRS)** A method of calculating depreciation of assets placed in service from 1980 to 1986 for federal income tax purposes. Replaced by the Modified Accelerated Cost Recovery System (MACRS) by the Tax Reform Act of 1986.

**accelerated depreciation** Asset depreciation at a faster rate than the straight line method. Examples include the 200% or 150% declining balance methods.

**accelerated life test** A test at elevated levels of environmental stress to determine deterioration or failure more rapidly.

**accelerating admixture** An admixture for hydraulic concrete that shortens setting time and inhibits early strength development.

**acceleration** **1.** An increase in velocity or rate of change. **2.** The ordered or voluntarily expedited performance of construction work at a faster rate than anticipated in the original schedule, the purpose of which is to recapture project delay. This is accomplished by increasing labor hours and other resources. **3.** The speeding up of the setting or hardening process of concrete by using an additive in the mix. The process of acceleration allows forms to be stripped sooner or floors finished earlier.

**accelerator** An additive that, when added to paint, concrete, mortar, or grout mix, speeds the rate of hydration and thereby causes it to set or harden sooner.

**accelograph** An instrument used to measure displacement during an earthquake. Often installed in buildings to measure movement.

**accent lighting** Fixtures or directional beams of light arranged so as to bring attention to an object or area.

**acceptable air quality** Interior conditioned air that is contaminant-free and deemed acceptable by at least 80% of the building's occupants.

**acceptance** Compliance by an offeree with the terms and conditions of an offer.

**acceptance, final (partial)** The formal action by the owner accepting the work (or a specified part thereof), following written notice from the engineer that the work (or specified part thereof) has been completed and is acceptable subject to the provisions of the contract regarding acceptance.*

**acceptance certificate** A dated and signed document issued to a contractor by an owner certifying that all the work of a construction project is complete and in accordance with all provisions of the contract. *

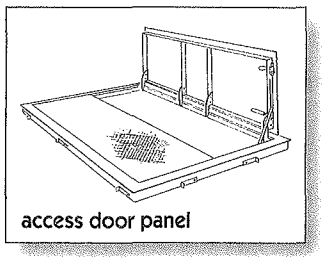
**accepted bid** The proposal or bid a contractor and an owner or owner's representative use as the basis for entering into a construction contract.

**access** **1.** The means of entry into a building, area, or room. **2.** A port or opening through which equipment may be inspected or repaired.

**access connection** A ramp or roadway for entering or exiting an arterial highway.

**access control system** Computerized building security equipment, such as badge readers, designed to protect against unauthorized entry into buildings or building zones.

**access door or panel** A means of access for the inspection, repair, or service of concealed systems, such as air-conditioning equipment.



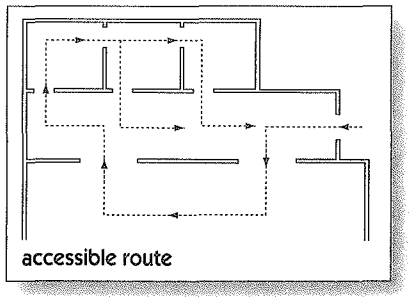
access door panel

**access eye** A fitting provided at drainpipe bends for rodding.

**access flooring** A raised flooring system with removable panels to allow access to the area below. This type of flooring is frequently used in computer rooms because it provides easy access to cables.

**accessible** That which is easily removed, repaired, or serviced without damaging the finish of a building.

**accessible route** A continuously unobstructed path connecting all accessible elements and spaces of a building or facility.



accessible route

**accessories** In the placing of concrete, the items used to assemble scaffolding, shoring, and forms, other than the wales, frames, and the forms themselves.

**accessory building** A secondary building on the same lot adjacent to the main building.

**accessory structure** A secondary incidental structure located on the same lot as a dwelling. For building code purposes, the *International Residential Code* further defines these structures as 3,000 square feet or less and no more than two stories high.

**access to the work** The right of the contractor to ingress and egress, and to occupy the work site as required to reasonably perform the work described in the contract documents. An example of denial of access to the work would be on the segment of a sewer installation project where no easements or work limits are indicated, but the

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contractor is ordered, after contract award, to conduct operations within a narrow work corridor necessitating different or unanticipated construction methods (e.g., use of sheeting).*

**accident** On construction sites, a sudden unexpected event, identifiable in terms of time and place, that results in personal injury or property damage.

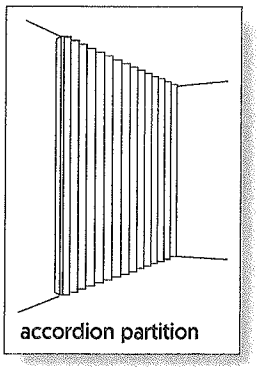
**acclivity** Refers to a hillside's upward slope.

**accolade** Ornamental treatment over an arch, doorway, or window formed by two ogee curves meeting in the middle.

**accord and satisfaction** A legal term referring to an agreement between parties to a contract whereby one accepts payment in the compromise of a dispute, claim, or change proposal. Typically this term is used concerning a mutual release of responsibility for a claim. *See also* **settlement**.

**accordion door** A retractable door, usually fabric-faced, hung from an overhead track and folding like the bellows of an accordion.

**accordion partition** A retractable partition having the same features as an accordion door.


accordion partition

**accouple** To join, tie, or couple together.

**accouplement** **1.** In architecture, the pairing of pilasters or columns, as in a colonnade or buttress. **2.** In carpentry, a tie or brace between timbers.

**accrual method** A method of accounting whereby revenues and expenses are identified with specific time periods, such as month, day, year, and are recorded as they are incurred without regard to the date of receipt or payment.

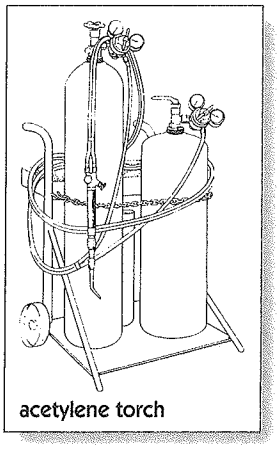
**accrued depreciation** The total reduction of the value of property as stated on a balance sheet for accounting or tax purposes.

**accumulator (surge drum, surge header)** **1.** A pressure vessel whose volume is used to maintain a constant pressure. **2.** In refrigeration, a storage chamber for low-side refrigerant.

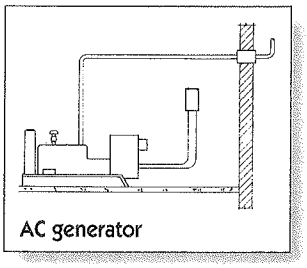
**acetone** A highly flammable organic solvent used with lacquers, paint thinners, paint removers, and resins.

**acetylene** A carbon gas which, when combined with pure oxygen and ignited, produces an extremely hot flame used in gas welding and metal cutting.

**acetylene torch** The torch used for welding and cutting. Contains compressed acetylene and oxygen.


acetylene torch

**AC generator** A generator that produces alternating current.


AC generator

**achromatic color** White, colorless light.

**acid** A liquid that has a pH of less than 7.0.

**acid- and alkali-resistant grout or mortar** A grout or mortar that is highly resistant to prolonged exposure to alkaline compounds, acid liquids, or gases.

**acid etch (aciding)** A method of cleaning the latence from concrete by washing it with an acid solution and rinsing with water.

**aciding** *See* **acid etch.**

**acid polishing** The polishing of a surface, particularly glass, by acid treatment.

**acid-proof floor** A floor that resists deterioration when exposed to acid.

**acid resistance** A measurement of a surface's ability to resist the corrosive effect of acids.

**acid-resistant brick** Brick that resists deterioration caused by exposure to acid. This type of brick should be laid with acid-resistant mortar.

**acid soil** Soil with a pH value of less than 6.6.

**acid steel** Steel made with a silica flux or in a silica-lined furnace.

**acorn nut** Nut with hexagonal base and rounded top that encases the end of the screw.

**acoustical** A term used to define systems incorporating sound control.

**acoustical barrier** A building system that restricts sound transmission.

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# A

**acoustical block (acoustic block)** A masonry block with sound-absorbing qualities, usually defined in terms of its NRC (noise reduction coefficient) rating.

**acoustical board** A construction material in board form that restricts or controls the transmission of sound.

**acoustical booth** *See* **acoustical enclosure.**

**acoustical ceiling** A ceiling system constructed of sound-control materials. The system may include lighting fixtures and air diffusers.

**acoustical correction** Special planning, shaping, and equipping of a space to produce the optimum reception of sound for an audience.

**acoustical door** A door constructed of sound-absorbing materials and installed with gaskets around the edges.

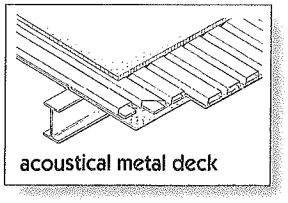
**acoustical enclosure (acoustical booth, acoustical room)** An enclosure constructed of acoustical materials for privacy in speaking, listening, and recording, as in a recording studio or a telephone booth.

**acoustical glass** A pane of glass composed of two lites with dead air space between them for sound absorption. This type of glass is frequently used for borrow lights and other interior applications.

**acoustical lining** Insulating material secured to the inside of ducts to limit sound and provide thermal insulation.

**acoustical materials** Materials that absorb and isolate sound and reduce reverberation, including felts, tiles, boards, and plasters.

**acoustical metal deck** A metal decking that includes a sound-absorbing material installed at a small additional cost per square foot.


acoustical metal deck

**acoustical panel** Modular units composed of a variety of sound-absorbing materials for ceiling or wall mounting.

**acoustical partition** A term applied particularly to movable, demountable, and operable partitions with sound-absorbing characteristics.

**acoustical plaster** Sound insulating and isolating plaster made of gypsum and a fibrous or porous aggregate such as wood, mineral wool, cork, or asbestos.

**acoustical reduction factor** A value, expressed in decibels, that defines the reduction in sound intensity that occurs when sound passes through a material.

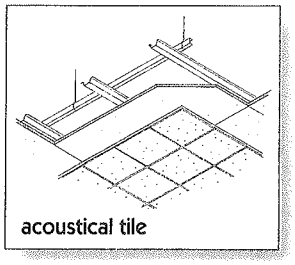
**acoustical room** *See* **acoustical enclosure.**

**acoustical sealant** A caulking or joint sealant with acoustical characteristics.

**acoustical security** Protection of a space from eavesdropping by means of soundproofing materials, appropriately configured HVAC ducting and openings, and possibly by the use of acoustical control devices, including sound control or "white noise" generators.

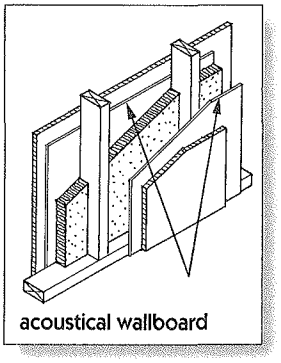
**acoustical sprayed-on material** A fibrous material with acoustical properties applied to a surface by spraying through a nozzle.

**acoustical tile** A term applied to modular ceiling panels in board form with sound-absorbing properties. This type of tile is sometimes adapted for use on walls.


acoustical tile

**acoustical transmission factor** The reciprocal of the sound reduction factor. A measure of sound intensity as it passes through a material, expressed in decibles.

**acoustical wallboard** Wallboard with sound-absorbing properties.


acoustical wallboard

**acoustical window wall** Double-glazed window walls with acoustical framing. This type of wall system is used particularly at airports.

**acoustic block** *See* **acoustical block.**

**acoustic insulation** *See* **sound insulation.**

**acoustic lining** Insulating material secured to the inside of ducts to attenuate sound and provide thermal insulation.

**acoustics** **1.** The science of sound transmission, absorption, generation, and reflection. **2.** In construction, the effects of these properties on the acoustical characteristics of an enclosure.

**acquiescence** A term frequently used when owners of adjacent properties agree on a boundary between their properties, if the original boundary is difficult or impossible to establish.

**acquisition** The process of acquiring property.

**acre** A common unit of land-area measurement equal to 160 square rods, or 43,560 square feet.

**acre foot** A unit of volume measurement equal to one acre times one foot thick. The acre foot is used to measure the volume of water or ore deposits.

**acropodium** An elevated pedestal or plinth bearing a statue.

**acropolis** The citadel of an ancient Greek city, usually surrounding the temple to the patron deity.

**acrylate resin** *See* **acrylic resin.**

**acrylic** *See* **acrylic resin.**

**acrylic fiber** Fiber produced from polymerized acrylonitrile, a liquid derivative of natural gas. A tough economical fiber commonly used in commercial and residential carpets and draperies.

**acrylic plastic glaze** A clear plastic sheet that is bonded to glass and that increases the ability of the glass to resist breaking and shattering.

**acrylic resin (acrylate resin)** In construction, clear, tough, thermoplastic resin manufactured in sheet and corrugated form, used as an adhesive, and as the main ingredient in some caulking and sealing compounds.

**acrylonitrile-butadiene-styrene** Copolymer with great strength and rigidity that is used in pipe and fittings for sanitary and storm drainage. Commonly used in drain waste vent piping.

**actinic glass** Glass that filters out radiation from sunlight.

**action item** An element of work, design, research, or other task to be completed before a specific date or time, such as before a subsequent meeting of involved parties.

**action level** The point when a concentration of hazardous materials reaches a level where OSHA regulations dictate protective steps be taken.

**activated alumina** A form of aluminum oxide that readily absorbs moisture and is therefore used as a drying agent.

**activated carbon** *See* **activated charcoal.**

**activated charcoal (activated carbon)** A material obtained principally as a by-product of the paper industry and used in filters for absorbing smoke, odors, and vapors.

**activated charcoal filtration** A filtration system that pulls certain chemicals and components from the air.

**activated rosin flux** Flux with a base that enhances the rosin flow of solder.

**activated sludge** Sludge that has settled out of oxygenated sewage.

**activated sludge process** A sewage treatment method involving the introduction of oxygen and bacteria into sewage. The by-products are water and activated sludge.

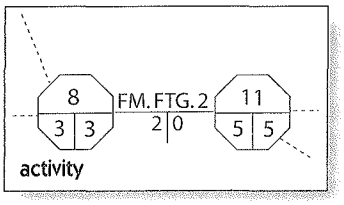
**active earth pressure** The horizontal component of pressure exerted on a wall by earth.

**active leaf** In a double-leaf door, the leaf to which the latching or locking mechanism is attached.

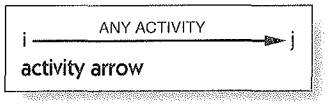
**active solar energy system** A system that primarily collects and transfers solar energy using mechanical means that are not powered by solar energy.

**active walls** Building walls that act as a generator or collector of energy. An example is a double glass wall that collects solar energy and reflects excess heat when the desired interior envelope temperature has been reached. This combination reduces a facility's net heating and cooling load.

**activity** In critical path method (CPM) scheduling, a task or item of work required to complete a project. Also called *task*.




**activity arrow** In arrow diagrams in critical path method scheduling, a graphic representation of an activity.




**activity duration** In critical path method scheduling, the estimated time required to complete an activity in time units (weeks, days, hours, etc.). There are three types of duration: original (or planned) duration, actual duration, and remaining duration. For in-progress activities, the completion duration is calculated by combining actual duration (so far) and remaining duration.

**act of God** An unforeseeable, inevitable event caused by natural forces over which an insurance policyholder has little or no control. Examples are windstorms, floods, earthquakes, and lightning strikes.

**actual cost records** Contemporaneous construction and accounting records detailing actual costs from a constructed project, including invoices, contracts, subcontracts, change orders, and applications for payment. *

**actual costs** The actual expenditures incurred by a program or project.*

**actual damages** Damages that can be assessed against an owner or contractor if either or both fail to perform their respective responsibilities and obligations as contained in the construction contract. Actual damages are considered economic (monetary) damages that can be clearly determined and proven, typically awarded by a court as the result of a lawsuit brought by one of the parties to the construction contract. *

**actual dimension** The real dimensional measurement of a piece of lumber, masonry unit, or other construction material. *See also* **nominal dimension.**

**actual finish date** Date when work on an activity is substantially complete. Activity substantial completion is when only minor or remedial work remains and successor activities may proceed without hindrance from the predecessor's remaining work. It is not necessarily the last day work will be performed on that activity. The remaining duration of this activity is zero.*

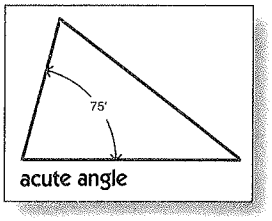
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# A

**actual start date** Date when work on an activity actually started with intention of completing activity within the planned duration. The actual start date is not necessarily the first date work was performed on that activity. Interim starts and stops for an activity may show the need for splitting the activity into component parts.*

**actuator** In hydraulics, a motor or cylinder designed to convert hydraulic energy into mechanical energy.

**acute angle** An angle less than 90°.



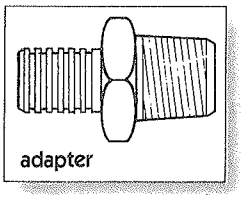

**acute toxic chemical** A substance that has immediate, but not necessarily permanent, adverse effects on health.

**adamant plaster** A quick setting gypsum plaster usually applied over a base coat of plaster.

**adapt** To modify a building or space to make it suitable for new requirements or purposes.

**adaptable building** A building that can be easily updated or modified to meet changing needs or requirements.

**adapter** Any device designed to match the size or characteristics of one item to those of another, particularly in the plumbing, air-conditioning, and electrical trades.



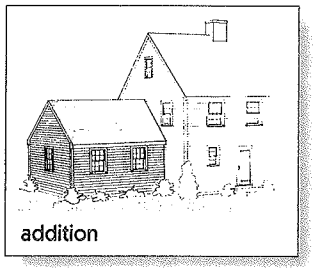

**adaptive use** Making modifications to an existing structure so that the space will be suitable for a new function. Also referred to as "adaptive reuse."

**ADA Standards for Accessible Design** As an adjunct to the Americans with Disabilites Act, a set of standards that establish minimum technical requirements for the design and construction of buildings and facilities. Their intent is to increase the level of accessibility in the built environment, in existing facilities as well as new construction and alterations.

**addenda** Plural form of **addendum**.

**addendum** A document describing an addition, change, correction, or modification to contract documents. An addendum is issued by the design professional during the bidding period or prior to the award of contract, and is the primary method of informing bidders of modifications to the work during the bidding process. Addenda become part of the contract documents.

**addition** **1.** An expansion to an existing structure, generally in the form of a room, floor, or wing. An increase in the floor area or volume of a structure. **2.** A chemical added to cement at the time of its manufacture to help the process or to alter the cement's characteristics.




**additional services** Professional services provided by the architect or engineer of a project that were not included in the original owner-architect agreement.

**additive** A substance that is added to a material to enhance or modify its characteristics, such as curing time, plasticity, color, or volatility.

**additive alternate** A specific alternate option for construction specifications or plans that results in a net increase in the base bid.

**additive constant** In stadia surveying, a correctional constant to be added to each calculated distance.

**addressable system** An advanced fire alarm or security system that provides for easy monitoring, remote testing, and quick location of an alarm condition.

**address system** An electronic audio system with a microphone and speakers installed for either fixed (permanent) or mobile use. Wiring for a permanent system should be done prior to any finish work.

**adherend** A material or part that is held to another by an adhesive.

**adhesion** The binding together of two surfaces by an adhesive.

**adhesion-type ceramic veneer** Ceramic tile or veneer attached to a backing by mortar, grout, or adhesive only. No anchors are used.

**adhesive** Generally, any substance that binds two surfaces together. In construction, the term is used principally in the wallboard and roofing trades.

**adiabatic** A condition in which there is no heat gain or heat loss.

**adiabatic curing** The curing of concrete or mortar, particularly a test cylinder, in a controlled environment with no heat gain or heat loss.

**adiabatic process** A thermodynamic process occurring in the absence of heat gain or heat loss.

**adit** **1.** The entrance or approach to a building. **2.** The entrance to a mine.

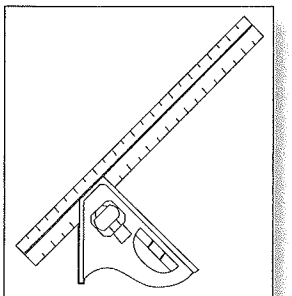
**adjustable base anchor** An attachment to the base of a door frame above a finished floor.

**adjustable clamp** A temporary clamping device that can be adjusted for position or size.

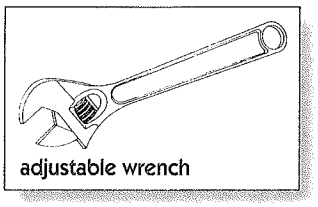
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**adjustable door frame** A door frame with a jamb that can be adjusted to accommodate different wall thicknesses.

**adjustable square (double square)** A carpenter's tool used for marking and scribing lumber. An adjustable square usually incorporates a level bubble.


adjustable square

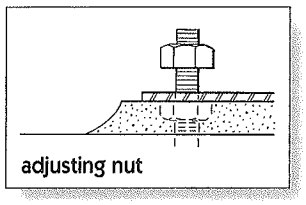
**adjustable wrench** A wrench with a jaw that can be adjusted to fit different size nuts or bolt heads.


adjustable wrench

**adjusted base cost** The total estimated cost of a project after adding or deducting addenda or alternatives.

**adjuster** A representative of the insurance company who negotiates with all parties involved in a loss in order to settle the claim equitably. An adjuster deals with the policyholder, repair contractor(s), witnesses, and police (if necessary), and acts as a middleman between these parties and the insurance company.

**adjusting nut** A threaded nut used for alignment of an object. Often coupled with a locking nut to secure it in position.


adjusting nut

**adjusting screw** A screw used for alignment of an object. Often coupled with a locking nut to secure it in position.

**adjustment** The determination of: (a) the cause of a loss, (b) whether it is covered by the policy, (c) the dollar value of the loss, and (d) the amount of money to which the claimant is entitled after all allowances and deductions have been made.

**adjustment factor** A constant (usually a multiplier) used in any calculation.

**adjuvant** **1.** Any agent added to another substance to increase its effectiveness. **2.** A nonpesticidal substance added to a pesticide to enhance its physical or chemical properties.

**administrative remedy** A nonjudicial remedy provided by an agency, board, commission, or the like.

**admixture** An ingredient other than cement, aggregate, or water that is added to a concrete or mortar mix to affect the physical or chemical characteristics of the concrete or mortar. The most common admixtures affect plasticity, air entrainment, and curing time.

**adobe** Earthen, sun-cured brick. A relatively labor-intensive, but low-embodied energy material, adobe absorbs excess heat during hot days and releases it during cool nights, thereby moderating a building's internal temperature.

**adobe blasting** *See* **mud-capping.**

**adobe brick** A large, roughly formed, unfired brick made from adobe and straw.

**adsorbed water** Water that is held on the surface of materials by electrochemical forces. This water, such as that on the surfaces of aggregate in a concrete mix, has a higher density and thus different physical properties from those of the free water in the mix.

**adsorbent** A material that has the ability to extract certain substances from gases, liquids, or solids by causing them to adhere to its surface without changing the physical properties of the adsorbent. Activated carbon, silica gel, and activated alumina are materials frequently used for this application.

**adsorption** The process of extracting specific substances from the atmosphere or from gases, liquids, or solids by causing them to adhere to the surface of an adsorbent without changing the physical properties of the adsorbent.

**ad valorem** Latin for based on value. Real property taxes, as they are based on the value of real property, are an ad valorem tax. An ad valorem tax is levied in proportion to value.

**advanced slope grouting** A method of grouting in which the grout is forced horizontally through preplaced aggregate.

**advance payment** A partial payment to a contractor made shortly after the contract is signed. Similar to a downpayment.

**advance payment bond** The generic term for the assurance of performance provided by a contractor to an owner that any money advanced to the contractor will be properly used to pay for project costs. Sometimes called a downpayment bond.

**advance slope method** A method of placing concrete in which the sloped face of the fresh concrete moves forward as the concrete is placed.

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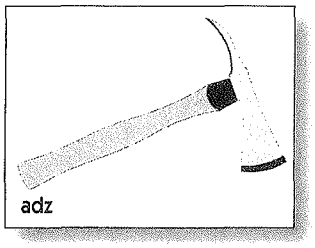
**advance waiver of liens** A waiver of all the contractor's rights to file mechanic's or materialmen's liens against the owner for nonpayment for work performed. Such advance waiver may be a condition of the owner's contract.

**adverse possession** Ownership of real property without having purchased it and without having done anything more than openly and physically possessing it for a long time in the contravention of the rights of the true owner. Although state laws differ, 20 years is the typical length of time that must pass before the person in possession of the land becomes the owner.

**advertisement for bids** Published notice of an owner's intention to award a contract for construction to a constructor who submits a proposal according to instructions to bidders. In its usual form, the advertisement is published in a convenient form of news media in order to attract constructors who are willing to prepare and submit proposals for the performance of the work. *See also* **bid call.**

**Advisory Council on Historic Preservation** An independent federal agency composed of 19 members who advise the President and the Congress on nationwide preservation issues.

**adz** A long-handled tool with a curved blade set perpendicular to the handle. Used for dressing lumber.


adz

**adz-eye hammer** A claw hammer with a long eye for receiving the handle.

**aeolian** Windblown or transported by the wind.

**aerate** To introduce air into soil or water, for example, by natural or mechanical means.

**aerated concrete** *See* **cellular concrete.**

**aeration** The process of introducing air into a substance or area by natural or mechanical means.

**aeration plant** A sewage treatment plant in which air is introduced into the sewage to accelerate the decomposition process.

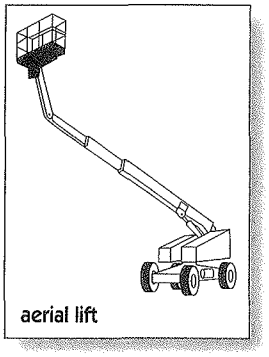
**aerator** A mechanical device that introduces air into a material such as soil, water, or sewage.

**aerator fitting** A pipe fitting used to introduce air into a flow of water.

**aerial** Pertaining to, caused by, or present in the air.

**aerial ladder** An extension ladder capable of reaching high places and often mounted on a vehicle such as a fire truck.

**aerial lift** A term commonly applied to mobile working platforms that are elevated hydraulically or mechanically.


aerial lift

**aerial photography** Photography performed from a vehicle in flight.

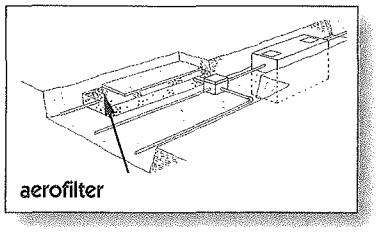
**aerial sewer** A sewer pipe or line supported above grade on bents or pedestals.

**aerial survey** A survey of the earth's surface based on aerial photographs and ground control points.

**aerial tramway** A cable and tower system used for transporting materials and personnel. Tramways are used in mining and dam building operations to transport great volumes of material over rough terrain.

**aerodynamic instability** A harmonic motion occurring in a structure during high winds and endangering structural integrity. The term was used to define the failure of the Tacoma Narrows Bridge.

**aerofilter** A bed of coarse aggregate used for filtering sewage.


aerofilter

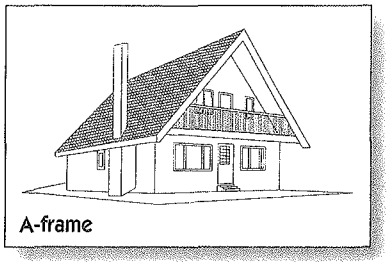
**aerograph** A paint spray gun.

**aerosol paints** Paints packaged in a pressurized can with a spray nozzle attached.

**affidavit of noncollusion** A sworn statement by the bidders on a project that the prices on their proposals were arrived at independently without consultation between or among them.

**affinity** A tendency for two substances to unite chemically or physically.

**A-frame** **1.** A structural system or hoisting system with three members erected in the shape of an upright capital letter "A." **2.** A building with a steep gable roof that extends to the ground.


A-frame

**after-cooler** A system that removes the heat from compressed gas after compression in a refrigeration system.

**afterfilter (final filter)** In air-conditioning, a filter located at the outlet end of the system.

**after-flush** The water that drains from a water closet after flushing and before the valve is closed by the incoming water pressure.

**after-sheathing window** A window installed after the wall sheathing is in place.

**aftertack (residual tack)** A defect in paint that causes the painted surface to become tacky under certain environmental conditions.

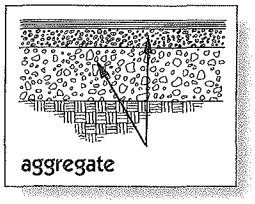
**age hardening** A term used to describe a hardening process of metals at room temperature.

**agency law** Rules, regulations, and procedures promulgated by an agency.

**agent** Under agency law, an agent is authorized by the principal to act on the principal's behalf. (For example, an architect is frequently the owner's agent. The owner, then, is the principal.) Generally, an agent's acts bind the principal as though the principal had acted directly. *See also* **principal**.

**agglomeration** The gathering together of small particles to form into larger particles, particularly to accelerate settlement in suspensions.

**aggregate** Granular material such as sand, gravel, crushed gravel, crushed stone, slag, and cinders. Aggregate is used in construction for the manufacturing of concrete, mortar, grout, asphaltic concrete, and roofing shingles. It is also used in leaching fields, drainage systems, roof ballast, landscaping, and as a base course for pavement and grade slabs. Aggregate is classified by size and gradation.


aggregate

**aggregate, abrasive** An antiskid aggregate worked into the surface of a concrete floor.

**aggregate, coarse** Aggregate that is larger than 1/8" and is retained on the No. 8 sieve.

**aggregate, coarse-graded** Aggregate with a continuous grading from coarse to fine, with a predominance of coarse particles.

**aggregrate, concrete** The fine and course aggregate used in manufacturing concrete. Both are usually washed and graded.

**aggregrate, exposed** A concrete surface with the aggregate exposed, formed by applying a retarder to the surface before the concrete has set, and subsequently removing the cement paste to the desired depth.

**aggregrate, fine** Aggregate smaller than 1/8". Fine aggregate passes through the No. 8 sieve.

**aggregrate, heavyweight** The aggregate produced from materials with high specific gravity, such as linomite, iron ore tailings, and magnetite.

**aggregate, lightweight** One of several materials used to decrease the unit weight of concrete, thereby reducing the structural load and the cost of the building. The materials most commonly used are perlite and vermiculite. The use of lightweight aggregate is costly, but sometimes necessary in construction.

**aggregate, macadam** A crushed aggregate of uniform size, placed to a specified depth, and covered over with hot asphalt.

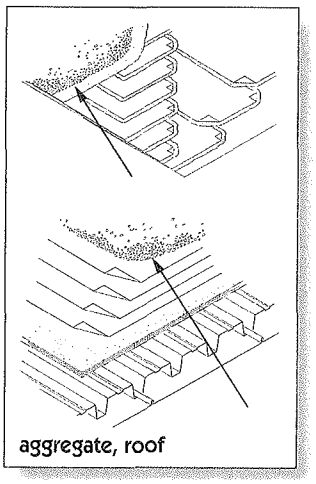
**aggregate, marble** A material produced from crushed marble of varying colors. It is used extensively in decorative landscaping, highway shoulders, and built-up roofing.

**aggregate, masonry** Washed sand used in a mortar mix.

**aggregate, open-graded** An aggregate in which a skip between the sieve gradations has been deliberately achieved so that the voids are not filled with intermediate-size particles.

**aggregate, plaster** Natural or manufactured washed sand used in a plaster mixture.

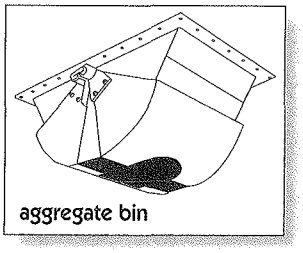
**aggregate, roof** **1.** The aggregate used for a tar-and-gravel application. **2.** The ballast used for membrane-type roofing.


aggregate, roof

**aggregrate, stone** An aggregate consisting of crushed stone.

**aggregate, well-graded** An aggregate that incorporates sizes from the maximum to the minimum specified so as to fill most of the voids. This type of aggregate is used for asphaltic concrete mixes and for base courses.

**aggregate bin** A structure designed for storing and dispensing aggregate. It is loaded from the top and emptied from the bottom.


aggregate bin

# A

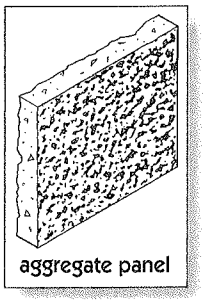
**aggregate bonding capacity** The maximum total contract value that a bonding company will cover (in performance bonds) for all of a construction company's current contracts.

**aggregate gun** A tool used to apply textured materials to gypsum drywall.

**aggregate interlock** The term applied to a situation in which the aggregate from one side of a concrete joint projects between the aggregate of the other side of the joint, thus resisting shear.

**aggregate limit** The maximum amount an insurance policy will pay for the sum of all personal injury and property damage claims that may arise during the term of the policy as the result of multiple occurrences. Legal defense costs may be excluded from this limit.

**aggregate panel** A precast concrete panel with exposed aggregate.



aggregate panel

**aggregate seal** The application of emulsified asphalt followed by a layer of uniform-size aggregate. Used to form a wearing and weather-resistant course.

**aggregate spreader** A piece of equipment used for placing aggregate to a desired depth on a roadway or parking lot.

**aggregrate testing** Any of a number of tests performed to determine the physical and chemical characteristics of an aggregate. Common tests are for abrasion, absorption, specific gravity, and soundness.

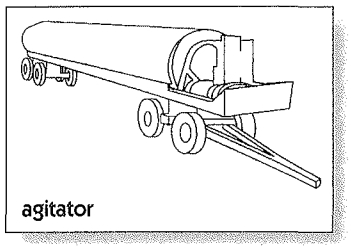
**aggressive sampling** During removal of hazardous materials, the agitation of air to test success of remediation effort.

**aging** **1.** A method of classifying individual receivables by age groups, according to the time elapsed from the date due. **2.** A process used to make building materials appear old or ancient. **3.** The chemical and physical changes in a material incurred by the passage of time. Concrete generally increases in strength with age, whereas rubber deteriorates with prolonged oxidation.

**agitating speed** The rate at which a concrete or mortar mixer rotates the drum or blades in order to agitate mixed materials to prevent segregation or setting.

**agitation** The rotation of, or moving of blades through, a drum containing concrete or mortar to prevent segregation or setting of mixture.

**agitator** A mechanical device used to maintain plasticity and to prevent segregation, particularly in concrete and mortar.



agitator

**aglite** A lightweight aggregate produced from expanded clay and used in concrete mixes.

**A-grade wood** **1.** A plywood surface that is smooth and paintable, and considered the best standard veneer. May be composed of more than one piece well jointed together. **2.** Plywood designation A-face, best veneer grade.

**agreement** **1.** A promise to perform, made between signatories to a document. **2.** In construction, the specific documents setting forth the terms of the contracts between architect, owner, engineer, construction manager, contractor, and others.

**agreement form** A standard printed form used by the signatories to an agreement, with blank spaces to fill in information pertinent to a particular contract.

**agricultural lime** A granular hydrated lime used for soil conditioning.

**agricultural pipe drain** A drainage system consisting of porous, perforated, or open-jointed pipe laid in a trench with porous fill.

**aiguille** **1.** A drill used for boring holes in masonry or cut stone. **2.** A drill used for boring blast holes in rock.

**air** **1.** In construction, shortened term for air-conditioning. **2.** Sometimes used to refer to the oxygen used in an oxygen/acetylene torch system.

**air admittance valve** A one-way valve that allows air to enter into a plumbing drainage system if negative pressure in the piping occurs.

**air alternator** A system that switches air from one side of an ice chest to the other.

**air balancing** The process of adjusting a heating or air-conditioning duct system to provide equal distribution to all areas.

**air barrier** A component of the building envelope system that prohibits air leakage into a building and reduces the risk of condensation build up. House wrap and fluid-applied air barriers are examples.

**air base** In aerial surveying, the distance between control stations in overlapping photographs.

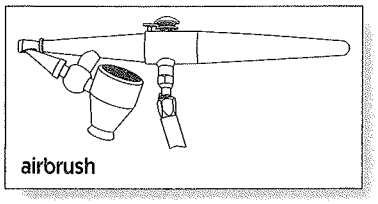
**air-blown mortar** *See* **shotcrete**.

**airborne transmission** A term that refers to sound traveling through air in a structure.

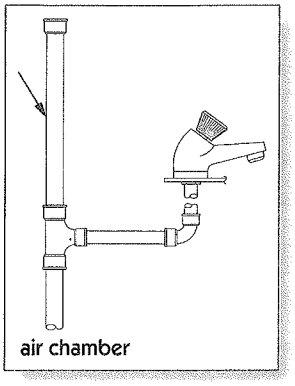
**air break** A piping arrangement in which a drain from a fixture appliance or device discharges through an open connection into a receptacle or interceptor. Used to prevent backflow or back siphonage.

**air brick** Brick manufactured with perforations to ventilate a masonry structure.

**airbrush** A device with a nozzle for applying paint with compressed air.


airbrush

**air chamber** In water piping, a vertical pipe containing entrapped air to absorb the pressure shock when a valve is closed suddenly.


air chamber

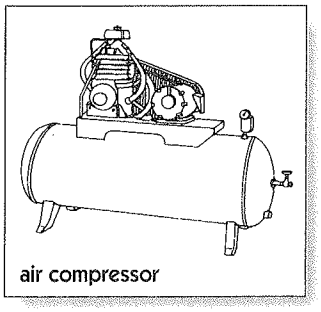
**air change** The volume of air in an enclosure that is being replaced by new air. The number of air changes per hour is a measure of ventilation.

**air circuit breaker** A breaker that discontinues current flow in air.

**air cleaner** A device, often hung from the ceiling, for removing impurities from the air. The device may have a mechanical or electrostatic filter.

**air cleaning** An indoor air quality control method of removing airborne particles and gases from the air.

**air compressor** A machine that extracts air from the atmosphere and compresses it into a holding chamber. The most common use of compressed air is for the operation of pneumatic tools. Air compressors are classified by the number of CFM (cubic feet per minute) compressed air they can produce.


air compressor

**air conditioner** A mechanism that controls temperature, humidity, and/or the cleanliness of air within an enclosure.

**air-conditioning** The process of controlling the temperature, humidity, and cleanliness of air, then distributing it within an enclosure.

**air-conditioning system** An air treatment system designed to control the temperature, humidity, and cleanliness of air and to provide for its distribution throughout the structure.

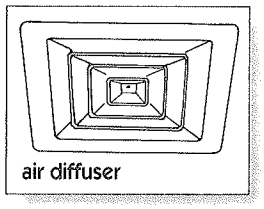
**air content** The volume of air present in a concrete or mortar mix, expressed as a percentage of the total volume. A controlled air content prevents concrete from cracking during the freeze/thaw cycle.

**air-cooled slag** Slag that is poured into beds and slowly cooled under ambient conditions.

**air curtain (air wall)** A narrow stream of air directed across an opening to deter the transfer of hot or cold air, contaminants, and insects from one side to the other. Air curtains are commonly used on grocery store refrigerator cases, mall storefronts, and loading platforms.

**air density** The weight per unit volume of air, expressed in pounds per cubic foot.

**air diffuser** An outlet in an air-supply duct for distributing and blending air in an enclosure. Usually, a round, square, or rectangular unit mounted in a suspended ceiling.


air diffuser

**air-distributing ceiling** A suspended ceiling system with small perforations in the tiles for controlled distribution of the air from a pressurized plenum above.

**air door** An invisible barrier of high-velocity air that separates different environments. Sometimes called *air walls*, air doors are typically used for garage-type or larger doors to reduce infiltration and ex-filtration.

**air drain** An empty space left between a foundation wall and a parallel wall to prevent the fill from laying directly against the foundation wall.

**air-entrained agent** An additive to hydraulic cement or an admixture for concrete or mortar that causes air to be incorporated in the form of minute bubbles on the concrete or mortar during mixing, usually to increase its workability and frost resistance.

**air-entrained concrete** *See* **concrete, air-entrained.**

**air-entraining agent** An admixture for concrete or mortar mixes that causes minute air bubbles to form within the mix. Air entrainment is desirable for workability of the mix and prevention of cracking in the freeze/thaw cycle.

**air-entraining hydraulic cement** Hydraulic cement containing an air-entraining addition in such amount to cause the product to entrain air in mortar within specified limits.

# A

**air escape** In plumbing, a valve for automatically discharging excess air from a water line.

**air exchange rate** Refers to the rate at which outside air replaces indoor air in a building, expressed in either air changes per hour (ACH) cubic feet per minute (cfm).

**air filter** A device for removing undesirable gaseous or solid particles from ambient air. All HVAC systems include some type of air filter.

**airflow retarders** Continuous materials, such as gypsum board, sheathing materials, rigid insulation, and sprayed foam insulation, that resist differences in air pressure caused by mechanical systems, the stack effect, and wind.

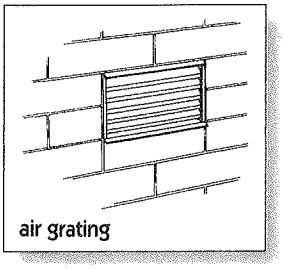
**air flue** *See* **flue**.

**airfoil fan** A backward-curved fan with blades of airfoil design.

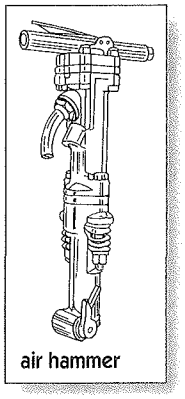
**air-fuel ratio** In combustion, the ratio of the air volume or weight to the fuel volume or weight.

**air gap** In plumbing, the distance between the outlet of a faucet and the overflow level of the fixture.

**air grating** A fixed metal grating, particularly in masonry foundation walls, for ventilation.


air grating

**air hammer** A portable, pneumatic percussion tool used for breaking and hammering.


air hammer

**air-handling troffer** A ceiling lighting unit that incorporates an air diffuser.

**air-handling unit (AHU)** The traditional method of heating, cooling, and ventilating a building by which single- or variable-speed fans push air over hot or cold coils, then through dampers and ducts and into one or more rooms.

**air lance** A device that directs a high pressure stream of compressed air to heat or clear away debris from a surface.

**air leakage** The air that escapes from a system or enclosure through cracks, joints, and couplings.

**air lift** A device that uses compressed air to lift slurry or dry powder through piping.

**airlock** **1.** An airtight chamber such as that used in tunnel and caisson excavation. **2.** A system of double doorways permitting entry and exit while preventing airflow from one area to another, as from a contaminated area to an uncontaminated area. **3.** An entrance room between areas of different pressures, such as the entrance to an air-supported structure. **4.** In plumbing, air trapped in a system and preventing flow.

**air makeup unit** A system for introducing fresh, conditioned air into an enclosure from which air is being exhausted.

**air meter** A device for measuring the air content of a concrete or mortar mix.

**air-mixing plenum** In an air-conditioning system, a chamber in which fresh air is mixed with recirculated air.

**air monitoring** In asbestos abatement, a procedure used to determine the fiber content in a volume of air over a measurable period of time.

**air passages** Openings in walls, floors, and ceilings that allow air movement out of rooms in a building.

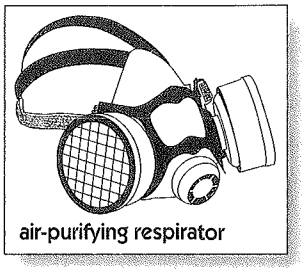
**air permeability test** A procedure for determining the fineness of powdered material such as cement.

**air pocket** A void filled with air, such as in a water piping system or in a concrete form when placing concrete.

**air-powered pump** A water pump that uses compressed air to create suction.

**air purge valve** A device for eliminating trapped air from a piping system.

**air-purifying respirator** A device that removes pollutants from a contaminated atmosphere as a person breathes.


air-purifying respirator

**air receiver** The air storage tank on a compressor.

**air regulator** An instrument for regulating the flow or pressure of air in a system.

**air release valve** A valve that releases air from a water pipe or fitting.

**air rights** The exclusive right of real property owners to possess the airspace above their land, as long as they comply with building and zoning laws.

**air ring** In a shotcrete nozzle, the perforated manifold that introduces air into the concrete.

**air separator** A pneumatic device that uses air to sort materials by size.

**air shaft (air well)** A roofless enclosed area within a building, admitting light and ventilation.

**air slacking** The absorption of moisture and carbon dioxide from the air by lime or cement.

**air splitter** Device inside an air duct that divides a single air stream into several streams.

**air stripping** A process by which volatile compounds are removed from soil or water by blowing clean air through the soil or water.

**air-supported storage tank cover** A nonrigid tank cover, usually for domestic water supplies, supported by atmospheric pressure that is slightly higher inside the tank than outside.

**air-supported structure** A nonrigid structure supported by atmospheric pressure that is slightly higher inside the tank than outside. The difference in pressure is created by fans.

**air terminal** The top of a lightning protection system on a building.

**air test** A test for leaks in ductwork and in drainage and pipe systems where compressed air is forced into a sealed system and leaks are detected with a pressure gauge.

**airtight** Refers to the inability to permit air passage.

**air tool** Any of a number of percussion tools that use pneumatic pressure to operate.

**air transformer** Attachment to a compressor that removes moisture and debris from the compressor's line.

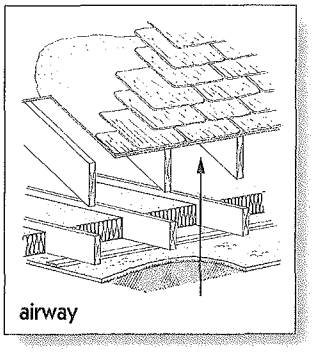
**air tube system** A tubular conveying system that uses air pressure to move capsules containing paperwork from one station to another.

**air void** The space occupied by entrained air in concrete or mortar.

**air wall** *See* **air curtain.**

**air washer** A water spraying mechanism for cleaning and humidifying air in a ventilation system.

**airway** The air space between the thermal insulation and sheathing on a roof.




**air well** *See* **air shaft.**

**aisle** A long passageway between sections of seats.

**aisleway** Any open passageway permitting access and traffic flow between sections within a building.

**Alabama marble** A fine-grained, white- or cream-colored marble.

**alabaster** A fine-grained translucent gypsum in white or pale hues.

**alarm system** An installed electrical system devised to protect against unauthorized entry or fire by giving off an audible and/or visual signal.

**albarium** A white lime used for stucco.

**albedo** The ratio of reflected light on a surface compared to the total amount of light.

**alclad** A product having an aluminum or aluminum alloy coating metallurgically bonded to the surface. The coating is anodic to the core, thus protecting it physically and electrolytically against corrosion.

**alcove** A recess or partly enclosed extension opening into a larger room.

**alder** A light-colored, lightweight hardwood often stained to simulate cherry or walnut, or used as plywood core.

**algicide** A chemical for preventing the growth of algae.

**algorithm** A set of mathematical instructions, or a computer program, used to produce a control output.

**alidade** A sighting apparatus often used with a plane table for determining and plotting horizontal and/or vertical angles.

**alienation** The act of transferring title of real property from one owner to another.

**aliform** Any object shaped like a wing.

**aligning punch** A tool used for aligning holes in structural steel. Often referred to as a spud wrench.

**alignment** **1.** The adjustment of elements in a plane such as structural steel. **2.** The plane or horizontal orientation of a structure or roadway.

**aliphatic resin glue** Thermoplastic adhesive used to bond wood and other porous materials.

**alite** The primary constituent of Portland cement clinker. Alite is composed of tricalcium silicate and small amounts of magnesium oxide, aluminum oxide, ferric oxide, and other materials.

**alkali** **1.** A liquid that has a pH greater than 7.0. **2.** Water soluble salts of alkali metals, such as sodium and potassium, which occur in concrete and mortar mixes. The presence of alkaline substances may cause expansion and subsequent cracking.

**alkali-aggregate reaction** A chemical reaction in mortar or concrete between alkalies (sodium and potassium) and certain constituents of some aggregates or soil. Destructive expansion of the concrete or mortar may result.

**alkali resistance** The ability, particularly of paint, to resist attack by alkaline materials.

**alkali soil** Soil that has a pH value of 8.5 or higher, and is thus harmful to some plant life.

# A

**alkirk tunneler** A tunnel-boring machine that drills a small pilot hole to serve as a center guide for the larger diameter tunneler.

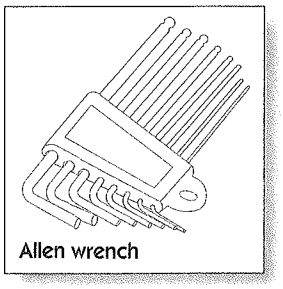
**alkyd paint** A paint, with an alkyd resin base, that produces a quick drying, hard surface.

**alkyd plastics** Thermoset plastics with good heat and electrical insulation properties. Commonly used in paints, lacquers, and molded electrical parts where temperatures will not exceed 400°F.

**alkyd resin** A synthetic resin used as a binder in lacquers, adhesives, paints, and varnishes.

**Allen head** A screw or bolt with a hexagonal recess to receive an Allen wrench.

**Allen wrench** A section of hexagonal stock used to turn an Allen head screw or bolt.



Allen wrench

**alley** A passageway between buildings on property lines that serves as a means of access.

**alligatoring** Rough cracking of a painted surface, often caused by applying another coat before the first is dry or by exposing a painted surface to extreme heat. It can also occur as a result of poor workmanship in plaster application due to incorrect mixtures of materials, incompatible base and finish coats, and the use of perlite. Commonly referred to as "chip cracking."

**alligator shears (lever shears)** A shop tool used for shearing sheet metal.

**alligator wrench** *See* **pipe wrench.**

**all-in aggregate** *See* **bank-run gravel.**

**allocable cost** A cost that is assignable to a particular contract or other cost objective.

**allocated cost** The total cost of an asset's individual components, summarized.

**allover** A term used to describe a repeating pattern on a surface.

**allowable bearing value (allowable soil pressure)** The bearing capacity of a soil, in pounds per square foot (psf), determined by its characteristics, such as shear, compressibility, water content, and cohesion. The higher the allowable bearing value of a soil, the smaller the footing required to support a structural member.

**allowable cost** Any reasonable cost that may be recovered under the contract to which it is allocable.

**allowable load** The ultimate load divided by a safety factor.

**allowable pile-bearing load** The allowable load used to design a pile cluster to support a structure.

**allowable soil pressure** *See* **allowable bearing value.**

**allowable stress** The maximum stress allowed by code for members of a structure, depending upon the material and the anticipated use of the structure.

**allowance** **1.** A stated requirement of the contract documents whereby a specified sum of money is incorporated, or allowed, into the contract sum in order to sustain the cost of a stipulated material, assembly, piece of equipment, or other part of a construction contract. This device is convenient in cases where the particular item cannot be fully described in the contract documents. **2.** In bidding, an amount budgeted for an item for which no exact dollar amount is available. **3.** A contingency for unforeseen costs. **4.** The classification of connected parts or members according to their tightness or looseness.

**alloy** A homogeneous mixture of two or more metals developed and used because of its lower cost and/or the certain desirable properties it exhibits.

**alloy steel** Steel with one or more added materials (other than carbon and the allowed impurities) that give it desired physical or chemical characteristics.

**all risk insurance** An insurance policy that can be written separately to add coverage against certain specific risks of damage or loss from any number of potential events. These risks represent potential losses in excess of coverage provided by other forms of insurance purchased for the purpose of protecting the owner, design professional, and contractor during and after the construction process.

**all-thread nipple** Pipe fitting with a thread running its entire length.

**alluvium** Any material, such as gravel, sand, silt, or stone, that has been deposited by running water.

**alphaduct** Flexible, nonmetal conduit used in electrical wiring configurations that require unusual bends.

**alpha gypsum** A specially processed calcined gypsum with an extremely high compressive strength.

**ALTA survey** Short for American Land Title Association, a land survey that identifies the title commitments of the parcel in addition to the normal as-built conditions.

**alteration** Construction within a structure or to its exterior closure that does not change the overall dimensions of the structure. Alteration includes remodeling and retrofitting.

**alternate** A specified item of construction that is set apart by a separate sum. An alternate may or may not be

incorporated into the contract sum at the discretion and approval of the owner at the time of contract award.

**alternate bid** An amount stated in a bid that can be added or deducted by an owner if the defined changes are made to the plans or specifications of the base bid.

**alternating current** An electric current that reverses direction at regular intervals. In the U.S., most current for domestic use reverses direction at 60 cycles per second.

**alternating sprinkler system** A fire sprinkler system that can be switched from a wet-pipe sprinkler system to a dry-pipe sprinkler system as needed.

**alternative dispute resolution (ADR)** A confidential method of settling a dispute without going to court, typically negotiation, mediation, or arbitration.

**alternator** A machine that develops alternating current by mechanical rotation of its rotor.

**altitude** In surveying or astronomy, the angular distance of a celestial body above the horizon.

**alum** A double sulfate added to plaster as a hardener and accelerator.

**alumina** Aluminum oxide found in the clay used to make brick and clay tile.

**aluminous cement** *See* **cement**.

**aluminum** A silver-colored, nonmagnetic, lightweight metal used extensively in the construction industry. It is used in sheets, extrusions, foils, and castings. Sheets are often anodized for greater corrosion resistance and surface hardness. Because of its light weight and good electrical conductivity, aluminum is used extensively for electrical cables. Aluminum is usually used in alloy form for greater strength.

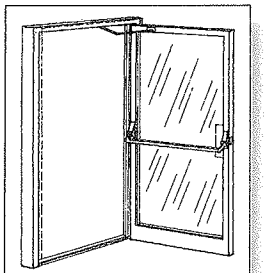
**aluminum brass** Brass with an aluminum alloy to increase corrosion resistance.

**aluminum bronze** A copper-aluminum alloy that is used in castings. Can also be cold-worked.

**aluminum-clad window** A factory-finished and sealed window whose wooden construction is enclosed with aluminum sheeting.

**aluminum-coated steel** Steel coated with aluminum to inhibit corrosion.

**aluminum door** A glazed door with aluminum stiles and rails.



aluminum door

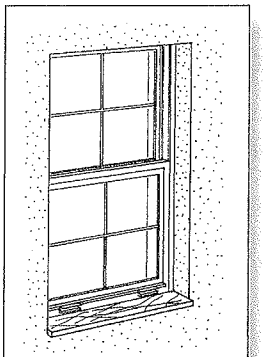
**aluminum foil** A very thin aluminum sheet used extensively for thermal reflection and moisture protection.

**aluminum nitrate fuel oil mix (ANFO)** An inexpensive explosive used in blasting and mining operations.

**aluminum oxide** *See* **alumina**.

**aluminum paint** A paint containing aluminum paste, which gives the paint good heat-, light-, and corrosion-resistant properties.

**aluminum window** A glazed window with an aluminum sash and muntins.



aluminum window

**amalgam** **1.** A combination or mixture of different elements. **2.** An alloy that includes mercury and one or more other metals.

**ambient lighting** The general background lighting, whether natural or artificial, of an area.

**ambient noise** The total noise level from all sources in a given area, either within a building or in an outside environment.

**ambient pressure** The pressure during normal operation at any particular location in a water distribution system.

**ambient temperature** The temperature of the environment surrounding an object.

**ambiguity** An uncertainty in the meaning of provisions of a contract, document or specification. Mere disagreement about the meaning of a provision does not indicate an ambiguity. There must be genuine uncertainty of meaning based on logical interpretation of the language used in the contract. Generally, ambiguities in contracts are construed against the drafter of the agreement.*

**amended water** Water to which a surfactant (a surface-active substance) has been added. Used in asbestos abatement operations.

**amendment** A modification of the contract by a subsequent agreement. This does not change the entire existing contract but does alter the terms of the affected provisions or requirements.*

**amenity** A feature of a structure that makes an aesthetic contribution above the normal standard for that area.

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# A

**American Arbitration Association (AAA)** A private nonprofit organization that provides education, training, and administrative assistance to parties who use nonjudicial methods, such as alternative dispute resolution (ADR) for resolving disputes. The AAA is involved primarily with binding arbitration and mediation.

**American basement (walk-out basement)** The floor of a building partly above and partly below grade.

**American black walnut** A close-grained, dark-colored hardwood often used for carving and furniture making.

**American bond** *See* **common bond.**

**American Conference of Governmental Industrial Hygienists (ACGIH)** An organization of professionals skilled in the science of industrial hygiene.

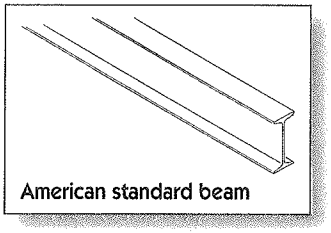
**American Federation of Labor (AFL)** A labor organization or union formed in the United States under the leadership of Samuel Gompers in 1886. The American Federation of Labor provided an "umbrella" organization, the purpose of which was to represent to management the interests of workers in various trades, crafts, and other skilled disciplines related to manufacturing and construction.

**American Federation of Labor and the Committee for Industrial Organizations (AFL-CIO)** A major union formed by the merger of the two organizations listed above under the leadership of John L. Lewis in 1955. The AFL-CIO represents the interests of various types of member workers in industry and other endeavors (including construction) for the purpose of negotiating with management for acceptable wages, benefits, and other material interests of worker-employees.

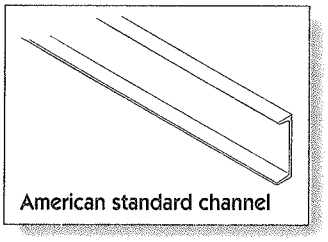
**American Lumber Standards Committee (ALSC)** The committee that maintains standards for hardwood and softwood grading, including those for size and nomenclature. Rules for grading are established by the U.S. Department of Commerce and enforced by regional organizations.

**American National Standards Institute (ANSI)** Publisher of the American National Standards, a reference book outlining the approved standards and specifications for all facets of building construction.

**American standard beam** A hot-rolled steel I-beam designated by the prefix S before the size and weight.




**American standard channel** A hot-rolled steel channel designated by the prefix C before the size and weight.




**American Standard Code for Information Interchange (ASCII)** An accepted standard for computerized data transmission.

**American standard pipe threads (Briggs standard)** The thread size and pitch commonly used in the U.S. for connecting pipe and fittings.

**American standard wire gauge** *See* **American wire gauge.**

**American table of distances** A code for the safe storage of explosives, giving distances from cap storage, dwellings, and other buildings and materials.

**American wire gauge (American standard wire gauge, Brown and Sharpe gauge)** The standard in the U.S. for specifying and manufacturing wire and sheet metal sizes, particularly electrical wire and metal flashing.

**Americans with Disabilities Act (ADA)** A federal civil rights act prohibiting discrimination against people with disabilities. There are five sections that cover different aspects of discrimination: employment, state and local government, public accommodations and commercial facilities, telecommunications, and miscellaneous provisions.

**Americans with Disabilities Act Accessibility Guidelines (ADAAG)** The minimum guidelines that must be followed to meet ADA Standards for Accessible Design. *See also* **ADA Standards for Accessible Design.**

**amino plastic** A group of thermoset plastics derived from ammonia and often used in making electrical insulators.

**ammeter** An instrument for measuring the rate of ampere flow through an electric circuit.

**ammonal** An inexpensive explosive used for heavy blasting in dry holes.

**ammonia** A highly efficient, inexpensive gas used in manufacturing fertilizers and as a coolant in large refrigeration systems such as ice rinks.

**ammonium chloride** A white, crystalline compound used as a soldering flux and in the manufacture of iron cement.

**ammonium nitrate fuel oil mix** An inexpensive explosion used in blasting.

**amorphous** A type of rock that has no crystalline structure.

**amortization** The process of paying off stock, bonds, a mortgage, or other indebtedness through installments, or by a sinking fund.

**amount of mixing** The mixing action employed to combine the ingredients of concrete or mortar, measured in time or number of revolutions.

**ampacity** A designation of the current-carrying capacity of an electrical wire, expressed in amperes.

**amperage** In a circuit, the flow of electricity, expressed in amperes.

**ampere** The electromotive force required to move one volt of electricity across one ohm of resistance. A measure of electrical current.

**amplifier** An electronic device used to increase the magnitude of an electrical signal without changing the quality of the signal.

**amplitude** In sound or vibration, the maximum variation from the mean position.

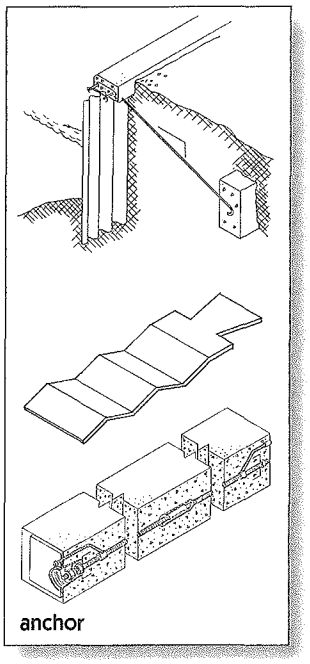
**amyl acetate (banana oil)** A solvent for paints and lacquers that has an odor resembling that of bananas.

**amylin** A starch-like, water-soluable compound used as a wallpaper adhesive.

**analog point** In Building Automation Systems, a sensor, such as a damper or temperature sensor, that has a continuous range of settings that can be monitored or controlled by the system.

**analog signal** A signal in the form of a fluctuating quantity (such as voltage or current strength) that reflects variations, such as loudness. It is not limited to discrete units.

**anchor (anchorage)** **1.** A device to prevent movement when in tension, such as a tie-back for sheet piling. **2.** In masonry composite wall construction, the tension connection between components. **3.** In prestressed or posttensioned concrete, the end connection for the tendons. **4.** A timber connector. **5.** The metal devices that secure metal door and window frames to masonry. **6.** In piping systems, a device that secures piping to a structure.


anchor

**anchorage** *See* **anchor.**

**anchorage bond stress (development bond stress)** The forces on a deformed reinforcing steel bar divided by the product of the perimeter times the embedded length.

**anchorage deformation (anchorage loss, anchorage slip)** In prestressing concrete members, the deformation of an anchor or slippage of tendons when the prestressing device is released.

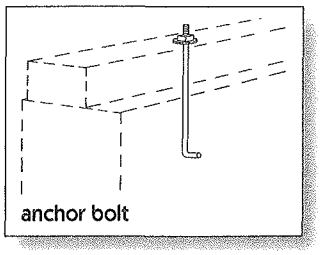
**anchorage loss** *See* **anchorage deformation.**

**anchorage slip** *See* **anchorage deformation.**

**anchorage zone** **1.** In pretensioning, the area of the member in which the stresses in the tendon anchor are developed. **2.** In posttensioning, the area adjacent to the anchorage that develops secondary stresses.

**anchor block** A block of wood in a masonry wall that provides a means of attaching other wood members.

**anchor bolt (foundation bolt, hold-down bolt)** A threaded bolt, usually embedded in a foundation, for securing a sill, framework, or machinery.


anchor bolt

**anchor bolt plan** A plan view showing size and location of all anchor bolts for a building's systems components. May be included in structural steel and shop drawings.

**anchored-type ceramic veneer** Ceramic veneer that is attached to a backing by nonferrous anchors and grout. The minimum thickness of veneer and grout is 1".

**anchor log** A log buried in the ground to act as a deadman.

**anchor plate** A plate attached to an object to which accessories or structural members may be attached by welding, screwing, nailing, or bolting.

**anchor rod** A threaded metal rod attached to hangers and used to support pipe and ductwork.

**anchor strip** A wooden, plastic, or metal board surrounding a window and nailed to the building's framing to serve as a windbreak.

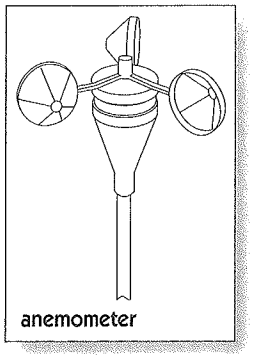
**ancillary** One of a group of buildings having a secondary or dependent use, such as an annex.

**ancon** **1.** Scrolled bracket or corbel that supports a cornice or entablature. **2.** A projecting boss on a concrete masonry unit.

**anechoic room** An enclosure whose interior surfaces do not reflect sound.

# A

**anemometer** An instrument that measures the velocity of airflow.




**angle** **1.** The figure or measurement of a figure formed when two planes diverge from a common line. **2.** In construction, a common name for an L-shaped metal member.

**angle bar** *See* **angle iron.**

**angle bead (angle staff, staff angle)** A metal or wood strip set at the corner of a wallboard or plaster wall to serve as a guide and to provide protection. Angle beads are most commonly made of nonferrous or galvanized perforated sheet metal.

**angle beam** Another term for angle iron. Usually, the term refers to one of heavier stock.

**angle block (glue block)** A small block of wood used to fasten or stiffen the joint of two adjacent wood members, usually at right angles.

**angle board** A board cut at an angle and used as a jig for erecting masonry or cutting other members at a constant angle.

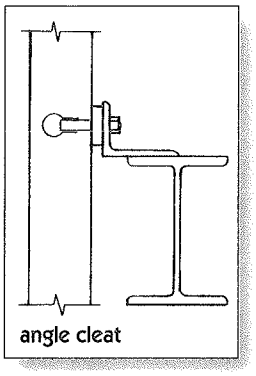
**angle bond** A metal tie that projects into each wall at a corner and is used to bond masonry.

**angle brace (angle tie)** A piece of material temporarily or permanently secured across an angle to make it rigid, such as a strip of wood nailed across the corners of a window frame to keep it square during installation.

**angle brick** A brick cast with an oblique angle on one of its corners.

**angle buttress** One of two buttresses forming a right angle at the corner of a structure.

**angle cleat (angle clip)** A short section of angle iron used to attach structural members, such as precast panels, to structural steel.




**angle clip** *See* **angle cleat.**

**angle closer** A special brick or a portion of a brick used to close the bond on the outside corner of a brick wall.

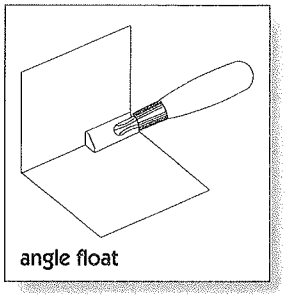
**angle collar (bevel collar)** A cast-iron pipe angle fitting with a bell-type connection at each end.

**angle divider** A square with an adjustable hinged blade used for setting or bisecting angles.

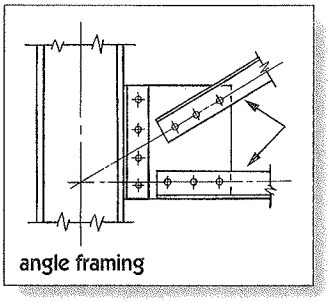
**angle dozer** A bulldozer whose blade can be set at an angle so as to push the excess material to one side.

**angle fillet (angle stile)** A strip of triangular cross section used to cover the joint of two surfaces meeting at an angle less than 180°.

**angle float (angle trowel)** A trowel with two surfaces meeting at right angles. An angle float is used for finishing plaster or concrete in an inside corner.



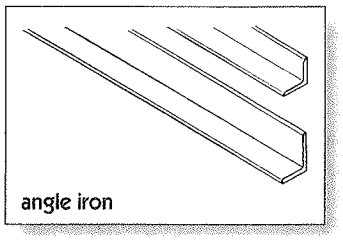

**angle framing** Light-gauge framing with an angle iron.




**angle gauge** A template used to set or maintain an angle during construction.

**angle hip tile** *See* **arris hip tile.**

**angle iron (angle bar, angle section)** An L-shaped steel structural member classified by the thickness of the stock and the length of the legs. Sometimes referred to simply as **angle.**




**angle lacing** A system of connecting two structural components with angle irons.

**angle of repose** The maximum angle above horizontal at which a material of given density and moisture content will remain in place without sliding.

This measurement is used specifically for earth cuts, fills, and stockpiled aggregates.

**angle paddle** A hand tool used to finish plaster.

**angle plane** A hand tool used to remove projections and smooth inside corners on a plaster brown coat covering once it has set.

**angle post** *See* **corner post.**

**angle rafter** *See* **hip rafter.**

**angle rage** *See* **hip rafter.**

**angle section** *See* **angle iron.**

**angle staff** *See* **angle bead.**

**angle stile** *See* **angle fillet.**

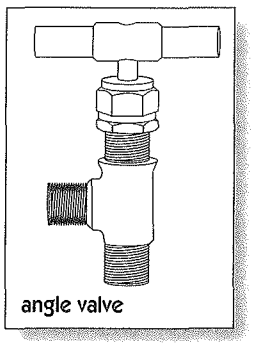
**angle strut** An angle iron erected to carry a compression load.

**anglet** A groove in a material or structure, most often containing a right angle.

**angle tie** *See* **angle brace.**

**angle trowel** *See* **angle float.**

**angle valve** A valve with the inlet at right angles to the outlet for controlling flow in a pipe.


angle valve

**angular aggregate** An aggregate made of crushed material with sharp edges, as opposed to screened gravel with rounded edges.

**angular measure** The deviation between two lines that meet at a point, measured in degrees, minutes and seconds.

**anhydrite** An additive used in the manufacture of Portland cement to control the set.

**anhydrous calcium sulfate (dead-burnt gypsum)** Gypsum from which all the water of crystallization has been removed.

**anhydrous gypsum plaster** A high-grade finish plaster with most of the water of crystallization removed.

**anhydrous lime** *See* **lime.**

**animal glue** A strong adhesive with poor water resistance made from bones and hides of animals. Often used in furniture manufacture.

**anionic surfactant** A negatively-charged adjuvant with limited compatibility used in asbestos abatement.

**anisotropic** In construction, a term to describe materials like wood that exhibit different properties when measured along different axes.

**annealed wire** A pliable wire used in construction primarily for reinforcing steel tie wires.

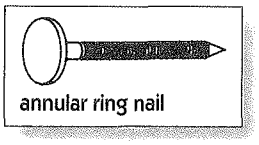
**annealing** The process of subjecting a material, particularly glass or metal, to heat and then slow cooling to relieve internal stress. This process reduces brittleness and increases toughness.

**annex** A secondary structure either near or adjoining a primary structure.

**annual fuel utilization efficiency (AFUE)** A seasonal efficiency rating that is an accurate estimation of fuel used for furnaces and direct-fired forced hot air systems. It measures the system efficiency and accounts for startup, cool-down, and other operating losses.

**Annual Report of Carcinogens** A list of those substances determined by the National Toxicology Program to be carcinogenic to humans.

**annular ring nail** A nail with a series of thread-like rings on its shank to give it good holding power. This type of nail is used for attaching gypsum board to wood studs.


annular ring nail

**annunciator** An electrical signaling device that identifies when a circuit is engaged.

**anode** The conductor rod used in an electrical system to protect underground tanks and pipes from electrochemical action.

**anodic coating** The surface finish resulting from anodizing aluminum. The finish may be clear or colored.

**anodize** The process of creating electrolytically a hard, noncorrosive film of aluminum oxide on the surface of a metal. This film can be either clear or colored.

**anodized aluminum** Aluminum coated by an electrolytic process to produce an oxide film that is corrosion-resistant.

**antechamber** An entrance, vestibule, or foyer.

**antichecking iron** A flat piece of iron, most often bent into a C, S or Z shape, that is driven into a timber end to prevent splitting.

**anticorrosive paint** A paint containing corrosive-resistant pigments such as zinc chromate, lead chromate, or red lead. This type of paint is used as a primer on iron and steel products.

**antifloatation pads** Concrete pads secured to underground tanks to add sufficient weight to the tank to overcome buoyancy when empty.

**antifreeze sprinkler system** A wet-pipe sprinkler system that uses an antifreeze solution in addition to water supply.

# A

**antimicrobial** A compound commonly added to other products to prevent bacteria growth on the surface of a finished product.

**antimonial lead (hard lead, regulus metal)** A lead alloy containing antimony that is used in sheet form for roofing, cladding, and tank lining. This alloy is harder than pure lead.

**antimony oxide** A white pigment added to plastics and paints to give them flame-retardant properties.

**antioxidant** Any substance that inhibits oxidation, which deteriorates plastics and other materials.

**antiquing (broken-color work)** A method of applying paint in which a second color is exposed from underneath. Used on trim and furniture to give the wood an older appearance.

**antisiphon trap (deep-seal trap)** In a drainage system, a plumbing trap that provides a water seat to prevent siphonage.

**antislip paint** A paint with coarse particles mixed in to roughen the surface to which it is applied. This type of paint is used on steps, ramps, walkways, and porches.

**antismudge ring** The frame around a ceiling-mounted air diffuser that reduces the formation of rings of dirt around the diffuser.

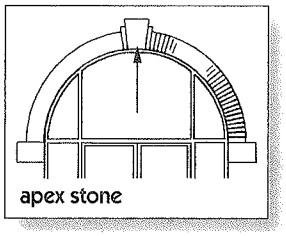
**antistatic agent** An additive that reduces the development of static electricity on the surface of plastics or on carpeting.

**anvil** The part of a pile hammer that transmits the driving force to a pile.

**aperture** In construction, any opening left in a wall for a door, window, or for ventilation.

**apex** The peak, or highest point of any structure.

**apex stone (keystone, saddle stone)** The highest stone or block in an arch, gable, dome, or vault. Apex stones are often decorative.


apex stone

**apparent candlepower** The measure of a light source at a specified distance expressed as the candle power that produces the same illumination at that same distance.

**apparent density** The mass per unit volume (or the weight per unit volume) of a material, taking into consideration any voids.

**appeal notice** A notice to a board of contract appeals that a contracting officer's final decision or failure to issue a decision will be appealed.

**appentice (pent, pentice)** A subordinate structure, like a shed, built against another structure.

**appliance** An electric or gas device used to provide occupant comfort or convenience such as by producing light, heat, air conditioning, refrigeration, and so forth.

**appliance panel** An electrical service panel with circuit breakers or fuses specifically designed for service to appliances.

**application bond** The measurement of the strength of adhesion between two adhered surfaces.

**application butyl** An adhesive with a butyl base used in caulking and sealants.

**application cement** A common term for mastics used in flooring and roofing applications.

**application failure** The separation by chemical or physical means of two adhered surfaces.

**application for payment** A formal written request for payment by a contractor for work completed on a contract and, if allowed for in the contract, materials stored on the job site or in a warehouse.

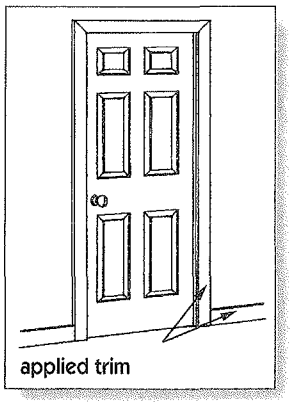
**application mortar** A mixture with an adhesive additive used for affixing ceramic wall or ceiling tile.

**application neoprene** A liquid neoprene compound applied to concrete foundation walls for waterproofing.

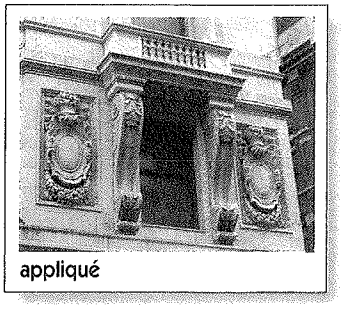
**application spreader** A trowel with notched edges used for applying adhesive.

**application wall clips** Special clips used for installing wallboard with adhesive in lieu of nails or screws.

**applied trim** Strips or moldings applied to, as opposed to manufactured with, door and window frames and wood paneling.


applied trim

**appliqué** A nonstructural decorative object attached to a member or structure for decorative purposes.


appliqué

**appraisal** A dollar estimate of the value of a certain item of property, or the assessment of the value of a loss. The estimate is developed from market value, replacement cost, income produced, or a combination of these factors. Appraisals are usually made by qualified professional appraisers.

**appraisal clause** A clause included in some property insurance policies stating that if the policyholder and the insurance company disagree over the dollar value of the loss, then both parties may hire their own independent appraiser. If these two appraisers do not agree, a third appraiser, acting as "umpire," is hired (the expense is shared by the policyholder and the insurance company), and his word is considered final.

**apprentice** A person who works with a skilled craftsman for a number of years in order to learn the trade. An apprentice is generally rated by the number of years served.

**approach ramp** **1.** An access for vehicles to a highway. **2.** A sloped access for the handicapped to a building, in lieu of stairs.

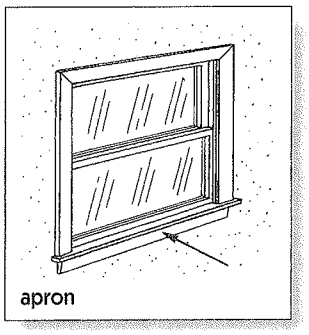
**approach-zone district** An area defined by a zoning ordinance or bylaw to be within the flight path of an airport. Building height and the type of industry allowed are often restricted within such an area.

**approved** In construction, materials, equipment, and workmanship in a system, or a measurable portion thereof, which have been accepted by an authority having jurisdiction. Usually the term refers to approval for payment, approval for continuation of work, or approval for occupancy.

**approved equal** Material, equipment, or method of construction that has been approved by the owner or the owner's representative as an acceptable alternative to that specified in the contract documents.

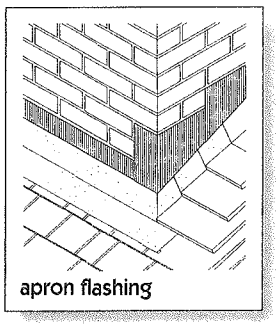
**appurtenance** **1.** Something added on to a main structure or system. **2.** A condition added to a property deed, such as a right-of-way.

**apron** **1.** A piece of finished trim placed under a window stool. **2.** A slab of concrete extending beyond the entrance to a building, particularly at an entrance for vehicular traffic. **3.** The piece of flat wood under the base of a cabinet. **4.** Weather protection paneling on the exterior of a building. **5.** A splashboard at the back of a sink. **6.** Bowl-front closing device for a scraper bowl. **7.** At an airport, the pavement adjacent to hangars and appurtenant buildings.



apron

**apron flashing** **1.** The flashing that diverts water from a vertical surface on a building to a sloped roof, such as that around a chimney. **2.** Flashing that leads water from a roof into a gutter.



apron flashing

**apron lining** A board or veneer that covers the apron piece of a stair case.

**apron molding** The piece of flat wood under the base of a cabinet.

**apron piece (pitching piece)** A piece of lumber protruding from a wall to support the rough stringers at the top or at a landing of a wooden staircase.

**apron rail** A horizontal rail attached to a door at the height of the lock.

**apron wall** A distinct exterior wall panel extending from a window sill to the window below.

**aquastat** An electrical control activated by changes in water temperature.

**aqueduct** A water-conveying system that relies on gravity to maintain water flow. An aqueduct may be underground or elevated; an elevated aqueduct may be covered or open.

**aquifer** A geological water-bearing formation that can provide water for wells.

**arbitration** The process by which parties agree to submit their disputes to the determination of a third, impartial party (referred to as the arbitrator), rather than pursuing their claims before a judge and jury in a court of law. Parties often agree in advance to binding arbitration of disputes, either as a clause in the contract or at the occurrence of a dispute. This method of avoiding litigation can save both time and money.

**arbor** **1.** An enclosure of closely planted trees, vines, or shrubs that are either self-supporting or supported on a framework. **2.** The rotating shaft of a circular saw or shaper.

**arc** **1.** The electrical discharge between two electrodes. When the electrodes are surrounded by gas in a lamp, they become a bright, economical light source. **2.** Any portion of a circle or the angle that it makes.

**arcade** A covered passageway between buildings, often with shops and offices on one or both sides.

**arc blow** The phenomenon that occurs when an electric arc loses stability. It is caused by magnetic forces created during welding.

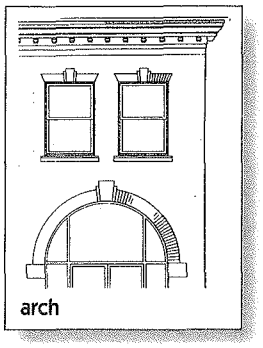
# A

**arc cutting** A method of cutting metal with an electric welding machine. The metal melts from the heat produced by the arc between the electrode and the metal.

**arc discharge** An electric discharge that produces light and is often used in lamps.

**arc gouging** A shaping or grooving of metal by arc cutting.

**arch** A curved or flat structure spanning an opening. The shape and size of arches are limited by the materials used and the support provided.


arch

**archaic materials** Historical components and assemblies that are essential to the integrity of a historic structure, but that are not in common use for new construction. Examples include traditional solid masonry construction, historic reinforced concrete assemblies, terra cotta masonry, lead-coated copper sheet metal assemblies, and hollow clay tile interior partition walls.

**arch band** The visible ribs in a vaulted ceiling.

**arch bar** A metal strap or beam that supports an arch.

**arch beam** A beam whose upper surface is arched.

**arch brace** A curved brace in a wooden roof truss that gives the roof an arched appearance from the inside.

**arch brick (compass brick, feather edge brick, radial brick, radiating brick, radius brick, voussoir brick)** **1.** One of a number of types of brick manufactured to construct curved surfaces such as arches and round manholes. **2.** Extremely hard-burned brick from an arch of a scove kiln.

**arch buttress** *See* **flying buttress.**

**arch center** The falsework used to support masonry during construction of an arch.

**arch corner bead** A job-cut corner bead used to finish an arch.

**arching** The bridging of shear stresses in a soil mass across an area of low shear strength to adjacent areas of higher shear strength.

**architect** A professionally qualified and licensed person who prepares plans and specifications for a building or structure. Architectural services include such duties as project analysis, development of the project design, and the preparation of construction documents (including drawings, specifications, bidding requirements, and general administration of the construction contract).

**architect-engineer** A person or company providing services as both architect and engineer.

**architect's approval** Permission granted by the architect, acting as the owner's representative, for actions and decisions involving materials, equipment, installation, change orders, substitution of materials, or payment for completed work.

**architect's scale** A draftsman's tool with proportionate, graduated spaces. May be flat, like a ruler, or three sided. The three-sided scale has 10 separate scales: 1/8" and 1/4", 1" and 1/2", and 3/8". 3/16", and 3/32", and 1-1/2" and 3".

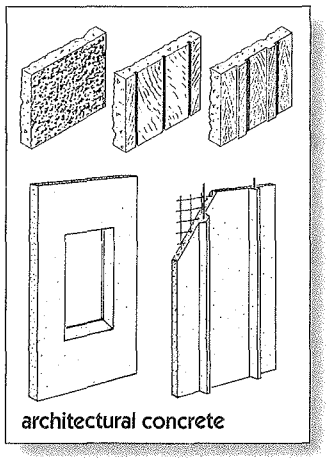
**architectural** Pertaining to a class of construction, particularly in home building, of higher-than-average quality. The term often pertains to the ornamental features of a structure.

**architectural area of buildings** The total of all stories of a building, after adjustments, computed according to AIA standards, measured from the exterior faces of exterior walls and from the center line of walls between buildings.

**architectural barrier** An architectural feature that is not compliant with accessibility for disabled users or prohibits usage or access to a building.

**architectural bronze** An alloy consisting of 57% copper, 40% zinc, 2.75% lead, and 0.25% tin, used for ornamental forgings and extrusions.

**architectural concrete** Structural or nonstructural concrete that will be permanently exposed to view and therefore requires special attention to uniformity of materials, forming, placing, and finishing. This type of concrete is frequently cast in a mold and has a pattern on the surface.


architectural concrete

**architectural door** A grade classification of door that designates higher-than-standard specifications for material and appearance.

**architectural drawings** Also called core drawings, these show the layout of the building and its use of space. Architectural drawings convey the structure's aesthetic value and show the dimensions and placement of all key features.

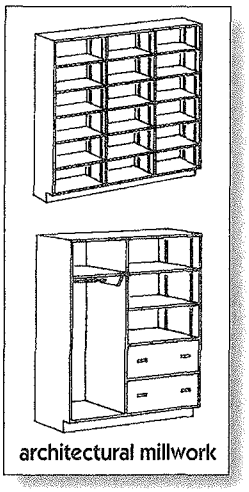
**architectural fee** The cost of architectural services to an owner, usually a percentage of the total contract amount. The fee varies according to the services provided and the complexity of the project.

**architectural glass** Glass with a configurated surface to obscure vision or diffuse light.

**architectural floor plan** The most common plan view that shows doors, windows, walls, and partitions.

**architectural history** The study of the development of building practices through written records and design. Involves examination of structures, sites, and objects in order to determine their relationship to preceding, contemporary, and subsequent architecture and events.

**architectural millwork (custom millwork)** Millwork manufactured to meet the specifications of a particular job, as distinguished from stock millwork.


architectural millwork

**architectural precast concrete** Precast concrete that, through application, finish, shape, color, or texture, contributes to a building's architectural form and finished effect.

**architectural programming** A process that identifies a structure's proposed use, code, agency review, and approval requirements and identifies the necessary rehabilitation and restoration of existing components, and any other needed improvements.

**architectural terra-cotta** Hard-burned, glazed, or unglazed clay building units, plain or ornamental, machine extruded or hand molded, and generally larger in size than brick or facing tile.

**architectural volume** The total architectural areas of a building (repeating the area of a story for additional floors) including the measurement from beneath the lowest floor to the average height of the roof surface for each various building height.

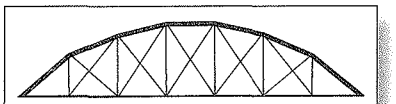
**architecture** The art and science of designing and building structures.

**architrave** In classical architecture, **1.** the bottom-most beam that spans from column to column resting directly upon the capitals. **2.** Ornamental moldings around door or window openings.

**archival documentation** Black-and-white positive prints taken of a historic building or structure, finished on archival (acid-free) paper. These documents are used for the National Register Nomination Forms and historical documentation.

**arch stone** The wedge-shaped masonry units used in building an arch.

**arch truss** A roof truss having a curved upper chord and a straight lower chord.


arch truss

**archway** A passageway through an arch, particularly a long one.

**arc light** A light produced by an arc across two electrodes.

**arc voltage** The reaction of a circuit's inductance to the rate of current change in the circuit.

**arc welding** The joining of metal parts by fusion. Heat is produced by the electricity passing between an electrode and the metal, and is usually accompanied by a filler metal and/or pressure.

**are** An area equal to 100 square meters.

**area** **1.** A measurement of a given planar region or of the surface of a solid. **2.** A particular part of a building that has been set aside for a specific purpose.

**area drain** A catch basin or other device designed to collect surface water.

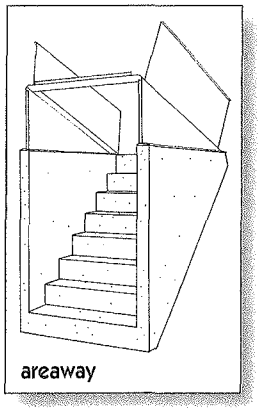
**area light** A light source used to illuminate a significant area, either indoors or outdoors.

**area method** A construction cost estimating system employing unit square foot costs multiplied by the adjusted gross floor area of a building.

**area of alteration** The specific area of the building in which a proposed renovation is about to take place.

**area wall** A masonry wall surrounding or partly surrounding an open area, particularly one below grade, such as an areaway at the entrance to a basement.

**areaway** An open area located below grade and adjacent to a building to provide light, air, or access to a basement or crawl space.


areaway

# A

**areaway grating** A steel or cast-iron grating placed over an areaway, usually at grade level.

**arenaceous** In classifying soil, a term referring to material that is composed mostly of sand.

**argillaceous** In classifying soil, a term referring to material that is composed mostly of clay or shale.

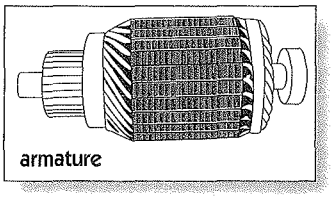
**argillite** A shale composed mostly of clay and silt.

**Arizona marble** A stone mined in a variety of colors, the best known of which are Apache Gold, Geronimo, and Navajo Black.

**Arkansas marble** A stone mined in a variety of colors, the best known of which are Ozark Famosa, Ozark Fleuri, and Ozark Rouge.

**arkose** A sandstone containing a high percentage of feldspar and used as a building stone.

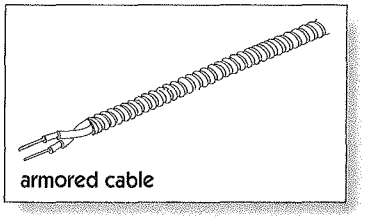
**armature** The rotating part of a motor or generator consisting of copper wire wound around an iron core.


armature

**arm conveyor** A belt with protruding arms or angles to carry materials into a building.

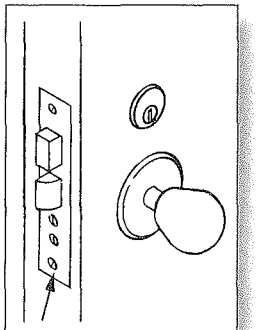
**armor coat** Durable pavement comprised of two or more thin layers of aggregate and asphalt.

**armored cable (metal-clad cable)** An electrical conduit of flexible steel cable wrapped around insulated wires.


armored cable

**armored concrete** Concrete with a surface treatment containing steel or iron and used in areas with heavy, steel-wheeled traffic.

**armored faceplate** A metal faceplate mortised into the edge of a door to protect the lock mechanism.


armored faceplate

**armored front** A tamperproof metal plate that covers the set screws of a mortise lock.

**armored plywood** Plywood that is faced on one or both sides with metal cladding.

**armor plate (kick plate)** A metal plate that is installed on the lower part of a door to protect it from kicks and scratches.

**arm's length transaction** A real estate transaction that occurs between unrelated parties.

**aromatic red cedar** A highly aromatic, fine-textured wood with a distinctive red and white color used for fence posts and rails and for mothproofing closets.

**arrester** **1.** A wire screen at the top of a chimney or incinerator to prevent burning material from flying out. **2.** In electrical equipment, a protective device that limits surge voltages by diverting current.

**arris fillet (doubling piece, tilting fillet)** A triangular piece of wood used under roofing to tilt it away from a vertical surface, such as a parapet or chimney. *See also* **cant strip.**

**arris gutter** An archaic term used to describe a V-shaped wooden gutter fixed to the eaves of a building.

**arris hip tile (angle hip tile)** An L-shaped roof tile manufactured to fit over the hip of a roof.

**arris rail** A triangular wooden rail with the broadest section used as a base.

**arrissing tool** A special float used to round the edges of freshly placed concrete.

**arrow diagram** A CPM (Critical Path Method) diagram in which arrows represent activities in a project.

**Art Deco** A popular decorative style of the 1920s and 1930s, characterized by vivid colors, bold outlines, zigzag forms, and new building materials like plastics.

**articles** Also referred to as **clauses**, these separate and numbered paragraphs within a construction contract state the rights, duties, responsibilities, and obligations of the parties (e.g., the owner and the contractor) to the contract.

**artificial intelligence** Computer systems that solve problems symbolically rather than algorithmically. Similar to the warning, decision-making, and problem-solving process in the human brain.

**artificial stone** A material containing stone chips and cement, mortar, or plaster that is seasoned for several months, then polished for a finish that simulates stone.

**artificial turf** A synthetic material designed to simulate a natural surface, and used to form playing surfaces for indoor or outdoor sports arenas, such as football fields.

**asbestine** A fine, powdered talc used in mixing paint.

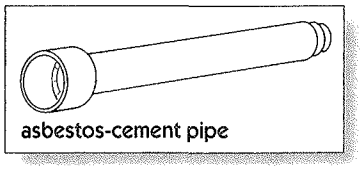
**asbestos (asbestos fiber)** A flexible, noncombustible, inorganic fiber used primarily in construction as a fireproofing and insulating material. Because airborne asbestos fibers have

been demonstrated to constitute a health hazard, the use of asbestos for new construction is heavily regulated and generally banned for all practical purposes.

**asbestos blanket** Asbestos fibers woven or bonded into a flexible blanket that at one time was used as a fire or heat barrier.

**asbestos-cement board (asbestos cement wallboard)** A dense, rigid board made from asbestos fibers bonded together with Portland cement and used formerly in building construction where fire or heat protection was required.

**asbestos-cement pipe** A strong, light, noncorrosive pipe made from asbestos fibers and Portland cement and formerly used in construction for water pipe drainage and air ducts.


asbestos-cement pipe

**asbestos-cement wallboard** *See* **asbestos-cement board.**

**asbestos-containing material** Any material containing more than one percent asbestos.

**asbestos duct** Asbestos-cement pipe used as an air duct.

**asbestos encapsulation** An airtight enclosure of asbestos fibers with sealant or film that prevent fibers from becoming airborne and creating a potential health hazard.

**asbestos felt** A building product used extensively in roofing and sheathing systems that was made by saturating asbestos felt material with asphalt or some other binder.

**asbestos fiber** *See* **asbestos.**

**asbestos formboard** Rigid asbestos cement shaped into formboard, formerly used in cementitious decks.

**asbestosis** Chronic inflammation of the lungs caused by inhalation of airborne asbestos fibers.

**asbestos joint runner (pouring rope)** Asbestos fibers woven into a rope and formerly used to wrap around a bell joint as a retainer for molten lead caulking.

**asbestos plaster** A fireproof plaster with high insulating properties made from asbestos fibers and bentonite.

**asbestos removal** A special trade that has developed since the health hazards of airborne asbestos have been revealed. Applies principally to ceiling tile, fireproofing, and pipe insulation.

**asbestos roofing** Rigid asbestos-cement sheets, either flat or corrugated, with good insulating and fireproofing qualities.

**asbestos roof shingle** Roofing shingle containing asbestos fibers.

**asbestos runner** *See* **asbestos joint runner.**

**asbestos sheeting** *See* **asbestos-cement board.**

**asbestos sheeting wallboard** *See* **asbestos-cement board.**

**asbestos waterproofing** A foundation waterproofing in sheet form consisting of PVC with an asbestos sheet backing.

**asbestos work** A classification system designed by OSHA that rates the level of training needed to perform asbestos-related tasks. Class I involves the removal or abatement of thermal insulation or surfacing asbestos-containing materials (ACM); Class II involves removing asbestos floor or ceiling tiles, siding, roofing or piping; Class III involves repair and maintenance operations where employees may disturb ACM; and Class IV involves custodial activities during which employees contact ACM.

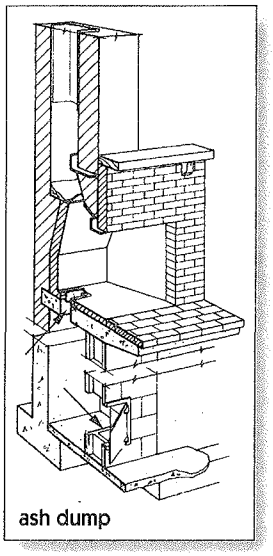
**asbo** *See* **asbestos.**

**as-built drawings** Record drawings made during construction. As-built drawings record the locations, sizes, and nature of concealed items such as structural elements, accessories, equipment, devices, plumbing lines, valves, mechanical equipment, and the like. These records (with dimensions) form a permanent record for future reference.

**as-built schedule** A time-scaled graphic depiction of the historical record of events, activities, and progress of a given project.

**ash** A sturdy, long-grained hardwood with excellent bending qualities. This wood is used in veneers, trim, and flooring.

**ash dump** An opening in the bottom of a firebox or fireplace into which ashes are swept, falling into an ashpit below.


ash dump

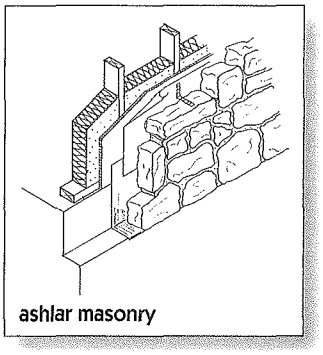
**ashlar** **1.** Any squared building stone. The term usually refers to thin stone used as facing. If the horizontal courses are level, it is called coursed ashlar, if they are broken, it is called random ashlar. **2.** Short vertical studs between the ceiling joists and the rafters.

**ashlar brick (rock-faced brick)** A brick with a broken face resembling stone.

# A

**ashlar line** A horizontal line on the exterior face of a masonry wall.

**ashlar masonry** A stone masonry wall or veneer composed of rectangular units bonded with mortar. *See also* **ashlar.**


ashlar masonry

**ashlar veneer** A nonstructural wall facing composed of ashlar masonry.

**ashpit** A cleanout under a fireplace, usually at the base of a chimney, where ashes are removed.

**as-late-as-possible (ALAP)** An activity for which the scheduling application sets the early dates as late as possible without delaying the early dates of any successor.*

**aspect** The orientation of a building with respect to the points of a compass.

**aspect ratio** **1.** In any configuration, the ratio of the long dimension to the short dimension. **2.** The ratio of the width of a duct to its height.

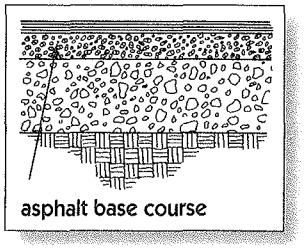
**aspen** A smooth-grained, white hardwood used for trim and veneer.

**asphalt** A dark brown to black bitumen pitch that melts readily. It appears in nature in asphalt beds and is also produced as a by-product of the petroleum industry.

**asphalt, blown** Asphalt that has had air blown through it at high temperatures to give it workability for roofing, pipe coating, foundation waterproofing, and other purposes.

**asphalt, liquid** An asphaltic material having a fluid consistency at normal temperatures. The common types specified for pavements are cutback, rapid curing (RC), medium curing (MC), and slow curing (SC), which are blended with petroleum solvents and emulsion, which is blended with water.

**asphalt base course** A bottom paving course consisting of coarse aggregate and asphalt.


asphalt base course

**asphalt block** A manufactured paving block made from asphaltic concrete and aggregate. The block is typically manufactured in squares, rectangles, and hexagons, and comes in dark gray or black colors.

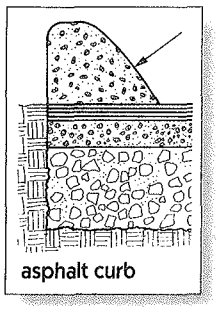
**asphalt cement** Asphalt that has been refined to meet the specifications for use in paving and other special uses. It is classified by penetration. *See also* **penetration.**

**asphalt coating (asphalt-lined pipe)** The asphaltic coating of corrugated metal pipe. Coatings can be inside, outside, or just on the invert.

**asphalt color coat** An asphalt surface treatment that has been impregnated with aggregate of a specified color.

**asphalt concrete** *See* **asphaltic concrete.**

**asphalt curb** An extruded or hand-formed berm made from asphaltic concrete.


asphalt curb

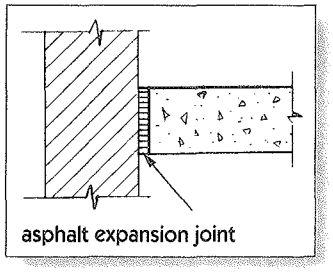
**asphalt cutback** An asphalt that has been liquefied by an additive for a specific use.

**asphalt cutter** Any of a variety of machines designed to cut asphalt pavement.

**asphalt dampproofing** The application of asphalt to the surface of a concrete or masonry wall to prevent passage of absorption of water or moisture.

**asphalt emulsion** Liquid asphalt in which water has been suspended. When the water evaporates, the asphalt hardens. Asphalt emulsion is used in paving as a tack coat to bind one course to another.

**asphalt expansion joint** Premolded felt or fiberboard impregnated with asphalt and used extensively as an expansion joint for cast-in-place concrete.


asphalt expansion joint

**asphalt felt** Felt impregnated with asphalt and used in roofing and sheathing systems. *See also* **asphalt-prepared roofing.**

**asphalt filler (asphalt joint filler)** A liquid asphalt used for filling joints and cracks in pavement and floors.

**asphalt flashing cement** A semisolid asphaltic material used to apply flashing.

**asphalt floor tile** Any of a number of economical, resilient floor tiles with an asphalt base. These tiles are particularly well-suited for application to concrete floors on grade, as they are not affected by moisture. For wood subfloors, they are usually laid on a felt underlayment.

**asphaltic** A term used to describe materials containing asphalt. While

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sometimes used interchangeably with asphalt in the construction industry, it is usually more correct to use asphaltic.

**asphaltic concrete (asphalt paving, bituminous concrete, blacktop)** A mixture of liquid asphalt and graded aggregate used as a paving material for roadways and parking lots. It is usually spread and compacted in layers over a prepared base while still hot.

**asphaltic macadam** A term generally referring to a penetration method of paving whereby the aggregate is placed first, then liquid asphalt is sprayed into the voids, followed by the addition of a finer-graded aggregate. Penetration macadam usually needs a seal coat to prevent damage caused by water infiltration.

**asphaltic mastic (mastic asphalt)** A viscous asphaltic material used as an adhesive, a waterproofing material, and a joint sealant.

**asphalt joint filler** *See* **asphalt filler.**

**asphalt lamination** A lamination of sheet material, such as paper or felt, using asphalt as the adhesive.

**asphalt leveling course** A course of asphaltic concrete pavement of varying thickness spread on an existing pavement to compensate for irregularities prior to placing the next course.

**asphalt-lined pipe** *See* **asphalt coating.**

**asphalt overlay** One or more courses of asphaltic concrete placed over existing pavement. The process of overlaying usually includes cleaning, and application of a tack coat, followed by a leveling course.

**asphalt paint** An economical, liquid-asphaltic product used principally for weatherproofing.

**asphalt paper** A paper that has been coated or saturated with asphalt for use as a moisture barrier.

**asphalt pavement** Any pavement made from one or more layers of asphaltic concrete.

**asphalt pavement sealer** A material applied to asphalt pavement after compaction to protect it from deterioration caused by exposure to weather or petroleum products.

**asphalt pavement structure** All the successive courses of asphalt products placed above the subgrade in a section of pavement.

**asphalt paving** *See* **asphaltic concrete.**

**asphalt penetration** A measure of the hardness or consistency of asphalt, expressed as the distance a needle of standard diameter will penetrate a sample under given time, load, and temperature conditions.

**asphalt plank** A reinforced, premolded, structural plank made of asphalt-impregnated fibers and mineral filler. The material comes in 3' to 8' lengths, 6" to 12" wide.

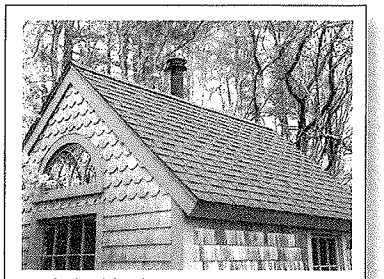
**asphalt-prepared roofing (asphaltic felt, bituminous felt, cold-process roofing, prepared roofing, rolled roofing, rolled strip roofing, roofing felt, sanded bituminous felt, saturated felt, self-finished roofing felt)** A roof covering manufactured in rolls and made from asphalt-impregnated felt with a harder layer of asphalt applied to the surface of the felt. All or part of the "weather" side may be covered with aggregate of various sizes and colors.

**asphalt prime coat** A tack coat, usually an emulsion, to increase the adhesion of one course to another in pavement construction.

**asphalt primer** A liquid asphalt of low viscosity that is applied to a nonbituminous surface such as concrete to prepare the surface for an asphalt course.

**asphalt seal coat** A thin asphalt surface treatment used to waterproof and improve the wearing surface texture of pavement, particularly that of an asphaltic macadam. Depending on the intended purpose for the pavement, a seal coat may or may not include aggregate.

**asphalt shingles (composition shingles, strip slates)** Roofing felt saturated with asphalt, coated on the weather side with a harder asphalt and aggregate particles, and cut into shingles for application to a sloped roof.

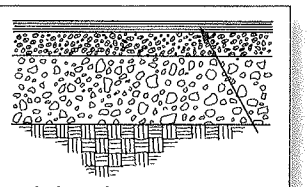


asphalt shingles

**asphalt soil stabilization** Treatment of existing soil with asphalt penetration, mixing, and compaction. Often used as a base for asphaltic concrete pavement.

**asphalt spray mulch** Emulsified asphalt sprayed on a freshly seeded area to prevent erosion and reduce evaporation.

**asphalt surface course** The top or wearing course of asphaltic concrete pavement.



asphalt surface course

**asphalt surface treatment** The application of liquid asphalt to any asphaltic pavement, with or without adding aggregate.

# A

**asphalt tack coat** A light coat of asphalt, usually an emulsion, added to an existing pavement to create a bond between the pavement and another course.

**asphyxiant** A substance that interferes with the normal function of the lungs.

**aspiration** In an air-conditioning system, the introduction of room air into the flow of air from a diffuser.

**aspirator** A device that draws a stream of gas or liquid into it by means of the suction created by liquid or gas passing through an orifice. An aspirator is used for mixing air with a stream of water or for mixing a controlled amount of a chemical with water.

**as-planned schedule** A project schedule prepared by the contractor to indicate the intended progress and method of performance. Frequently used as the baseline schedule for calculating delay.

**assembled occupancy** For design purposes, the maximum number of people who will occupy a room or hall at one time.

**assembling bolt** A threaded bolt used for temporarily holding structural steel members together during welding.

**assembly adhesive** A powerful adhesive used to bond parts together, as in the manufacture of furniture or marine equipment.

**assembly drawing** A drawing showing all parts of a machine or structure in operating position.

**assessed valuation** The value of a property assigned by a municipality for real estate tax purposes. The valuation may be higher or lower than the market value of the property.

**assessment** **1.** A tax on property. **2.** A charge for specific services, such as sewer or water, by a government agency.

**assessment ratio** The ratio between the market value and assessed valuation of a property, expressed as a percent.

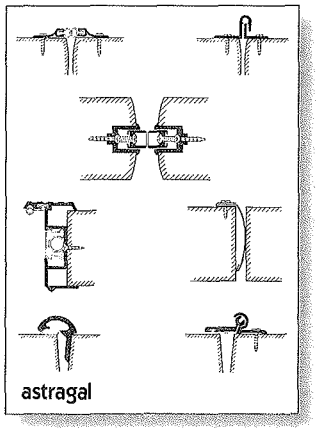
**asset** An item of monetary value, which can include real, personal, or financial property, that is expected to have some value in a future period.

**assignment** **1.** A transfer of rights, frequently involving rights arising under a contract. **2.** With respect to a contract, a document stating that payment for work completed or materials delivered must be made to someone other than the company or person specified in the contract.

**associate dimensioning** A feature of a computer-aided design and drafting system that dynamically recalculates all dimensions affected by a change the operator has made.

**as-soon-as-possible (ASAP)** An activity for which the scheduling application sets the early dates to be as soon as possible. This is the default activity type in most project management systems.*

**astragal** **1.** A molding attached to one of a pair of doors or casement windows to cover up the joint between two stiles. **2.** A bead molding, most often half-round and ornate, with a narrow flat band, or fillet, on at least one side.


astragal

**asymmetric** A term used to describe the offset current waveform that can accompany an electric fault.

**athley wagon** Large trailer used in heavy construction to transport soil and rock.

**atmospheric pressure** The pressure (14.7 psi) exerted by the earth's atmosphere at sea level under standard conditions.

**attenuation** The sound reduction process utilizing a sound-absorbing system.

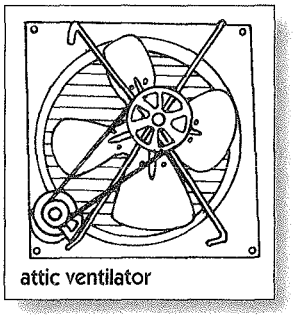
**Atterberg limits** Terms defining the properties of soils at different water contents.

**Atterberg test** Laboratory tests to determine the Atterberg limits.

**attic** Unfinished space between ceiling joists of the top story of a building and the roof rafters.

**attic tank** A domestic water storage tank installed above the highest plumbing fixture in a building to provide water pressure by gravity.

**attic ventilator** An electric fan, frequently thermostatically controlled, to push hot air out of an attic.


attic ventilator

**attorney-in-fact** One who holds a power of attorney from another to execute documents on behalf of the grantor of the power.

**attractive nuisance** A site condition on private property that poses an unreasonable danger to children and other passersby, e.g., a pool or a construction site without a tall fence surrounding it. In general, the property owner would be held liable for injuries if they could have been reasonably prevented.

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**attribute** In the context of asset or project planning, a characteristic or property that is appraised in terms of whether it does or does not exist (e.g., go or not-go) with respect to a given requirement.*

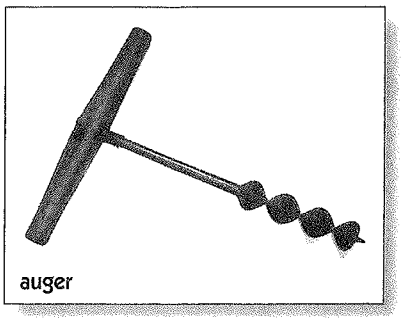
**audible signage** Signage with the ability to transmit a voice message to the visually impaired.

**audio frequencies** Frequencies between 15 and 20,000 cycles per second (Hz), which is within hearing range of the human ear.

**audio masking system** Reducing distracting sounds and increasing speech privacy through the use of sound-masking equipment or software. Some systems provide protection from laser beams and other high-tech sound detection devices.

**audit** The examination of records, documents, and other evidence for the purpose of determining the propriety of transactions and assessing fiscal compliance with relevant cost and accounting requirements.

**auger** **1.** A carpenter's hand tool used for boring holes in wood. **2.** A hand-held or rotary-powered tool with a helical cutting edge used for drilling holes in soil. Augers are used for taking soil samples, drilling for caissons, or drilling for cast-in-place piles.



auger

**auger bit** A bit used to bore holes in wood that has a square tang, fitted into and rotated by a brace.

**authority** **1.** Power of influence, either granted to or developed by individuals, that leads to others doing what those individuals direct. **2.** Formal conferment of such influence through an instrument such as project charter.*

**authority having jurisdiction (AHJ)** A person who has the delegated authority to determine, mandate, and enforce code requirements established by jurisdictional governing bodies.

**authorize** Give final approval; a person who can authorize something is vested with authority to give final endorsement and which require no further approval or agreement.*

**authorized work** An effort that has been approved by higher authority and may or may not be definitive.*

**autoclave** A chamber in which steam at high pressure is used to cure precast concrete members.

**autogenous healing** The natural tendency of concrete or mortar to repair surface hairline cracks when kept in contact with water.

**automatic** Descriptive of any device activated by the environment or a predetermined condition, such as a ventilator that opens at a given temperature.

**automatic air vent** A vent that opens and closes at a predetermined temperature.

**automatic batcher** A batcher that blends all the ingredients of a mixture at predetermined weights upon receiving a single command.

**automatic circuit breaker** *See* **circuit breaker.**

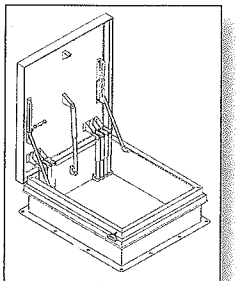
**automatic closing device** *See* **closing device.**

**automatic door** A power-operated door that opens at the approach of a person or vehicle and closes when the person or vehicle has passed.

**automatic door bottom (drop-bottom seal)** An attachment to the bottom of a door that is actuated when the door is closed to seal the bottom of the door at the threshold.

**automatic fire pump** A pump in a standpipe or sprinkler system that turns on when the water pressure drops below a predetermined level.

**automatic fire vent (automatic smoke vent)** A device in the roof of a building that operates automatically to control fire or smoke.



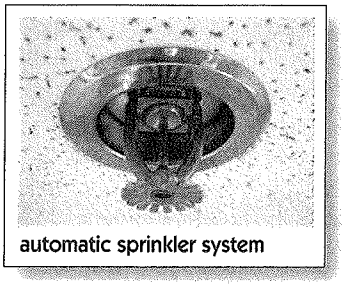
automatic fire vent

**automatic iris** An optical device, much like the iris in the eye, containing a diaphragm that expands and contracts to control the amount of light that passes through the lens.

**automatic operator** A remote-control operating device. The term usually refers to the opening and closing of doors by electronically actuated switches.

**automatic smoke vent** *See* **automatic fire vent.**

**automatic sprinkler system** A fire safety system designed to provide instant and continuous spraying of water over large areas in the case of fire.



automatic sprinkler system

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# A

**automatic temperature control** Electromechanical temperature-regulating equipment. ATC equipment is usually not integrated with other components of a Building Automation System because it is not digital.

**automatic transfer switch** In an electrical system, a switch that automatically transfers the load to another circuit when the voltage drops below a predetermined level.

**auxiliary contact** An additional contact not normally associated with operation of a switching device such as a contact or circuit breaker.

**auxiliary loads** Refers to all dynamic loads that a building sustains, with the exception of basic design loads.

**auxiliary rafter (cushion rafter)** A rafter used to strengthen the main rafter, usually at the area of greatest load.

**auxiliary reinforcement** In a prestressed concrete member, refers to all reinforcing steel other than the prestressing steel.

**auxiliary rim lock** A surface-mounted lock installed in addition to the main lock on a door.

**average annual cost** The conversion, by an interest rate and present worth technique, of all capital and operating costs to a series of equivalent equal annual costs. As a system for comparing proposal investments, it requires assumption of a specific minimum acceptable interest rate.*

**average bond stress** The force exerted on a steel reinforcing bar divided by the product of the perimeter multiplied by the embedded length.

**average grade** The average of ground surface elevations within a building site.

**average haul** The average distance material is transported from where it originates to where it is deposited, such as from cut to fill in roadway construction.

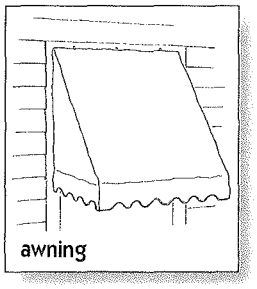
**aviation snips** *See* **tin snips.**

**avodire (white mahogany)** A light-colored wood used for interior trim, plywood, and paneling.

**award** A party's formal communication of their acceptance of a bid or proposal for services, construction, materials, or equipment.

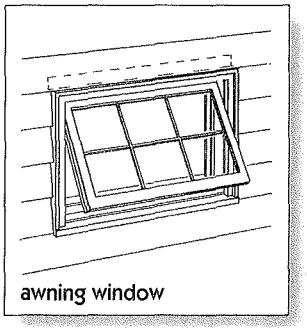
**awl** A hand tool used for piercing holes, particularly in leather. Often fitted with a needle for sewing heavy materials.

**awning** A projection over a door or window, often retractable, for protection against rain and sun.


awning

**awning blind** A blind that is hinged at the top.

**awning window** A window that is hinged at the top.

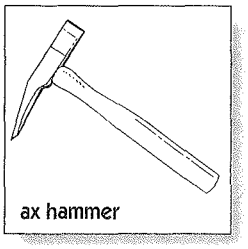

awning window

**ax (axe)** A sharp-edged hand tool for splitting wood and hewing timber.

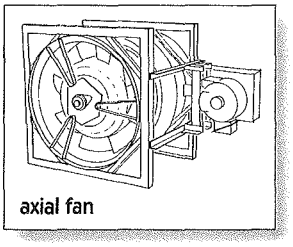
**axe** *See* **ax.**

**axed brick (rough axed brick)** Brick shaped by an ax so as to create rough surfaces.

**ax hammer** A hand tool for dressing stone.


ax hammer

**axial fan** A fan that produces pressure from the velocity of gas passing through the impeller, with no pressure being produced by centrifugal force.


axial fan

**axial flow fan** *See* **centrifugal fan.**

**axial force** *See* **axial load.**

**axial force diagram** In statics, a graphic representation of the axial loads acting at each section of a structural member.

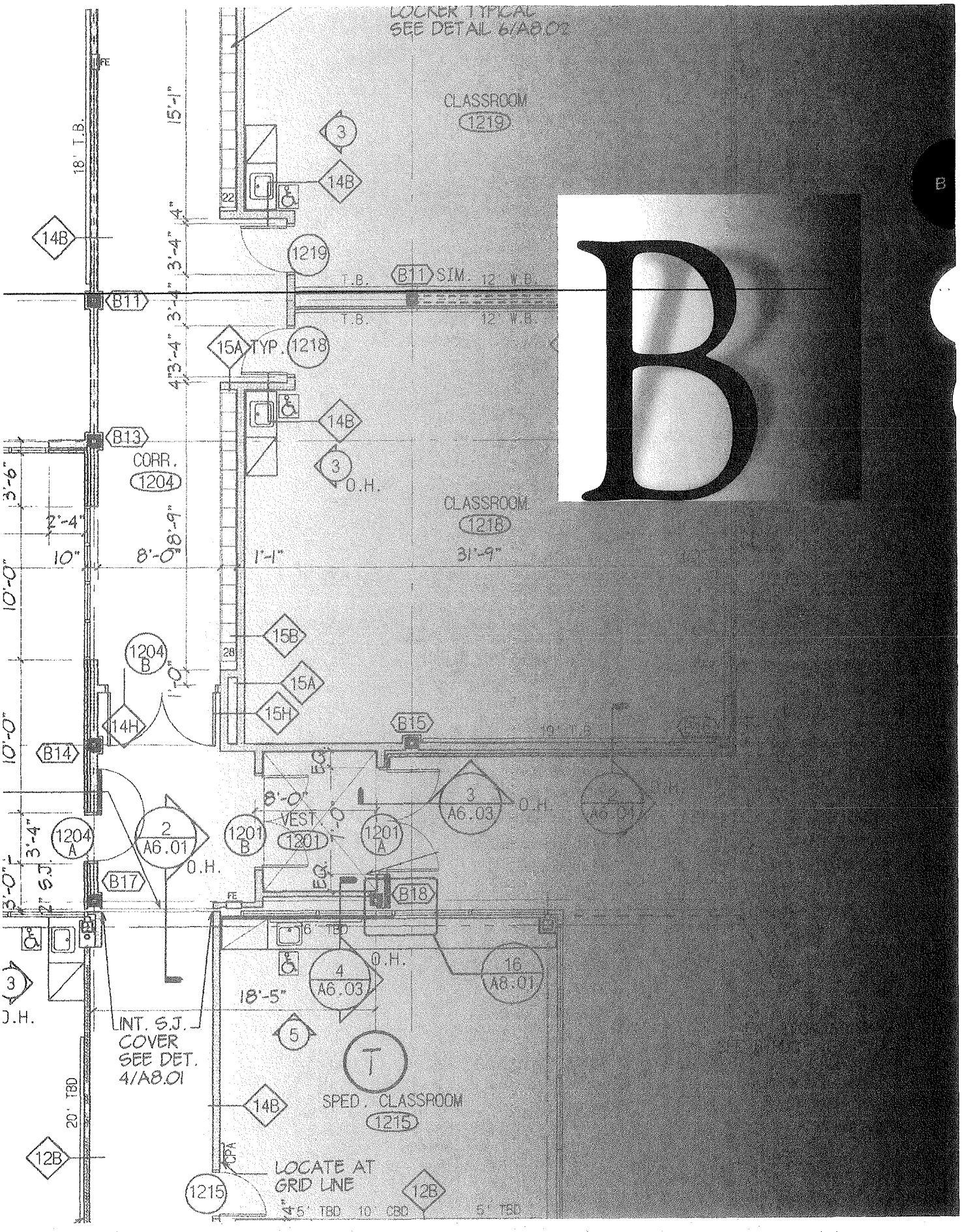
**axial growth theory** A theory of development that urban growth occurs first in close proximity to transportation systems, such as freeways, light rail, etc.

**axial load (axial force)** The longitudinal force acting on a structural member.

**axis** A straight line representing the center of symmetry of a plane or solid object.

**azimuth** The horizontal angle measured clockwise from north to an object.

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LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
CLASSROOM
1216
CORR.
1204
SPED. CLASSROOM
1215
VEST.
1201
B
B11
B13
B14
B15
B17
B18
14B
15A TYP.
1218
15B
14H
12B
18' T.B.
15'-1"
3'-4"
4"
3'-4"
3'-4"
4"
3'-6"
2'-4"
10"
8'-0"
8'-9"
1'-1"
31'-9"
10'-0"
10'-0"
1'-0"
8'-0"
3'-4"
3'-0"
2" S.J.
20' TBD
18'-5"
5' TBD
10' CBD
5' TBD
O.H.
INT. S.J. COVER SEE DET. 4/A8.01
LOCATE AT GRID LINE
T.B.
12" W.B.
SIM.
FE
EJ.
CPA

# B Abbreviations

*The abbreviations listed below are commonly used in the construction industry.*

**B** beam, boron, brightness

**B1S** banded one side, bead one side

**B2E** banded two ends

**B2S** banded two sides, bead two sides, bright two sides

**B2S1E** banded two sides and one end

**B3E** beveled on three edges

**B4E** beveled on four edges

**BA** bright annealed

**B&B** in the lumber industry, grade B and better; balled and burlapped

**b&cb** beaded on the edge and center

**B&O** back-out punch

**B&S** beams and stringers, bell and spigot, Brown and Sharpe gauge

**B&W** black and white

**BAS** building automation system

**bat** batten

**bbl, Bbl, brl** barrel

**BC** building code

**bcc** body-centered cubic

**BCM** broken cubic meter

**BCY** broken cubic yard

**bd** in the lumber industry, board

**bdl** bundle

**BE** in the piping industry, beveled end

**BET** between

**Beth B** Bethlehem beam

**bev** beveled

**bev sid** beveled siding

**BF, bd ft** board foot

**BFP** backflow preventer

**bg** bag

**BG** below ground or below grade

**Bg cem** bag of cement

**Bh** Brinell hardness

**Bhn** Brinell hardness number

**BHP** brake horsepower, boiler horsepower

**BI** black iron

**BICSI** Building Industry Consulting Service International

**Bit, Bitum** bituminous

**Bk** backed

**Bkrs** breakers

**BL** building line

**B/L** bill of lading

**bldg, Bldg** building

**blk** block, black

**BLKG** blocking

**BLO** blower

**BLR** boiler

**blt** built, borrowed light

**bm** board measure

**BM** beam, bench mark

**B/M, BOM** bill of materials

**BMEP** brake mean effective measure

**BOCA** Building Officials and Code Administrators International

**b of b** back of board

**boil** boilermaker

**BP** blueprint, baseplate, bearing pile, building paper

**bpd** barrels per day

**BPG** beveled plate glass

**BPM** blows per minute

**BR** bedroom

**brc** brace

**brcg** bracing

**BRG** bearing

**BRI** building-related illness

**BRK** brick

**BRKT, bkt** bracket

**BRS** brass

**Br Std, BS** British Standard

**BRZ** bronze

**BRZG** brazing

**BSMT** basement

**BSR** building space requirements

**BTB** bituminous treated base

**btr, Btr** better

**Btu** British thermal unit

**BTUH** Btu per hour

**but** buttress

**BW** butt weld

**BX** interlocked armored cable

**babbitt** An antifriction alloy composed of tin and lesser amounts of copper and antimony. Babbitt is used in bushings and bearings.

**back** **1.** That part, area, or surface that is farthest from the front. **2.** The portion behind or opposite that is intended for use or view. **3.** The reverse (scale). **4.** That portion that offers strength or support from the rear. **5.** The extrados of an arch or vault sometimes concealed in the surrounding masonry. **6.** In slate or tile, the side opposite the bed. **7.** The surface of wallboard that receives the plaster. **8.** The side of a piece of lumber or plywood opposite the face. The back is the side with the lower overall quality or appearance.

**back arch** A concealed arch that supports the inner part (or backing) of a wall where a lintel carries the exterior facing.

**backband** A rabbeted molding used to surround the outside edge of a casing in an opening such as a door or window.

**back blocking** A small piece of gypsum board laminated behind framing member joints for reinforcement.

**backbone subsystem** In a premises distribution system, the cable that runs from the equipment room to the various floors in a building. In a single-floor building, the subsystem is the main trunk of the communications system.

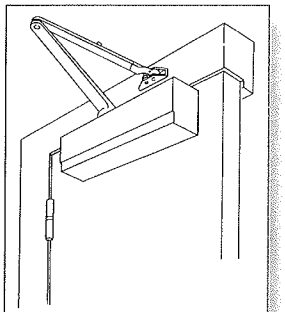
**back boxing** Thin boards used in construction of double-hung windows to enclose the channel in which the sash weights hang, and to keep the channel free of mortar. *See also* **back lining**.

**back-brush** To paint over a freshly painted surface with a finishing return stroke.

**backcasting** A creative thinking process in which the desired result of a project is first envisioned, and then different means of achieving it are proposed. Solutions tend to be less constrained by preconceived ideas.

**backcharge** A charge against a contract in the form of a credit change order to a contractor for the cost of having others perform portions of their contract.

**back check** The mechanism in a hydraulic door closer or door check that reduces the speed with which the door can be opened.



back check

**back clip** A special clip used on the hydraulic door closer or door check that reduces the speed with which the door can be opened.

**back coating** Asphalt coating applied to the back of shingles or rolled roofing.

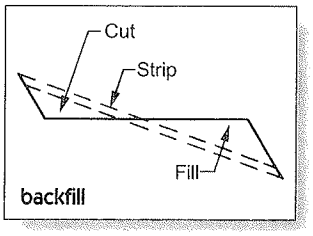
**back-draft damper** A damper, the blades of which are gravity-controlled and allow the passage of air in one direction only.

**back edging** A process by which glazed ceramic pipe is cut by first chipping away the glaze and then chipping the underlying pipe until it is cut through.

**backer** In framing, three studs nailed together in a U-shape to which a partition is attached.

**backer rod foam** Foam rope used to seal wide gaps and joints before caulk is applied, reducing unwanted air leakage.

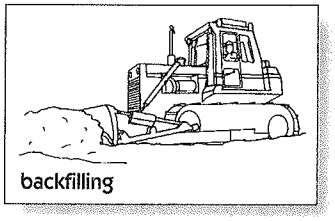
**backfill** Earth, soil, or other material used to replace previously excavated material, as around a newly constructed foundation wall.




backfill

**back fillet** The return of a fillet molding.

**backfilling** **1.** The process of placing backfill. **2.** Rough masonry laid behind a facing or between two faces. **3.** Brickwork laid in spaces between structural timbers. *See also* **nogging**.



backfilling

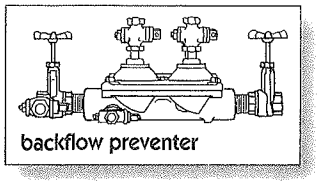
**back flap (back fold, back shutter)** That leaf of a folding window shutter that falls behind the exposed leaf, sometimes in a recess in the casing.

**backflap hinge (flap hinge)** A hinge with a flat plate or strap to fasten to the face of a door or shutter. This type of hinge is used especially when the stile is too thin to accept a butt hinge.

**backflow** **1.** The unintentional reversal of the normal and intended direction of flow. Backflow is sometimes caused by back siphonage. **2.** The flow of water or other liquids, mixtures, or substances into the distributing pipes of a potable water supply system from a source other than the intended source. *See also* **back siphonage**.

# B

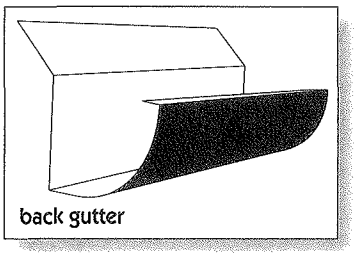
**backflow preventer** A device or means to prevent backflow into the potable water system.


backflow preventer

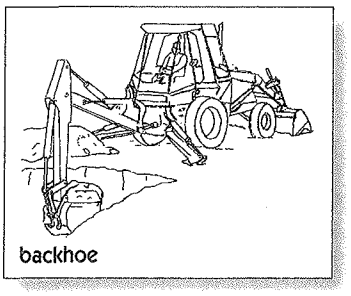
**backflow valve** *See* **backwater valve.**

**back fold** *See* **back flap.**

**back gutter** A shallow gutter installed on the upslope side of a chimney on a sloping roof. A back gutter is used to divert water around the chimney.


back gutter

**backhoe** A powered excavating machine used to cut trenches by drawing a boom-mounted bucket through the ground toward the machine. The bucket is raised and swung to either side to deposit the excavated material.


backhoe

**backing** **1.** The bevel applied to the upper edge of a hip rafter. **2.** Positioning furring onto joists to create a level surface on which to lay floorboards. **3.** Furring applied to the inside angles of walls or partitions to provide solid corners for securing wallboard. **4.** The first coat of plaster on lath. **5.** The unseen or unfinished inner face of a wall. **6.** Coursed masonry applied over an extrados of an arch. **7.** Interior wall bricks concealed by the facing bricks. **8.** The wainscoting between a floor and a window. **9.** The material under the pile or facing of a carpet. **10.** The stone used for random rubble walls.

**backing board** **1.** In a suspended acoustical ceiling, gypsum board to which acoustical tiles are secured. **2.** Gypsum wallboard or other material secured to wall studs prior to paneling to provide rigidity, sound insulation, and fire resistance.

**backing brick** A lower quality of brick used in places where it will be concealed by face brick or other masonry.

**backing ring (chill ring)** A metal ring used to prevent melted metal from entering a pipe when making a butt-weld joint, and to provide a uniform gap for welding.

**back iron** Reinforcing steel plate on a wood plane.

**back jamb** *See* **back lining.**

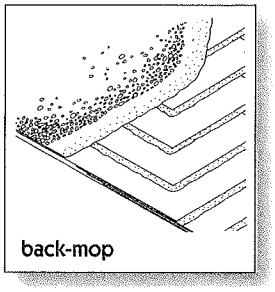
**backjoint** A rabbet in masonry such as that over a fireplace to receive a wood nailer.

**backlight** To illuminate from behind (and often above) an object.

**back lining (back jamb)** **1.** In a weighted sash window, the thin wood strip that closes the jamb of a cased frame to provide a smooth surface for the operation of the sash and, where applicable, prevents abrasion of brickwork by the sash weights. **2.** The framing piece that constitutes the back recess for box shutters.

**back lintel** A lintel used to support the backing of a masonry wall, and therefore, not visible on the face.

**back-mop** To apply hot bituminous material, either by mop or mechanical applicator, to the underside of roofing felt during the construction of a built-up roof.


back-mop

**back-nailing** Nailing the layers, or plies, of a built-up roof to the substrate to help prevent slippage. Performed in addition to hot mopping.

**back nut** **1.** A threaded nut that helps to create a watertight joint, as on the long thread of a pipe connector, and whose one dished side accepts a grommet. **2.** A locknut.

**back-paint** To apply paint to the reverse or unseen side of an object, not for appearance but for protection against weather.

**backplastering** Plaster applied to one face of a lath system following the application and subsequent hardening of plaster that has been applied to the opposite face.

**backplate** A wood or metal plate that functions as backing for a structural member.

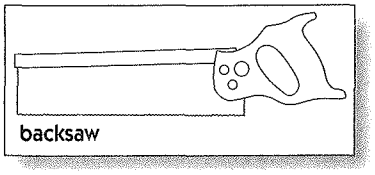
**back pressure** Hydraulic or pneumatic pressure in a direction opposite the normal and intended direction of flow through a pipe, conduit, or duct. Usually caused by a restriction to the flow.

**back-pressure valve** *See* **check valve.**

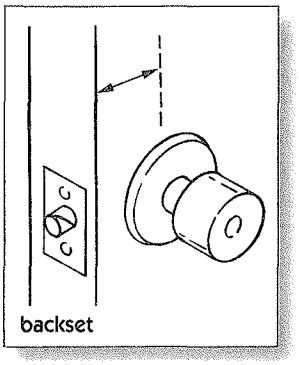
**back primed** Back-painted woodwork. Used primarily for exterior shingles, siding, or trim.

**back putty (bed glazing)** The glazing compound applied between the glass and its sash or frame.

**backsaw** A handsaw used in finish carpentry work. The back (noncutting) edge of the saw is stiffened with a steel or brass strip. A backsaw is used for cutting mitered joints and other joinery work.


backsaw

**backset** The offset or horizontal distance between the face or front of a door back to the center of the keyhole or central axis of the knob.


backset

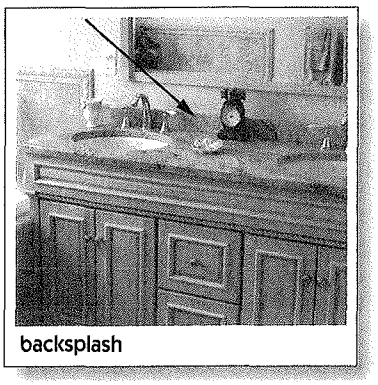
**backshoring** Reinsertion of shores beneath a stripped concrete slab after the original formwork and shoring has been removed from a small section. Unlike reshoring, backshoring keeps the slab from supporting its own weight or the weight of existing loads above it until the slab attains full strength.

**back shutter** *See* **back flap.**

**back sight** In surveying, a sight on an established survey point or line.

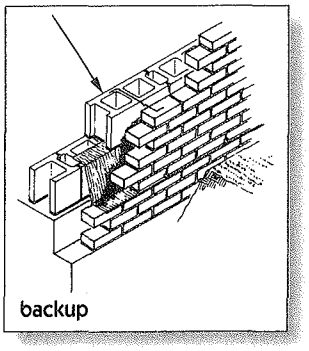
**back siphonage** The backward flow of used, contaminated, or polluted water from a plumbing fixture or vessel into the potable water supply, often due to negative pressure in a pipe. *See also* **backflow.**

**backsplash** A protective panel, apron, or sheet of waterproof material positioned on a wall behind a sink, counter, or lavatory.


backsplash

**backstamp** A stamp that appears on all plywood panels manufactured by American Plywood Association member mills.

**backup** **1.** That part of a masonry wall behind the exterior facing. **2.** Any substance placed into a joint to seal the joint and reduce its depth, and/or to inhibit sagging of the sealant. **3.** Overflow due to blockage in a piping system. **4.** Supporting documents for an estimate or schedule including detailed calculations, descriptions of data sources, and comments on the quality of the data.*


backup

**backup figures** The detailed calculations that produce unit prices.

**backup strip (lathing board)** A narrow strip of wood secured to the corner of a wall or partition to provide a base on which to nail the ends of the lathing.

**back veneer** The ply on veneer plywood opposite the face veneer and usually of lesser quality.

**back vent** In plumbing, a venting device installed on the downstream side of a trap to protect it from siphonage.

**backward curved fan** Centrifugal fan with blades that curve backward away from the direction of the rotation.

**backwater valve (backflow valve)** A check valve in a drainage pipe that prevents reversal of flow.

**bad faith** Conduct, within the context of an agreement, that is intended to deceive, mislead, or cause injury to another.

**badger** A tool used to remove excess mortar or other deposits from the inside of pipes or culverts after they have been laid. *See also* **badger plane.**

**badger plane** A large, wooden hand plane for rabbeting, whose mouth is fashioned obliquely from side to side to allow its use close to corners.

**badigeon** **1.** A cement for filling holes or covering defects in masonry and woodwork. **2.** A plaster and powdered stone mixture applied to walls to give them texture.

**baffle** **1.** A tray or partition employed on conveying equipment to direct or change the direction of flow. **2.** An opaque or translucent plate-like protective shield used against direct observation of a light source; a light baffle. **3.** A plate-like device for reducing sound transmission. **4.** Any construction intended to change the direction of flow of a liquid.

**bag (sack)** A quantity of Portland cement; 94 pounds in the United States, 87.5 pounds in Canada, 112 pounds in the United Kingdom, and 50 kilograms in most other countries. Different weights per bag are commonly used for other types of cement.

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# B

**bag plug** An inflatable drain stopper usually placed at the lowest point in a piping system; used during testing of the system's integrity.

**bag trap** A plumbing trap, shaped like an S, whose inlet and outlet are in alignment.

**baked finish** A film of paint or varnish baked at temperatures above 150°F to produce a tough, durable finish.

**bakelite** A plastic developed for use in electrical fittings, door handles, pulls, etc. Bakelite has high chemical and electrical resistance.

**bakeout** A process used to remove volatile organic compounds (VOCs) by elevating the temperature in an unoccupied, fully furnished, and ventilated building.

**balance arm** A supporting arm at the side of a projected window that allows the sash to be opened without an appreciable change in its center of gravity.

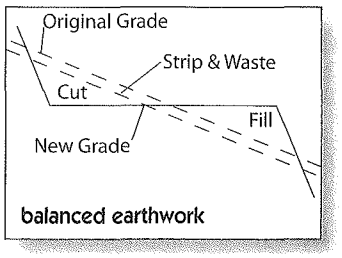
**balance bar** *See* **balance beam.**

**balance beam (balance bar)** A counterbalance consisting of a long beam attached to a moveable structure, such as a drawbridge or gate, whose weight it offsets during opening and closing.

**balanced circuit** A three-wire electric power circuit whose main conductors all carry substantially equal currents, either alternating or direct, and in which there exists substantially equal voltages between each main conductor and neutral.

**balanced door** A door that is installed using double-pivoted hardware, which allows it to swing open in a semi-counterbalanced manner.

**balanced earthwork** Cutting and filling in which the amount of one is equal to the amount of the other after swelling and compaction factors are applied.



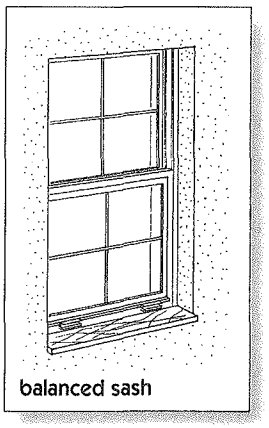
balanced earthwork

**balanced load** **1.** In an electric circuit, such as a three-wire system, a load connected such that the currents on each side are equal. **2.** In reinforced concrete beam design, a load that would cause crushing of concrete and yielding of tensile steel simultaneously.

**balanced moment** Moment capacity at simultaneous crushing of concrete and yielding of tensile steel. *See also* **balanced load.**

**balanced reinforcement** An amount and distribution of reinforcement in a flexural member such that the allowable tensile stress in the steel and allowable compressive stress in the concrete are attained simultaneously.

**balanced sash** A sash in a double-hung window that requires very little effort to raise or lower because its weight is counterbalanced with weights or pretensioned springs.


balanced sash

**balanced step (dancing step, dancing winder)** One of a series of winders that are balanced (as opposed to radiating from a common center). Their narrow ends are nearly equal in width to that of the straight portion of the adjacent stair flight to provide the line of traffic with a relatively even tread width.

**balance point** The temperature outside at which the heat lost from a building equals the heat gained from the occupants and equipment inside.

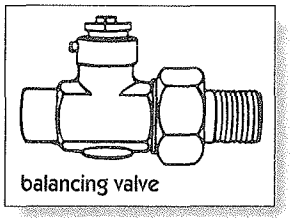
**balance spring** A window mechanism for counterbalancing a sliding sash to keep it open as needed.

**balancing** **1.** Adjusting the mass distribution of a rotor to diminish journal vibrations and control the forces on the bearings from eccentric loading. **2.** In an HVAC system, adjusting the system to produce the desired level of heating and cooling in each area of a building.

**balancing damper** A plate or adjustable vane installed in a duct branch to regulate the flow of air in the duct.

**balancing plug cock** *See* **balancing valve.**

**balancing valve (balancing plug cock)** A pipe valve used to control the flow rather than to shut it off.

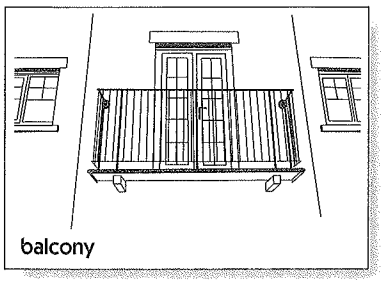

balancing valve

**balata** **1.** A rubber-like, nonelastic latex gum used to make industrial belting and gaskets. **2.** A tropical American tree that yields a latex-like sap.

**balaustre (canary wood)** A heavy, hard, and glossy South American wood. May be yellowish brown, purplish brown, or orange in color.

**balcony** **1.** A platform that protrudes from a building. It can be cantilevered or supported from below, and is usually protected by a railing or balustrade.

**2.** A gallery protruding over the main floor of an auditorium; usually provides additional seating. **3.** In a theater, an elevated platform used as part of a permanent stage setting.


balcony

**balk (baulk)** In building construction, a squared timber whose dimensions are at least 4" x 4-1/2".

**ballast** **1.** A layer of coarse stone, gravel, slag, etc., over which concrete is placed. **2.** The crushed rock or gravel of a railroad bed on which ties are set. **3.** The transformer-like device that limits the electric current flowing through the gas within a fluorescent lamp. **4.** A high-intensity discharge that provides a lamp with the proper starting voltage. **5.** Material placed in a vessel to provide temporary stability.

**ballast cycling** The undesirable condition that occurs when the ballast turns lamps on and off because of an overheated thermal switch.

**ballast factor** The ratio of the luminous output of a lamp when functioning on a ballast to its luminous output when functioning under standardized rating conditions.

**ballast noise rating** The degree of noise created by a fluorescent lamp ballast, represented by the letters A (the quietest) to F (the loudest).

**ballast-tamper** A portable machine used to compact the ballast under railroad ties. Usually powered by electricity or compressed air.

**ball-bearing hinge** A butt hinge having ball bearings positioned between the knuckles to reduce friction.

**ball catch** A door fastener in which a spring-tensioned metal ball engages the striking plate to keep the door closed until force is applied.

**ball-check valve** A device used to stop the flow of liquid in one direction while allowing flow in an opposite direction. The pressure against a spring-loaded ball opens the valve in one direction of flow. Pressure from the other direction forces the ball against a seat, closing the valve and preventing flow.

**ball cock** A float valve incorporating a spherical float; used to control the height of water, as in a toilet tank. *See also* **float valve.**

**ball float** The somewhat spherical floating device by which a ball valve is controlled.

**balling up** In welding, the globules of flux or molten brazing filler metal that result from inadequate wetting of the metal being welded.

**ball joint** A flexible mechanical joint that allows the axis of one part to be set at an angle to the other by virtue of the design of the two components. One possesses a fixed spherical shell to accommodate the ball-shaped end of the other.

**balloon frame** *See* **balloon framing.**

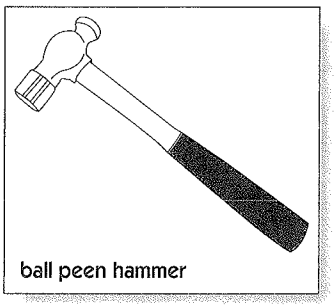
**balloon framing (balloon frame)** A style of wood framing in which the vertical structural members (the posts and studs) are single, continuous pieces from sill to roof plate. The intermediate floor joists are supported by ledger boards spiked to or let into the studs. The elimination of cross grains in the studding reduces differential shrinkage.

**balloon-payment loan** An installment loan demanding a final payment significantly larger than any of the previous annuity payments. Often employed temporarily until long-term financing arrangements are finalized. Commonly found in creative financing arrangements where the seller has accepted a second deed of trust or a wraparound mortgage as security for an unpaid portion of the purchase price.

**ballot box planning** Land use restrictions or growth controls created by community voters rather than by local government officials. Generally, ballot box planning is synonymous with increased growth controls in affluent communities and relaxed growth controls in modest or low income communities.

**ballpark figure** A rough estimate.

**ball peen hammer** A hammer having a hemispherical peen on one end and used by metal workers, stonemasons, and mechanics.


ball peen hammer

**ball test** **1.** A test to determine the consistency of freshly mixed concrete by measuring the depth of penetration of a cylindrical metal weight or plunger that has been dropped into it. **2.** A test to determine whether or not a drain is circular and unobstructed, performed by rolling a certain size ball through the drain. *See also* **Kelley ball.**

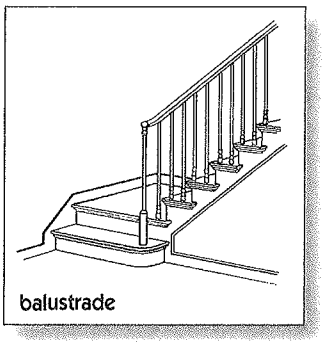
**ball valve** A spherically shaped gate valve that provides a very tight shut-off for fluids in a high-pressure piping system.

**balsa (corkwood)** A soft, porous wood that, at a density of 7-10 pounds per cubic foot, makes it lighter in weight than any other wood. Balsa is used for models and as the core material in lightweight sandwich panels.

# B

**baluster (banister)** **1.** One of a series of short, vertical supporting elements for a handrail or a coping. **2.** Any vase-shaped supporting member or column. **3.** The roll on the side of an Ionic capital.

**balustrade** A complete railing system, including a top rail, balusters, and sometimes a bottom rail.

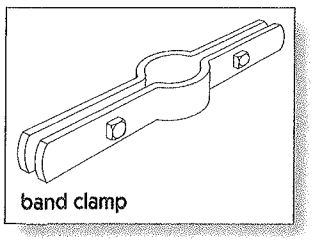

balustrade

**banana oil** *See* **amyl acetate.**

**band** **1.** A group of small bars or the wire encircling the main reinforcement in a concrete structural member to form a peripheral tie. A band is also a group of bars distributed in a slab, wall, or footing. **2.** A horizontal ornamental feature of a wall, such as a flat frieze or fascia, usually having some kind of projecting molding at its upper and lower edges. **3.** Frequencies that occur in a range between two set limits.

**band board** Perimeter floor joist that sits atop the sill in a wood floor framing system.

**band clamp** A metal clamp consisting of two pieces that are bolted at their ends to hold riser pipes.

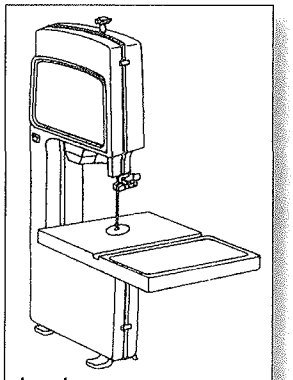

band clamp

**banding** Wood strips or veneer attached to the exposed edges of plywood or particleboard in the construction of furniture or shelves.

**band iron** A thin, metal strip used as a form tie or form hanger.

**band joist** A vertical member that forms the perimeter of a floor system.

**band saw** A power saw consisting of a continuous piece of flexible steel that runs around two pulleys and has teeth on one or both sides. A band saw is used to cut logs into cants, to rip lumber, and to cut curved shapes.


band saw

**bandwidth** A range of frequencies expressed in cycles per second (Hertz). The greater the bandwidth, the more information that can be transmitted.

**banister** **1.** A handrail. **2.** A balustrade, especially one on the side of a staircase. *See also* **baluster.**

**banjo vanity** A bathroom vanity top shaped like a banjo, usually with the "handle" extending over the toilet for added storage.

**bank** A mass of soil rising above a digging or trucking level. Excavation and loading are done at the face of a bank.

**bank cubic yard** A unit designating one cubic yard of earth or rock, measured or calculated before removal from the bank.

**banker** A table or bench on which stonemasons or bricklayers shape their materials before setting them.

**bank gravel** *See* **bank-run gravel.**

**bank material** Soil or rock in its natural state before excavation or blasting.

**bank measure** A determination of the volume of a mass of soil or rock in its natural state before excavation or blasting.

**bank plug** Wooden stake used by surveyors to measure grade.

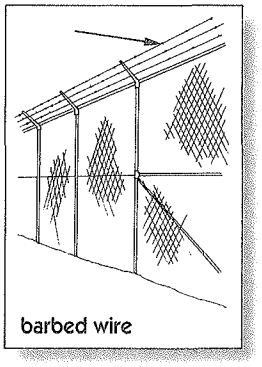
**bank-run gravel (bank gravel, run-of-bank gravel, all-in aggregate)** Granular material excavated without screening, scalping, or crushing. This type of gravel is a naturally occurring aggregate comprised of cobbles, gravel, sand, and fines.

**bank sand** Sand that is unlike lake sand in that it has sharp edges that provide a better bond and more strength when used in plastering.

**bar** **1.** A deformed steel member used to reinforce concrete. **2.** A solid piece of metal whose length is substantially greater than its width.

**barb bolt (rag bolt)** A bolt with jagged edges that prevent it from being easily removed from any object into which it has been driven.

**barbed wire (barbwire)** Two or more wires twisted together with intermittent barbs incorporated during manufacture. Used for security and livestock fencing.


barbed wire

**bar bending** The process of bending reinforcing steel into shapes required for reinforced concrete construction.

**barbwire** *See* **barbed wire.**

**bar chair** *See* **bar support.**

**bar chart (Gantt chart)** A chart that graphically describes activities on a work-versus-time scale, illustrating planned start and completion dates for the various project activities.

**bar clamp** A carpenter's clamping device consisting of a long bar with adjustable clamping jaws. A bar clamp is used to hold joinery components during gluing.

**bare** **1.** Descriptive of a piece of building material whose actual dimensions are smaller than those specified. **2.** Scant.

**bare cost** The estimated cost of an item of work or a project before the bidder's markup for overhead and profit.

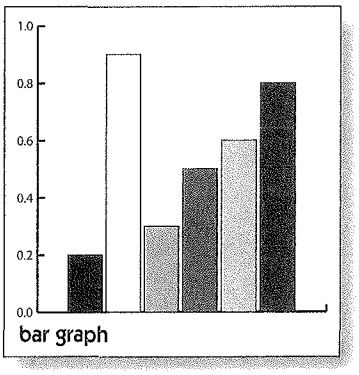
**barefaced tenon (bareface tenon)** A tenon that has a "shoulder" on one side only, and is used in the construction of wood doors.

**bargain and sale deed** A deed in which the grantor admits that he has some interest in, though not necessarily a clear and unencumbered title to, the property being conveyed. This kind of deed often contains a warranty that the grantor did not encumber the property or convey away any part of the title during his period of ownership.

**bargeboard** A board that hangs from the projecting end of a gable roof, often ornamental.

**barge spike (boat spike)** A long, square spike with a chisel point, used primarily in heavy timber construction.

**bar graph** A graphical representation of simultaneous events charted with reference to time. A bar graph is a simplified method of charting events, such as the processes of building construction. The horizontal axis of the chart is scaled to increments of time; the various events are charted vertically. The duration of the event is charted by a horizontal line or bar beginning at the time the event is scheduled to begin and ending at the time the event is scheduled to be completed. At any point in time, the reader can observe the number of events that are occurring simultaneously.



bar graph

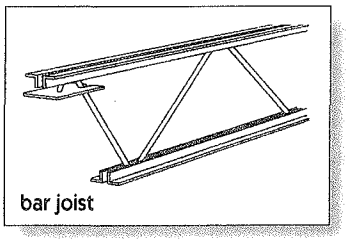
**bar handle** A horizontal rod used to open a door.

**barite (barytes)** A mineral of barium sulfate often used as an aggregate for concrete in the construction of high-density radiation shielding.

**barium plaster** A gypsum plaster to which barium salts have been added during manufacturing. Used on walls of x-ray rooms.

**barium sulfate** *See* **barite.**

**bar joist** A light steel joist of open-web construction with a single zigzag bar welded to upper and lower chords at the points of contact. Used as floor and roof supports.


bar joist

**bar mat** An assembly of steel reinforcement composed of two or more layers of bars placed at right angles to each other and tied together by welding or wire ties.

**bar molding (bar-rail molding)** A rabbeted molding that serves as a nosing when fixed to the edge of a countertop or bar.

**barn-door hanger** A type of hanger used for heavy exterior sliding or rolling doors. Consisting of two pulleys secured in tandem to the top of the door and connected by a heavy metal strap. The door moves by rolling along a horizontal track that either hangs from the lintel or is anchored to a parallel member projecting slightly from it.

**barn-door stay** One of at least a pair of small pulleys that facilitate and direct the movement of a sliding barn (or other) door by rolling along a horizontal track or rail.

**barn sash** A basic, plain window sash typically installed in a rough frame for temporary structures.

**barometer** A device that measures atmospheric pressure.

**Baroque** A style of architecture and decoration developed in the late 17th century and characterized by the elaborate use of scrolls, curves, and other symmetrical ornamentation.

**barracks** A usually simple, unadorned building or group of buildings that provide temporary housing, often for military personnel.

**bar-rail molding** *See* **bar molding.**

**barrel** **1.** A unit of weight measure for Portland cement, equivalent to four bags or 376 pounds. **2.** A standard cylindrical vessel with a liquid capacity of 31-1/2 gallons. **3.** That part of a pipe where the bore and wall thickness remain uniform.

**barrel bolt (tower bolt)** A cylindrical bolt mounted on a plate that has a case projecting from its surface to contain and guide the bolt.

# B

**barreling (tumbling)** A process in which small articles are placed in a cylindrical case and painted by being tumbled in a barrel of paint.

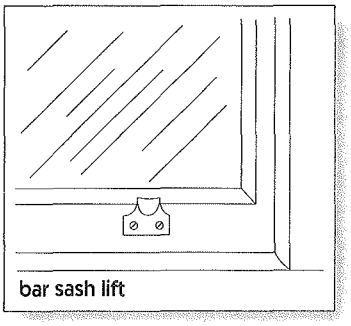
**barricade** An obstruction used to deter the passage of persons or vehicles. Any of several devices used to detour or restrict passage.

**barrier-free environment** A building or area that is fully accessible and usable by disabled people.

**barrow** **1.** A wheelbarrow. **2.** A large mound of earth or pile of rocks intentionally placed on top of an ancient burial site for protection.

**barrow run** A temporary smooth ramp of planks or plywood for wheeled transport of materials at a construction site.

**bar sash lift** A handle on the bottom rail of a sash for raising and lowering the sash.


bar sash lift

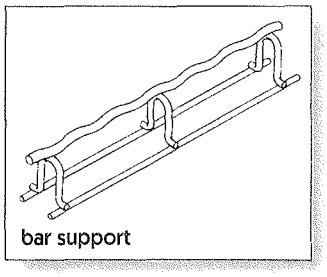
**bar screen** A coarse screening device made from equally spaced parallel bars or rods, used to separate large stones from gravel or crushed stone. *See also* **bar strainer**.

**bar size section** A hot-rolled bar, angle, channel tee, or zee whose largest cross-sectional dimension does not exceed 3".

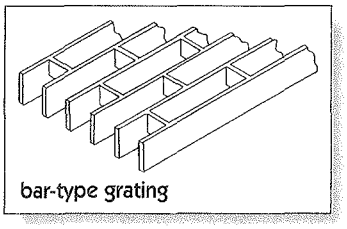
**bar spacing** The distance between parallel reinforcing bars, measured center to center.

**bar strainer** **1.** A screening device, fabricated from parallel bars or rods, used over a drain to prevent the entrance of foreign objects. **2.** A bar screen.

**bar support (bar chair)** A rigid device of formed wire, plastic, or concrete, used to support or hold reinforcing bars in proper position during concrete operations.


bar support

**bar-type grating** An open grate with parallel bearing bars evenly spaced and attached to a frame. The grating may be cast or welded and may have crossbars.


bar-type grating

**barway** A gate with one or more sliding bars that act as large latch bolts.

**barytes** *See* **barite**.

**BAS** *See* **Building Automation System**.

**basalt** A dark, fine-grained igneous rock of high density widely used for paving aggregate.

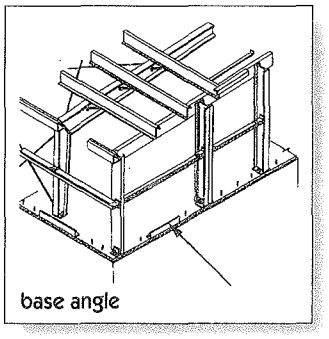
**bascule** A structure that rotates like a saw around a horizontal axis, and that has a counterbalance at one end. The most common use is for a bascule bridge.

**bascule bridge** A bridge designed with counterbalances so that as one end is lowered, the other end is raised.

**base (scrubboard, skirting board, washboard)** **1.** The lowest part of anything upon which the whole rests. **2.** A subfloor slab or "working mat," either previously placed and hardened or freshly placed, on which floor topping is placed. **3.** The underlying stratum on which a concrete slab, such as pavement, is placed. **4.** A board or molding used against the bottom of walls to cover their joint with the floor and to protect them from kicks and scuffs. **5.** The protection covering the unfinished edge of plaster or gypsum board. **6.** The lowest visible part of a building.

**base anchor** A fixed or adjustable metal device attached to the base of a door frame to secure it to the floor.

**base angle** Angle iron stock attached to the perimeter of a foundation for supporting and aligning tilt-up wall panels.


base angle

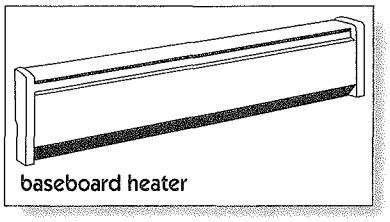
**base bid** The amount of money stated in the bid as the sum for which the bidder offers to perform the work described in the bidding documents, prior to the adjustments for alternate bids that have been submitted.

**base bid specifications** The specifications that list or describe those specific materials, equipment, and construction methods that comprise the base bid exclusive of any alternate bids.

**base block** A usually unadorned, squared block that terminates a molded baseboard at an opening or serves as a base when attached to the foot of a door or the bottom of window trim.

**baseboard** *See* **base (4.)**.

**baseboard heater** A heating system in which the heating elements are housed in special panels placed horizontally along the baseboard of a wall.


baseboard heater

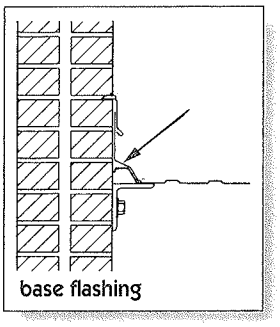
**baseboard radiator unit** A heating device designed to be positioned in a room so as to replace a baseboard. The heat source is commonly from hot water, steam, or electricity.

**base coat** **1.** The plaster beneath the finish coat. **2.** The initial coat of paint or stain applied to a surface.

**base course** **1.** A layer of material of specified thickness constructed on the subgrade or sub-base of a pavement to serve one or more functions, such as distributing loads, providing drainage, or minimizing frost action. **2.** The lowest course of masonry in a wall, pier, foundation, or footing course.

**base elbow** A cast-iron pipe elbow with a flange or baseplate for placement on a floor or block.

**base flashing** **1.** In roofing, the flashing supplied by the upturned edges of a watertight membrane. **2.** The metal or composition flashing used with any roofing material at the joint between the roofing surface and a vertical surface, such as a parapet or wall.


base flashing

**base light** Uniform and diffuse illumination without accent.

**base line** **1.** The meticulously established reference line used in surveying or timber cruising. **2.** In construction, the center or reference line of location of a highway, railway, building, or bridge.

**baseline schedule** **1.** A fixed project schedule that is the standard by which project performance is measured. The current schedule is copied into the baseline schedule that remains frozen until it is reset. Resetting the baseline is done when the scope of the project has been changed significantly, for example after a negotiated change. At that point, the original or current baseline becomes invalid and should not be compared with the current schedule. **2.** Version of schedule that reflects all formally authorized scope and schedule changes.*

**base map** A map employed in urban planning to indicate the principal outstanding physical characteristics of an area and which is thereafter used as a reference for subsequent mapping.

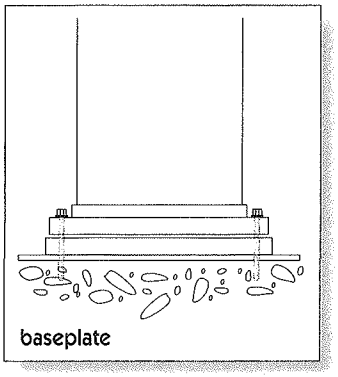
**basement** The bottom full story of a building below the first floor. A basement may be partially or completely below grade.

**basement soil** *See* **subgrade.**

**base metal** In joining two metal pieces, the parent metal that is actually welded, brazed, or soldered, and remains unmelted after the joining process, as opposed to the filler metal deposited during the joining operation.

**base molding** Trim molding applied to the upper edge of interior baseboard.

**baseplate** A plate used to distribute vertical loads from structural columns or machinery.


baseplate

**base screed** A galvanized metal screed with perforated or expanded flanges to provide ground for plaster and to separate areas of dissimilar materials.

**base sheet** The saturated and/or coated felt sheeting laid as the first ply in a built-up roof system.

**base shoe (base shoe molding, carpet strip, carpet stripmolding, floor molding, shoe molding)** The molding or carpet strip covering the joint between a floor and a baseboard, often a quarter-round bead.

**base shoe corner** A block or a piece of molding installed in the corner of a room so as to eliminate the need to miter the base shoe.

**base shoe molding** *See* **base shoe.**

**base tee** A pipe tee that has an attached supporting baseplate.

**base tile** The bottom course of tile in a tiled wall.

**base trim** Any decorative molding at the base of a wall, column, or pedestal.

**basic insulation level** The measure of the insulation capability of a piece of electrical equipment; the equipment's ability to withstand very high voltage surges.

**basic module** **1.** A unit of dimension used when coordinating the sizes of building elements and other components. **2.** The fundamental unit of size in the systems of coordination in metric building, or 100 mm.

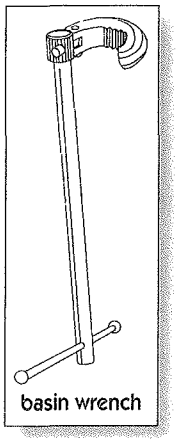
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# B

**basic services** A group of services provided to an owner by a design professional under a contract that is considered to be the minimum necessary to lead to a contract for construction with a constructor.

**basin** **1.** A somewhat circular natural or excavated hollow or depression having sloping sides and usually used for holding water. **2.** A similarly shaped plumbing fixture, such as a sink.

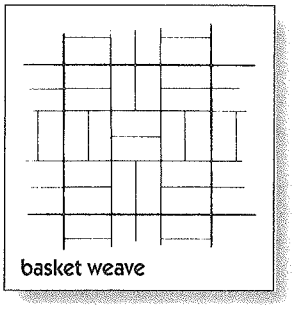
**basin wrench** A wrench with a long shank and ratcheted jaws used in plumbing for difficult-to-reach areas, as when installing a faucet behind a sink.


basin wrench

**basis** Written documentation that describes how an estimate, schedule, or other plan component was developed and defines the information used in support of development. A basis document commonly includes, but is not limited to, a description of the scope included, methodologies used, references and defining deliverables used, assumptions and exclusions made, clarifications, adjustments, and some indication of the level of uncertainty.*

**basket crib** A construction of interlocking timbers that can be arranged to function as a shaft liner, a protective device around a concrete pier in water, or a temporary floating foundation.

**basket weave** A pattern of bricks placed flat or on edge and arranged in a checkerboard layout.


basket weave

**bas-relief (basso-riviero, basso-rilievo)** Sculpture, carving, or embossing that protrudes slightly from its background.

**basso-rilievo** *See* **bas-relief.**

**basso-riviero** *See* **bas-relief.**

**basswood (American linden)** A fine-textured softwood used for carving, cabinet work, and paneling. Basswood is also the primary source of excelsior.

**bastard** Any nonstandard item deviating from normal size, slope, fabrication, or quality.

**bastard file** A flat file whose grain is somewhat less than coarse and that is primarily used to smooth metal surfaces.

**bastard granite** A gneissic rock whose formation resembles that of true granite. Bastard granite is used mostly in wall construction but is not a true granite.

**bastard hip** Hip roof design in which the angles of the hip rafter are not equal (or 45 degrees).

**bastard joint** *See* **blind joint.**

**bastard masonry** **1.** Thin blocks of facing stones used to face brick or rubble walls. Bastard masonry is dressed and built to resemble ashlar. **2.** Rough, quarry-dressed ashlar stones.

**bastard pointing** In masonry, a type of pointing that emphasizes the joint by forming a small ridge projecting along its center.

**bastard-sawn** **1.** Lumber that has been sawn so that the annual rings make angles of 30°-60° to the surface of the piece. **2.** Any lumber that has been flat-sawn, plain-sawn, or slash-sawn.

**bastard spruce** *See* **Douglas fir.**

**bastard tuckpointing** *See* **bastard pointing.**

**bat** **1.** A burned brick or shape that, because it is broken, has only one good end. **2.** A piece of brick. **3.** A single unit of batt insulation. **4.** A piece of wood that serves as a brace.

**Bataan mahogany** *See* **tanguile.**

**bat bolt** A bolt whose butt or tang has been provided with barbs or similar protrusions to increase its grip.

**batch** The quantity produced as the result of one mixing operation, as in a batch of concrete.

**batch box** A container of known volume used to measure the constituents of concrete or mortar in proper proportions.

**batch mixer** A machine that mixes concrete, grout, or mortar in batches in accordance to a design mix. Each batch is used completely before a second batch is started.


batch mixer

**batch plant** An installation of equipment including batchers and mixers as required for batching and mixing concrete materials. Called a *mixing plant* when mixing equipment is included.

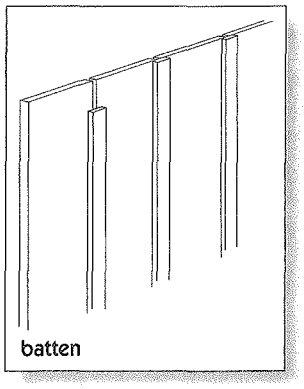
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**batement light** A window constructed with an angular bottom to fit a curved or sloping member.

**bathroom** A room usually equipped with a water closet, a lavatory, a bathtub and/or a shower.

**batted work (broad tooled)** Stone whose surface has been scored downward from the top by administering 8 to 10 narrow, parallel strikes per inch with a batting tool.

**batten** **1.** A narrow strip of wood used as siding to cover the joints of parallel boards or plywood. The resultant pattern is referred to as *board and batten*. **2.** A strip of wood placed perpendicular to several parallel pieces of wood to hold them together. **3.** A furring strip fastened to a wall to provide a base for lathing or plastering. **4.** In roofing, a strip of wood placed over boards or roof structural members to provide a base for the application of wood or slate shingles, or clay tiles. **5.** The steel strip that fastens the metal flooring on a fire escape.


batten

**battenboard** *See* **coreboard.**

**batten door (ledged door, unframed door)** A door in which stiles are absent and that consists of vertical boards or sheathing secured on the back side by horizontal battens.

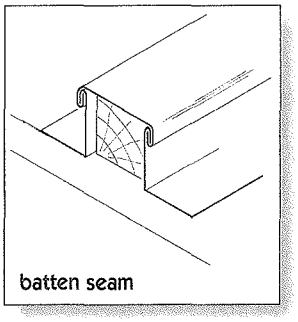
**battened column** A column composed of two longitudinal shafts fastened securely to each other by batten plates.

**battened wall (strapped wall)** A wall to which battens have been secured.

**batten plate (stay plate)** A steel plate connecting two parallel components (such as flanges or angles) of a built-up structural column, girder, or strut, and transmitting the shear between them.

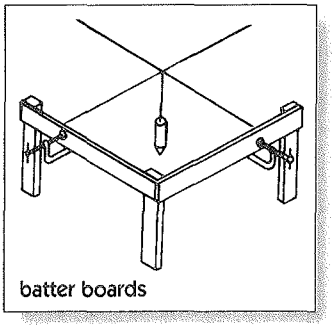
**batten roll (conical roll)** In metal roofing, a roll joint fabricated over a triangular wood piece.

**batten seam** In metal roofing, a seam fabricated around a wood strip.


batten seam

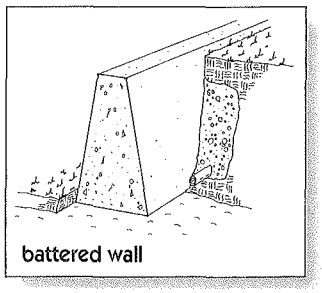
**batter** **1.** To incline from the vertical. **2.** A slope, such as that of the outer side of a wall, that is wider at the bottom than at the top.

**batter boards** Pairs of horizontal boards nailed to wood stakes adjoining an excavation. Used with strings as a guide to elevation and to outline a proposed building. The strings strung between boards can be left in place during excavation.


batter boards

**batter brace (batter post)** **1.** A bracing member positioned diagonally so as to reinforce an end of a truss. **2.** An inclined timber that forms a side support to a tunnel roof.

**battered wall** A wall that slopes backward, as by recessing or sloping masonry in successive courses.


battered wall

**batter level** An instrument used to measure the inclination of a slope.

**batter pile (brace pile, raking pile, spur pile)** **1.** A pile driven somewhat diagonally so as to resist horizontal forces. **2.** Any pile installed at an angle to the vertical.

**batter post** *See* **batter brace.**

**batter rule** An instrument used to adjust the inclination of a battered wall during its construction. A batter rule incorporates a rule or frame and a plumb line and bob.

**batter stick** A tapered board hung vertically by its wide end or used in conjunction with a level to check the batter of a wall surface.

**battery** A device in which electrochemical action is employed to store and provide direct electric current.

**battery charge controller** A device that modulates the charge current into a battery to protect against overcharging and the associated loss of electrolytes. A low-voltage disconnect protects the battery from becoming excessively discharged by disconnecting the load.

# B

**battery limit** Comprises one or more geographic boundaries, imaginary or real, enclosing a plant or unit being engineered and/or erected, established for the purpose of providing a means of specifically identifying certain portions of the plant, related groups of equipment, or associated facilities. *

**batting tool** A mason's dressing chisel used to apply a striated surface to stone.

**batt insulation** Thermal or sound-insulating material, such as fiberglass or expanded shale, that has been fashioned into a flexible, blanket-like form, often with a vapor barrier on one side. Batt insulation is manufactured in dimensions that facilitate its installation between the studs or joists of a frame construction. *See also* **blanket insulation.**

**battleships** *See* **Madison clips.**

**baud** In data transmission, a unit of measure equal to one bit per second.

**Bauhaus** A school of art, design, and architecture established by Walter Gropius in Weimar, Germany, 1919.

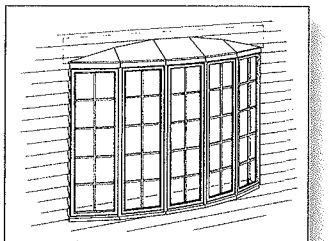
**baulk** *See* **balk.**

**bay** **1.** In construction, the space between two main trusses or beams. **2.** The space between two adjacent piers or mullions, or between two adjacent lines of columns. **3.** A small, well-defined area of concrete laid in the course of placing larger areas, such as floors, pavements, or runways. **4.** The projecting structure of a bay window.

**bayonet saw** *See* **jigsaw.**

**bay stall** A built-in window seat at the opening of a bay window.

**bay window** A usually large window or group of windows that projects from a wall of a building forming a recess within the building.


bay window

**beacon** **1.** A light that indicates a location by directing its powerful beam slightly above the horizontal and rotating it so that to a stationary observer, it appears to be flashing. A beacon is used at airports, on lighthouses, etc. **2.** A transmitter that broadcasts warning or guiding signals.

**bead** **1.** Any molding, stop, or caulking used around a glass panel to hold it in position. **2.** A stop or strip of wood against which a door or window sash closes. **3.** A strip of sheet metal that has been fabricated so as to have a projecting nosing and two perforated or expanded flanges. A bead is used as a stop at the perimeter of a plastered surface or as reinforcement at the corners. **4.** A narrow, half-round molding, either attached to or milled on a larger piece. **5.** A square or rectangular trim less than 1" in width and thickness. **6.** A choker ferrule; the knob on the end of a choker.

**bead and butt** *See* **bead butt.**

**bead-and-reel** Half-round molding into which are incorporated alternating patterns of discs and elongated beads.

**bead board** A decorative form of wainscoting that consists of a quarter-round molding.

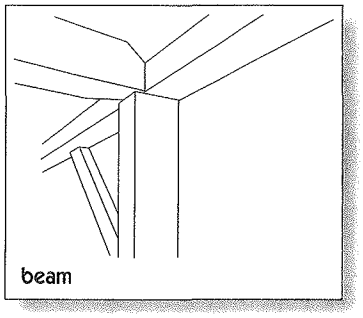
**bead butt (bead and butt)** Thick, framed panelwork, as on a door, having one face flush with the frame and decorated with moldings (beads) on the adjoining edges, running with the grain and butting against the rail. The other side is recessed and without moldings.

**bead butt and square** Door paneling comprising one flush face and one bead butt.

**bead molding** Small, half-round, convex molding, either continuous or divided, that resembles a succession of beads.

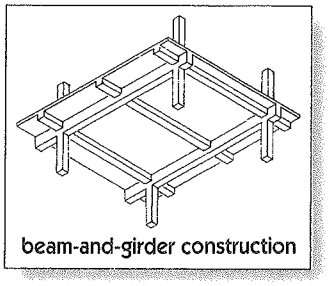
**bead plane** A special plane with a curved cutting edge employed in the cutting of beads in wood.

**beam** **1.** A horizontal structural member, such as a girder, rafter, or purlin, that transversely supports a load and transfers the load to vertical members, such as columns and walls. **2.** The graduated horizontal bar of a weighing scale.


beam

**beam anchor (joist anchor, wall anchor)** A metal tie used to secure a beam, joist, or floor firmly to a wall.

**beam-and-girder construction** A type of floor construction in which slabs are used to distribute the load to evenly spaced beams and girders.


beam-and-girder construction

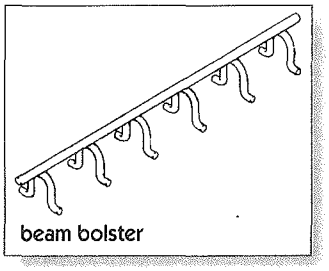
**beam-and-slab floor** A type of floor construction in which reinforced concrete beams are used to support a monolithic concrete floor slab.

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**beam bearing plate** A metal plate positioned under the end of a beam to distribute the reaction load over a larger area. When used under a column, it is called a *loose plate*.

**beam blocking** Covering or enclosing a beam, joist, or girder to make it appear larger than it really is.

**beam bolster** A rod or heavy wire device used to support steel reinforcement in the formwork for a reinforced concrete beam.


beam bolster

**beam bottom** The soffit of a beam.

**beam box** *See* **wall box.**

**beam brick** A lintel made of brick courses, often held together by metal straps.

**beam ceiling** A type of construction in which the structural and/or ornamental overhead beams are left exposed to view from the room below.

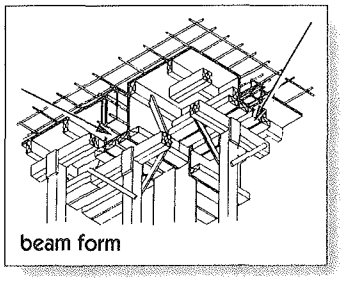
**beam column** A structural member that transmits an axial load as well as a transverse load.

**beam compass** An instrument comprising a small horizontal bar with two vertical components that can slide along it. One carries a sharp-pointed tip and is held by the user in a stationary position. The other carries a pencil tip and is moved around the first to draw circles or arcs of circles for full-size working drawings.

**beam fill (beam filling)** Masonry, brickwork, or concrete placed between floor or ceiling joists to stiffen the joists and provide fire resistance.

**beam filling** *See* **beam fill.**

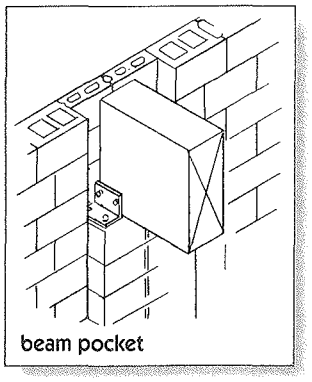
**beam form** A retainer or mold constructed to give the necessary shape, support, and finish to a concrete beam.


beam form

**beam hanger (beam saddle)** **1.** A wire, strap, or other hardware device used to hang beam forms from another structural member. **2.** In timber construction, a strap, wire, or stirrup used to support a beam.

**beam haunch** A poured concrete section that continues beyond a beam to support the sill.

**beam pocket** **1.** A space left open in a vertical structural member to receive a beam. **2.** An opening in the column or girder form where forms for an intersecting beam will be framed.


beam pocket

**beam saddle** *See* **beam hanger.**

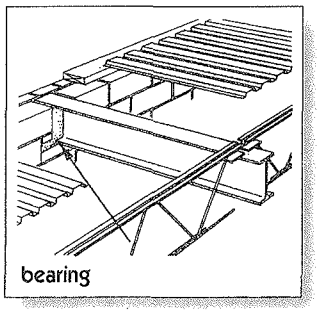
**beam side** The side panels of a form for a concrete beam.

**beam spread** A measure of the dispersion of a beam of light. Expressed as the angle between two directions in the plane in which the candlepower is equal to a specified percent (usually 10%) of the maximum candlepower in the beam.

**beam test** A method of measuring the flexural strength (modulus of rupture) of concrete by testing a standard unreinforced beam.

**bearer** **1.** A horizontal member of a scaffold on which the platform rests and which may be supported by ledgers. **2.** Any load-supporting horizontal structural member. **3.** Any device that provides support for a landing or window in a stair. **4.** In balloon framing, the ribbon board on which the joists for the second floor rest.

**bearing** **1.** That section of a structural member, such as a column, beam, or truss, that rests on the supports. **2.** A device used to support or steady a shaft, axle, or trunnion. **3.** In surveying, the horizontal angle between a reference direction, such as true north, and a given line. **4.** Descriptive of any wall that provides support to the floor and/or roof of a building.

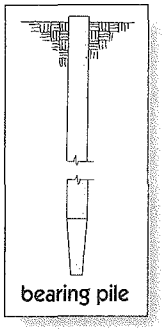

bearing

**bearing bar** **1.** A wrought-iron bar used on masonry to offer a level support for floor joists. **2.** A supporting bar for a grating.

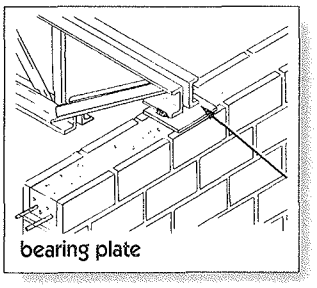
**bearing capacity** The maximum unit pressure that soil or other material can withstand without failure or excessive settlement.

# B

**bearing pile** A pile that supports a vertical load.




**bearing plate** A steel plate positioned under a beam, column, girder, or truss to distribute a load to a support member.




**bearing pressure** The existing load on a bearing surface, divided by the area of the bearing surface.

**bearing stratum** The soil or rock stratum on which a footing or mat bears or carries the load transferred to it by a pile, caisson, or similar deep foundation unit.

**bearing wall** Any wall that supports a vertical load as well as its own weight.

**Beaufort scale** A numerical scale used to indicate the successive range of wind velocity (0 for calm, 12 for hurricane force).

**bed** **1.** The mortar into which masonry units are set. **2.** Sand or other aggregate on which pipe or conduit is laid in a trench. **3.** To set in place with putty or similar compound, as might be performed in glazing. **4.** A supporting base for engines or machinery. **5.** To level or smooth a path onto which a tree will be felled. **6.** To set glass in place using putty.

**bed coat** *See* **bedding coat.**

**bedding** **1.** A prepared base for masonry or concrete. **2.** The lath or other support(s) on which pipe is laid. *See also* **bed (2.)** *and* **(3.)**.

**bedding coat (bed coat)** Ordinarily, the initial coat of joint compound on gypsum board applied over tape, bead, and other fastener heads.

**bedding course** The initial layer of mortar at the bottom of a masonry construction.

**bedding dot** A small area of plaster built out of the face of a finished wall or ceiling that acts as a screed for leveling and plumbing in a plastering operation.

**bedding stone** A flat slab of marble with which bricklayers and masons check the flatness of rubbed bricks.

**bed dowel** A dowel placed in the mortar bed for a stone to prevent settlement before the mortar has set.

**bed glazing** *See* **back putty.**

**bed joint** **1.** The horizontal layer of mortar on which a masonry unit is laid. **2.** In an arch, a horizontal joint or one that radiates between adjacent voussoirs. **3.** A horizontal fault in a rock formation.

**bed molding** **1.** A molding placed at the angle between a vertical surface and an overhanging horizontal surface, such as between a side wall and the eaves of a building. **2.** The lowest molding in a band of moldings. **3.** In classical architecture, a molding of a cornice of an entablature, located between the corona and the frieze.

**bedplate** A baseplate, frame, or platform that supports a structural element, furnace, or heavy machine.

**bedrock** Solid rock that underlies the earth's surface soil and that can provide, by its very existence, the foundation on which a heavy structure may be erected.

**bedroom community** Refers to a community of mainly commuters that generally lacks industry of its own.

**bed timber** A large wood member set perpendicular to trusses that serves as a foundation or support element.

**beech (beechwood)** Any of a number of hardwoods of the genus *fagus*, having characteristics of straight, close grain and good workability. Beech is often used in furniture, turnings, tools, and similar products.

**beechwood** *See* **beech.**

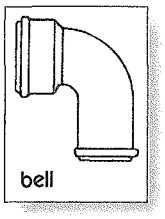
**BEES (Building for Environmental and Economic Sustainability)** A methodology that considers multiple environmental and economic impacts over the building product's entire life cycle to develop a rational decision-making scoring system.

**beetle (maul)** A heavy mallet with a large wooden head used for driving pegs or wedges or in other applications where material might sustain damage if struck with a conventional sledgehammer.

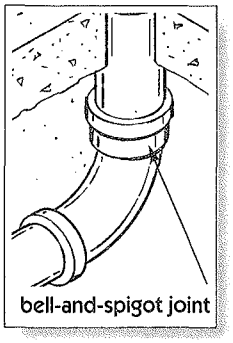
**before-sheathing window** A window installed before the wall sheathing is in place.

**Belgian block** A paving stone shaped like a truncated pyramid and laid with the largest face down.

**bell (hub)** A portion of a pipe that, for a short distance, is sufficiently enlarged to receive the end of another pipe of the same diameter for the purpose of making a joint.



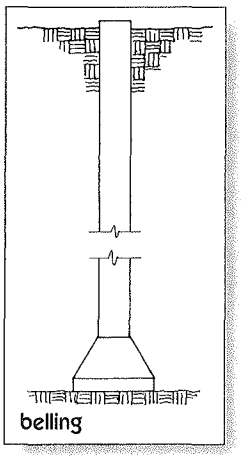
**bell-and-spigot joint (bell joint, spigot-and-socket joint)** The most commonly used joint in cast-iron pipe. Each length is made with an enlarged diameter or bell at one end into which the plain or spigot end of another piece is inserted. The joint is sealed by cement, oakum, lead, or rubber caulked into the bell around the spigot.


bell-and-spigot joint

**belled caisson** A caisson with an enlarged, bell-shaped base.

**belled excavation** The bell-shaped lower portion of a shaft or footing excavation frequently used in caisson construction.

**belling** In pier, caisson, or pile construction, the process of enlarging the base of a foundation element at the bearing stratum to provide more bearing area.


belling

**bell joint** *See* **bell-and-spigot joint.**

**bell loop** The circuit that provides notification of a fire condition in a fire alarm system.

**bellows expansion joint** In a run of piping, a joint accomplished with flexible metal bellows that can expand and/or contract linearly to allow for thermally induced linear fluctuations of the run itself.

**bell transformer** A very small transformer that supplies low voltage power on demand to doorbells or similar devices.

**bell trap** A bell-shaped trap sometimes used in floor drains. Its installation for residential use is prohibited by the National Plumbing Code.

**bell wire** Small-diameter wire of low current-carrying capacity whose insulation is rated at 30 volts or less.

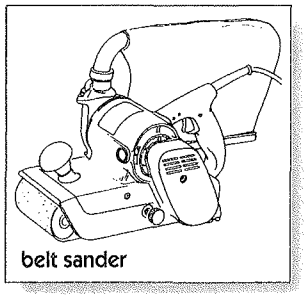
**belt** **1.** A flexible continuous loop that conveys power (or materials) between the pulleys or rollers around which it passes. **2.** A course of brick or stone that protrudes from a wall of similar material and is usually positioned in line with the windowsills.

**belt conveyor** A power-driven apparatus comprising a single continuous belt and the idler wheels around which it passes to transport materials or products placed on the upper surface of the belt.

**belt course** **1.** In masonry, a continuous layer of stone or brick that protrudes from the face of a stone or brick wall. **2.** In carpentry, a horizontal band around a building, usually made of a flat board member and molding.

**belt loader** An excavating machine comprising an auger or other cutting edge that digs away the earth, and a conveyer belt that elevates the excavated material for loading onto a truck or depositing elsewhere.

**belt sander** An electrically powered, portable sanding tool with a continuous abrasive belt driven in one direction only. A belt sander is used to smooth surfaces, usually wood.


belt sander

**belt tightener** A device incorporated into the construction of a conveyer belt for adjusting the belt tension by repositioning the counterweight and pulley.

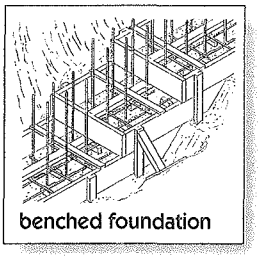
**belvedere** A rooftop pavillion or a small structure, like a gazebo, for enjoying a vista.

**bench** **1.** A long seat, with or without a back, made in any of several materials, such as wood, metal, or fiberglass, and usually accommodating more than one person. **2.** One step, level, or shelf in a cut or excavation that is performed in several layers. **3.** A pretensioning bed.

**bench brake** A large, heavy, bench-mounted device for bending sheet metal.

**bench dog** A peg or pin partially inserted into a hole at an edge or end of a workbench to help secure a piece of work or prevent it from sliding off the bench.

**benched foundation (stepped foundation)** A foundation cut as a series of horizontal steps in an inclined bearing stratum to prevent sliding when loaded.


benched foundation

# B

**bench hook (side hook)** In carpentry, any device used to protect the top surface of a workbench from being scarred or damaged by any slipping or sliding of the work. It usually keeps the work positioned toward the front of the bench.

**benching** **1.** A half-round channel cast in the concrete in the bottom of a manhole to direct discharge when the flow is low. **2.** Concrete placed in horizontal steps on steeply sloping fill to prevent sliding. **3.** Concrete laid on the side slopes of drainage channels where the slopes are interrupted by manholes, etc. **4.** Concrete laid in a pipeline trench to provide firmer support.

**bench mark** **1.** A marked reference point on a permanent object, such as a metal disc set in concrete, whose elevation as referenced to a datum is known. **2.** A mark made by a surveyor or general contractor to be used as a reference point when measuring the elevation or location of other points.

**benchmarking** A measurement and analysis process that compares practices, processes, and relevant measure to those of a selected basis of comparison (i.e., the benchmark) with the goal of improving performance. The comparison basis includes internal or external competitive or best practices, durations, resource quantities, etc.*

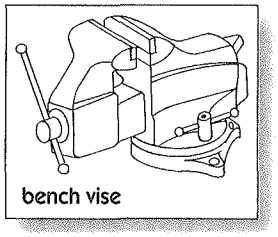
**bench plane** A plane, such as a block plane or a jack plane, used primarily in bench work on flat surfaces.

**bench sander** An electrically powered, bench-mounted sanding machine that uses a rotating abrasive disk or grinder, or a continuous abrasive belt, to smooth the surface of objects held against it.

**bench stop** A usually notched, adjustable metal apparatus fastened close to an end of a workbench to hold a piece of wood securely during planing.

**bench table** A course of masonry, wide enough to form a seat, that protrudes from the foot of an interior wall or column.

**bench vise** An ordinary vise attached to a workbench to hold a material or component in place while it is being worked on.



bench vise

**bench work** All work performed on a bench rather than on machines or in the field.

**bend** **1.** An elbow fitting or other short length of bent conduit used to join two lengths of straight adjacent conduit. **2.** A pipe fitting used to achieve a change in direction.

**bending beam** *See* **tie beam.**

**bending extra** A charge (an extra) by the fabricator for bending reinforcing bars. Extras are charged by the ton according to bar sizes.

**bending iron** A tool used to shape or expand pipe.

**bending moment** The bending effect at any section of a beam. The bending moment is equal to the algebraic sum of moments taken about the center of gravity of that section.

**bending moment diagram** A graphic representation of the variation of bending moment along the length of the member for a given stationary system of loads.

**bending schedule** A list of reinforcement prepared by the designer or detailer of a reinforced concrete structure that shows the shapes, dimensions, and location of every bar, and the number of bars required.

**bend test** Subjecting a flat bar to a 180° cold bend in order to test its weld or steel and to check its ductility, which is verified if no cracking occurs during the test.

**beneficial occupancy** Use of a building, structure, or facility by the owner for its intended purpose (functionally complete), although other contract work, nonessential to the function of the occupied section, remains to be completed. *

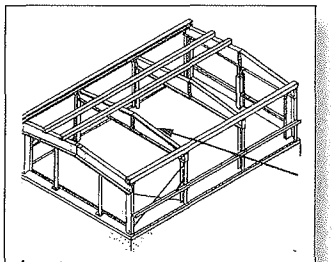
**beneficiation** The process used to increase the iron content of ores.

**benefit cost analysis** A method of evaluating projects or investments by comparing the present value or annual value of expected benefits to the present value or annual value of expected costs.*

**benefit-to-cost ratio (BTC)** Benefits divided by costs, where both are discounted to a present value or equivalent uniform annual value.*

**benefits, mandatory and customary** The employee benefits required by law (such as social security, workers' compensation, and disability insurance) and by custom (such as vacation, sick leave) as well as those that are optional, depending on the individual firm (such as pension plans, life insurance).

**bent** **1.** A structural framework, transverse to the length of a structure, designed to carry lateral as well as vertical loads. **2.** Any of several grasses of the genus *agrostis* that are used where a resilient, velvety texture is required.

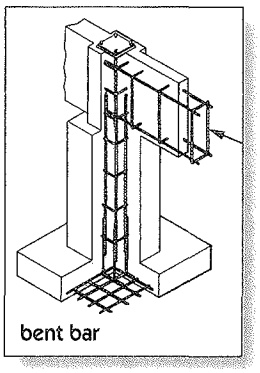


bent

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**bent approach** The arrangement of a driveway such that it turns sharply through two out-of-line gateways. The bent approach is used for privacy and security.

**bent bar** A reinforcing bar bent to a prescribed shape, such as a truss, straight bar with hook, stirrup, or column tie. A bent bar is bent to pass from one face of a member to the other.


bent bar

**bentonite** A clay composed principally of minerals in the montmorillonite group and characterized by high absorption and very large volume change with wetting or drying.

**benzene** A flammable liquid used in dyes and as a solvent and cleaning fluid.

**Berea sandstone** A fine-grain sandstone quarried in Amherst, Ohio.

**berm** **1.** An artificially placed continuous ridge or bank of earth, usually along a roadside. Also called a *shoulder*. **2.** A ridge or bank of earth placed against a masonry wall. **3.** A ledge or strip of earth placed so as to support pipes or beams. **4.** Earthen dikes or embankments constructed to retain water on land that will be flood-irrigated. **5.** Earthen or paved dike-like embankments for diverting runoff water. **6.** A raised wall enclosing a liquid waste storage or spill area. **7.** An asphaltic concrete or concrete curb.

**berth** A docking facility where a vessel can tie up and load or discharge cargo, fuel, etc.

**best practices** Practical techniques gained from experience that have been shown to produce best results.*

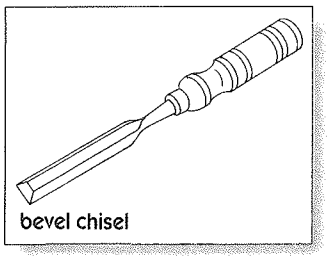
**Bethell process** A method of pressure-impregnating wood with a creosote preservative.

**bevel** **1.** Any angle (except a right angle) or inclination of any line or surface that joins another. **2.** An adjustable instrument used for determining, measuring, or reproducing angles. **3.** In welding, preparation on the edges to be welded.

**bevel angle** In welding, the angle created by the prepared edge of a member and a plane perpendicular to the surface of the member.

**bevel board (pitch board)** A board that has been cut to a predetermined desired, or required angle and employed in any angular wood construction, including roof and stair framing.

**bevel chisel** A wood-cutting chisel whose cutting edge is angled between its sides.

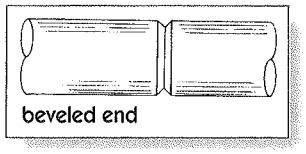

bevel chisel

**bevel collar** *See* **angle collar.**

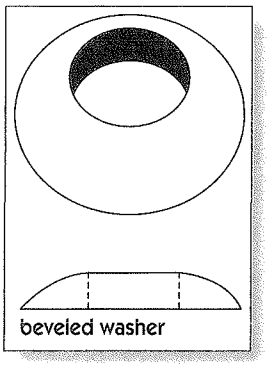
**bevel cut** Any cut made at an angle other than a right angle.

**beveled edge** **1.** A vertical front edge on a door, cut so as to have a slope of 1/8" in 2" from a plane perpendicular to the face of the door. **2.** The factory-applied angle on the edge of gypsum board that creates a "vee" grooved joint when two pieces are installed together. **3.** A chamfer strip incorporated into concrete forms for columns or beams so as to eliminate sharp corners on the finished product.

**beveled end** The end of a pipe or fitting that has been prepared for welding.


beveled end

**beveled washer** A washer with a bevel on one side, and used mostly in structural steel work to provide a flat surface for the nut wherever a threaded rod or bolt passes through a beam at an angle.


beveled washer

**bevel joint** A carpentry joint in which two wood pieces meet at any angle except a right angle.

**bevel protractor** A graduated semicircular drafting device incorporating an adjustable pivoted arm and used for measuring and plotting angles.

**bevel siding** *See* **clapboard.**

**bevel square** A tool similar to a try square except that it has an adjustable blade that can be set at any angle.

**B-grade wood** The classification of a somewhat inferior grade of solid surface veneer that contains visible repair plugs and tight knots.

**biannual report** A report of the waste reduction and recycling activities of all hazardous waste generators. This report is published twice a year and is required by most states.

**bias** The fixed voltage applied to an electrode.

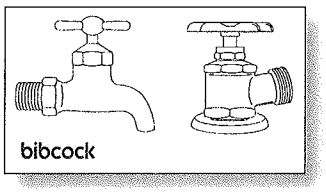
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# B

**bib** *See* **bibcock.**

**bibb** *See* **bibcock.**

**bibcock (bib, bibb, bib tap)** **1.** Any faucet or stopcock that has its nozzle directed downward. **2.** Any tap supplied by a horizontal pipe.




**bib tap** *See* **bibcock.**

**bib valve** Any standard bibcock or faucet equipped with a handle that is turned in one direction to initiate the flow of water, and turned in the opposite direction (screwed down) to shut off the flow by closing a washer disk onto a seating within the valve.

**bid** A complete signed proposal to perform work (or a designated portion) for a stipulated sum. A bid is submitted in accordance with the bidding documents.

**bid abstract (summary)** On a given project, a compilation of bidders and their respective bids, usually separated into individual items.

**bid assembly** The compiling of all estimates, prices, and sub-bids to produce a bid.

**bid bond** A form of security executed by the bidder or principal in conjunction with a surety to guarantee that the bidder will enter into a contract within a specified period of time and will furnish the required bonds for performance and labor and materials payment.

**bid call** A published announcement that bids for a specific construction project will be accepted at a designated time and place. *See also* **advertisement for bids.**

**bid date** A predetermined date for the receipt of bids, usually set by the architect and owner.

**bidder** An entity or person who submits a bid for a prime contract with the owner. A bidder is not a contractor on a specific project until a contract is signed between the bidder and the owner.

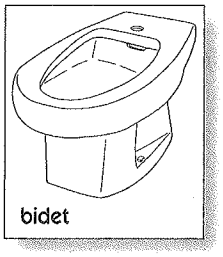
**bidders mailing list** A list of contractors to whom an owner or his representative sends invitations for bids for a particular project.

**bidding documents** Documents usually including advertisement or invitation to bidders, instructions to bidders, bid form, form of contract, forms of bonds, conditions of contract, specifications, drawings, addenda, and any other information needed to completely describe the work so that constructors can adequately prepare proposals or bids for the owner's consideration.

**bidding period** The period of time beginning with the issuance of bidding documents, and ending at the *bid time.*

**bidding requirements** Those instructions included in the bidding documents, such as the invitation or advertisement for bids, instructions to bidders, bid form, and bid bond.

**bidet** A low, basin-like bathroom fixture used for washing the lower part of the body.




**bid form** A form, furnished to the bidder, on which to submit his bid.

**bid guarantee** *See* **bid security.**

**bid letting** *See* **bid opening.**

**bid opening (bid letting)** A formal meeting held at a specified time and place at which sealed bids are opened, tabulated, and read aloud.

**bid package** All drawings, specifications, documents, estimates, paperwork, bid forms, and bid bonds relevant to a construction project. A contract is based on the bid package.

**bid price** The amount for which a bidder offers to perform work. (This sum is stated in the bid.)

**bid protest** A challenge by a disappointed bidder. On a government contract, this is submitted to the Contracting Officer or the GAO.

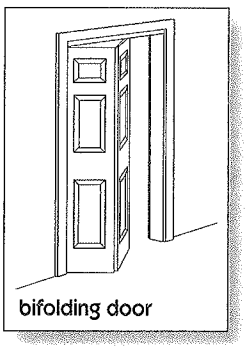
**bid results** The display of all the bids on a project.

**bid security (bid guarantee)** A bid bond or deposit submitted with a bid to guarantee to the owner that the bidder, if awarded the contract, will execute the contract within a specified period of time and will furnish any bonds or other requirements of the bid documents.

**bid shopping** Sharing contractor pricing information among potential bid or proposal respondents prior to award. The practice is considered unethical and sometimes illegal.

**bid time** The exact date and time for submission of bids, established by the owner or architect. *See also* **bid date.**

**bifolding door** A door that has two leaves, each consisting of two panels hinged together so that they fold on each other when the door is opened. One free edge of each leaf, or pair of panels, is hinged at a door jamb; the other edge is supported from and guided by an overhead track.



**bilateral contract** A contract in which both contracting parties are bound to fulfill obligations towards each other.

**billet** **1.** A steel bar forged or rolled from an iron ingot. **2.** A timber milled on three sides and left rounded on the fourth.

**billet steel** *See* **billet (1.)**.

**billing rate** The full value of a labor-hour, including all overhead, burden, and profit.

**bill of materials (BOM)** **1.** Set of physical elements required to build a project. **2.** Hierarchical view of the physical assemblies, subassemblies, and components needed to fabricate a manufacturing product. **3.** Descriptive and quantitative list of materials, supplies, parts, and components required to produce a designated complete end item of materials, assembly, or subassembly.*

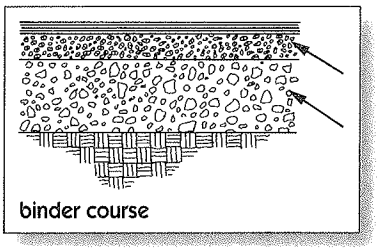
**bill of quantities (BOQ)** Descriptive and quantitative list of materials, supplies, parts, and components required to produce a designated complete end item of materials, assembly or subassembly. Typically includes a description of the associated "method of measurement." *

**bin** A storage container, usually for loose materials such as sand, stone, or crushed rock.

**binary code** In computer technology, a system of representing numbers or letters using the base-2 (binary) number system.

**binder** **1.** Almost any cementing material, either hydrated cement or a product of cement or lime and reactive siliceous materials. The kinds of cement and the curing conditions determine the general type of binder formed. **2.** Any material, such as asphalt or resin, that forms the matrix of concretes, mortars, and sanded grouts. **3.** That ingredient of an adhesive composition that is principally responsible for the adhesive properties that actually hold the two bodies together. **4.** In paint, that nonvolatile ingredient, such as oil, varnish, protein, or size, that serves to hold the pigment particles together in a coherent film. **5.** A stirrup or other similar contrivance, usually of small-diameter rod, that functions to hold together the main steel in a reinforced concrete beam or column.

**binder course (binding course)** **1.** A succession of masonry units between an inner and outer wall that serve to bind them. **2.** In asphaltic concrete paving, an intermediate course between the base and the surfacing material comprised of bituminously bound aggregate of intermediate size.


binder course

**binder warp** *See* **binding yarn**.

**binding agent** *See* **binder (4.)**.

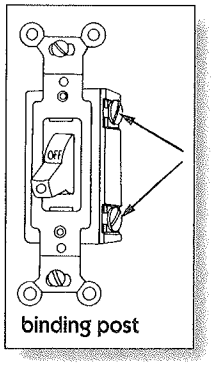
**binding beam** **1.** A timber or steel beam that carries the common joists in a double or framed elbow. **2.** Any timber that ties together various components of a frame.

**binding course** *See* **binder course**.

**binding joist** *See* **binding beam (1.)**.

**binding piece** A piece of lumber nailed between two parallel joists or beams to control lateral deflection.

**binding post** **1.** A set screw that holds a conductor against the terminal of a device or on equipment. **2.** A post attached to an electric wire, cable, or apparatus to facilitate a connection to it.

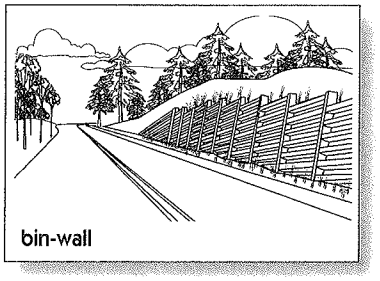


binding post

**binding rafter** *See* **purlin**.

**binding yarn (binder warp, crimp warp)** In carpeting, the natural or synthetic yarn incorporated lengthwise into the woven fabric to "bind" the tufts of pile securely.

**bin-wall** A retaining, supporting, or protective structure made from a group of connected bins filled with gravel or sand. May serve as an abutment, a pier, a retaining wall, or as a shield against gunfire or explosion.


bin-wall

**bioaccumulative** A substance that enters the body but is not removed through normal bodily functions.

**biodegradable** Capable of breaking down and decaying naturally and returning to the earth.

**biological remediation** The process of degrading a contaminant through a bioremediation process.

**biological wastewater management** Using natural or simulated wetlands to purify wastewater through biological processes.

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# B

**biomass** All of the living material in a given area; most often refers to vegetation.

**biometrics** Electronic methods of identifying and authenticating a person's identity through the confirmation of his/her physiological or sometimes behavioral characteristics. Techniques include fingerprint matching, iris and retinal scanning, facial recognition, hand geometry matching, voice recognition, and vein matching.

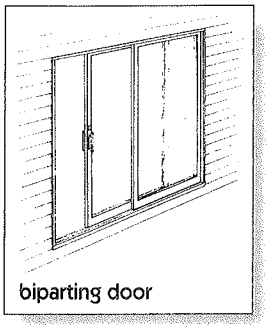
**biophilia** A field of research that studies the correlation between building ecology (specifically more "natural" environments that feature views to nature, daylight, and fresh air) and good health.

**bioremediation** The use of naturally occurring biological agents to degrade hazardous waste to a nonhazardous state.

**bioswale** A technology that uses plants and soil and/or compost to retain and cleanse runoff from a site, roadway, or other source.

**bioventing** A process that intentionally stimulates in-situ biological degradation; also called soil venting.

**biparting door** A sliding door with two leaves that slide in the same plane and meet at the door opening.


biparting door

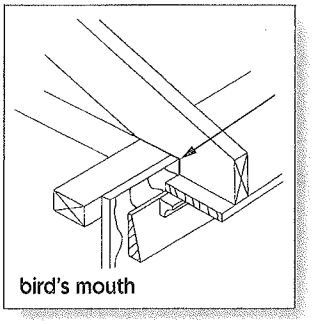
**birch** A strong, fine-grained hardwood commonly used in veneer, furniture, flooring, and turned wood products.

**birdbath** Slang for a depression in a driveway that catches water.

**bird screen** Wire mesh used to cover chimneys, ventilators, and louvers to prevent birds from entering buildings through these accesses.

**bird's-eye maple** Lumber from a sugar maple tree that has been cut to exhibit a wavy grain with many small circular or elliptical markings.

**bird's mouth** An L-shaped cut made in a diagonal timber, such as a rafter, so that it snugly fits against another timber, such as a wall plate.


bird's mouth

**bit** **1.** The tool that fits into a brace or drill and is rotated to bore a hole. **2.** On a soldering iron, the (usually copper) tip that heats the joint and melts the solder. **3.** That part of a key that is inserted into a lock and engages the tumblers or bolt. **4.** A binary digit; the smallest unit of computerized data.

**bit brace** *See* **handbrace.**

**bite** In glazing, the overlap between the innermost edge of the stop or frame and the outer edge of the light or panel.

**bit extension** A length of rod held at one end by the chuck of a brace and equipped at the other end for holding a bit. A bit extension permits the drilling of holes whose required depth is greater than the length of an ordinary bit.

**bit gauge (bit stop)** A piece of metal projecting outward from a bit to limit its depth of penetration.

**bit key (wing key)** Any key that has a bit.

**bitumen** Any of several mixtures of naturally occurring or synthetically rendered hydrocarbons and other substances obtained from coal or petroleum by distillation. Bitumen is incorporated in asphalt and tar and is used in road surfacing and waterproofing operations.

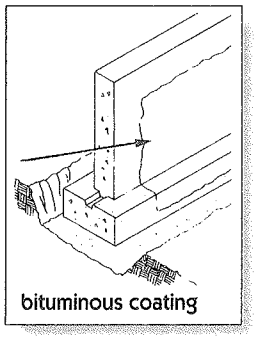
**bituminous** Composed of, similar to, derived from, relating to, or containing bitumen. The term bituminous is descriptive of asphalt and tar products.

**bituminous base course (black base)** Bituminously bound aggregate serving as a foundation for binder courses and surface courses in asphalt paving operations.

**bituminous binder course** *See* **binder course (2.).**

**bituminous cement** A class of dark substances composed of intermediate hydrocarbons. Bituminous cement is available in solid, semisolid, or liquid states at normal temperatures.

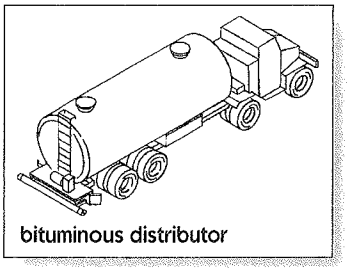
**bituminous coating** Any waterproof or protective coating whose base is a compound of asphalt or tar.


bituminous coating

**bituminous concrete** *See* **asphaltic concrete.**

**bituminous distributor** A tank truck equipped with a perforated spray bar through which heated bituminous

material, such as tar or road oil, is pumped onto the surface of a road.


bituminous distributor

**bituminous emulsion** **1.** A suspension of any globules of a bituminous substance in water or an aqueous solution. **2.** An invert emulsion of the above, i.e., a suspension of tiny globules of water or an aqueous solution in a liquid bituminous substance. This type of bituminous emulsion is applied to surfaces to provide a weatherproof coating. *See also* **emulsified asphalt.**

**bituminous felt** *See* **asphalt-prepared roofing.**

**bituminous fiber pipe** Drainage pipe made from a combination of coal tar and cellulose fiber.

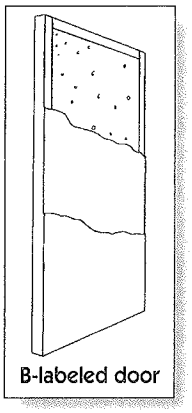
**bituminous grout** A mixture of bituminous material and fine sand or other aggregate that, when heated, becomes liquid enough to flow into place without mechanical assistance. Bituminous grout will air-cure after being poured into cracks or joints as a filler and/or sealer.

**bituminous leveling course** In paving operations, a course consisting of a mixture of asphalt and sand and used to level or crown a base course or existing deteriorating pavement prior to the application of a surface.

**bituminous macadam** A paving material comprising bituminously coated coarse aggregate.

**bituminous paint** A thick black waterproofing paint containing substantial amounts of coal tar or asphalt.

**B-labeled door** A door carrying a certification from Underwriters' Laboratories that it is of a construction that will pass the standard fire door test required for a Class B opening, and that it has been prepared (with cuts and reinforcement) to receive the hardware required for a Class B opening.


B-labeled door

**black base** *See* **bituminous base course.**

**black japan** A black, high-quality bituminous paint or varnish.

**black-light** **1.** A fluorescent lamp with a phosphor that emits black light. **2.** Electron-magnetic energy of the ultraviolet spectrum. Black light is used to excite fluorescent paints and dyes so that they become visible.

**black plate** Uncoated cold-rolled steel in 12" to 32" wide sheets.

**black steel pipe** Steel pipe that has not been galvanized.

**blacktop** *See* **asphaltic concrete.**

**black water** Wastewater from toilets and other plumbing fixtures that may be contaminated with bacteria or other harmful organisms.

**Blaine apparatus** Air-permeability apparatus for measuring the surface area of a finely ground cement.

**Blaine test** A method for determining the fineness of cement or other material based on the permeability to air of a sample prepared under specified conditions.

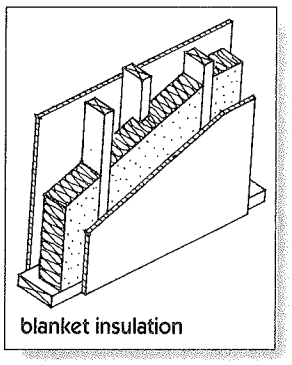
**blank door** **1.** A recess in a wall fitted with a fixed door, and used for architectural effect. **2.** A door that has been fixed in position to seal an opening.

**blanket** **1.** Soil or pieces of rock remaining or intentionally placed over a blast area to contain or direct the throw of fragments. **2.** Insulation sandwiched between sheets of fabric, plaster, or paper facing, used for protecting fresh concrete during curing.

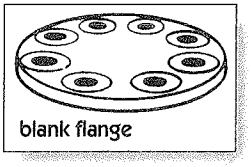
**blanket bond** A bond covering a group of persons, articles, or properties.*

**blanket encumbrance** A lien or mortgage levied proportionately on every lot in a given subdivision.

**blanket insulation** Faced or unfaced thermal or sound insulation, usually made of fiberglass, available in densities and thicknesses that allow it to conform to the various-shaped spaces it encounters in its many applications. Blanket insulation is the same as batt insulation, except that it is supplied in continuous rolls instead of sheets. *See also* **insulation blanket.**


blanket insulation

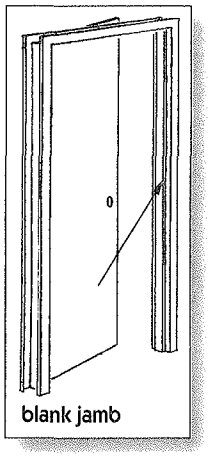
**blank flange (blind flange)** **1.** A flange in which the bolt holes are not drilled. **2.** A solid plate fitting used to seal off flow in a pipe.


blank flange

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# B

**blank jamb** A vertical component of a door frame as installed without any preparation for hardware installation.




**blank-off** A blank plate sealing off a sector of a diffuser to prevent airflow in the direction of the blank-off plate.

**blank wall (blind wall, dead wall)** A wall with no openings on its entire surface.

**blank window (blind window, false window)** **1.** A recess in a wall, having the appearance of a window. **2.** A window that has been sealed off but is still visible.

**blast** To loosen, crack, or move rock or hard-packed soil by the detonation of explosives.

**blast area** The area in which explosives loading and blasting operations are being conducted.

**blast cleaning** Any cleaning method in which air, liquid, abrasive, or some combination of these is applied under pressure.

**blast freezer** A freezer room in which air at subfreezing temperature is circulated by blower for the purpose of freezing foods quickly.

**blast-furnace slag** The nonmetallic waste that develops simultaneously with iron in a blast furnace. Consists essentially of silicates and aluminosilicates of calcium and other bases.

**blast heater** A unit heater containing a set of heat-transfer coils through which air is forced or drawn at high velocities.

**blast hole** A vertical hole with a diameter of at least 4" and drilled to accept a charge of blasting explosives.

**blasthole drill** A device that bores blast holes.

**blasting** The process of loosening rock or hard-packed material with explosives.

**blasting agent** A material or mixture consisting of a fuel and oxidizer used for blasting, but not classified as an explosive and in which none of the ingredients is classified as an explosive, provided the finished product cannot be detonated with a No. 8 blasting cap when confined. An example is a mixture of ammonium nitrate and fuel oil or coal.

**blasting cap** A metallic tube closed at one end, containing a charge of one or more detonating compounds, designed for and capable of detonation from the sparks or flame of a safety fuse inserted and crimped into the open end.

**blasting mat** A blanket of interwoven steel cable or interlocking steel rings placed over a blast to contain the resultant fragments.

**blast-resistant door** A steel door designed and fabricated to resist dynamic pressures of short duration up to 3,000 psi (21 MPA).

**BLCC** A National Institute of Standards and Technology (NIST) software program that performs life-cycle analysis of buildings and components, useful for comparing alternate designs that have higher initial costs, but lower operating costs over the life of the building.

**bleaching** Lightening, whitening, or removing color, either by chemical means, such as chlorine or oxalic acid, or by exposure to certain kinds of light.

**bleeder** A small valve used to drain fluid from a pipe, radiator, or small tank.

**bleeder pipe (bleeder tile)** A pipe (usually clay) placed to allow water from outside a basement retaining wall to pass through the foundation into drains within the building.

**bleeder tile** *See* **bleeder pipe.**

**bleeding** **1.** The autogenous flow of mixing water within, or its emergence from, freshly placed concrete or mortar. Bleeding is caused by the settlement of the solid materials within the mass. Also called *water grain.* **2.** In painting, seepage of resin or an undercoating of paint through the finish coat. **3.** In lumber, the exuding of sap or resin.

**bleeding rate** The ratio of the volume of water that is released by bleeding to the original volume of the paste. *See* **bleeding (1.).**

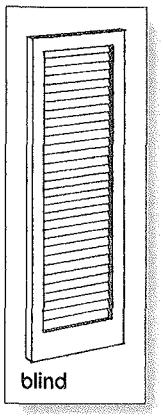
**bleed-through (strike-through)** Discoloration in the face plies of wood veneer caused by seepage of cement through the veneer.

**blended cement** A hydraulic cement consisting of an intimate and uniform blend of (a) granulated blast-furnace slag and hydrated lime, (b) Portland cement and granulated blast-furnace slag, (c) Portland cement and pozzolan, or (d) Portland-blast-furnace slag, cement, and pozzolan. Blended cement is produced by intergrinding Portland cement clinker with the other materials or by a combination of intergrinding and blending.

**blending valve** A three-way valve that permits the mixing required to obtain a desired liquid temperature.

**blind** **1.** Any panel, shade, screen, or similar contrivance used to block light

or inhibit viewing. **2.** An assembly of wood stiles, rail and wood slats, or louvers used in conjunction with doors and windows.

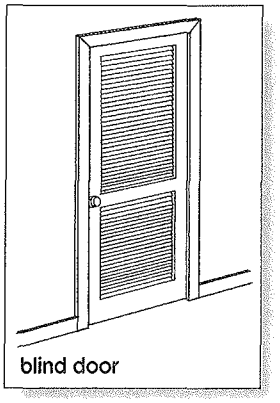

blind

**blind alley (cul-de-sac)** Any alley, road, or passageway that has only one end open for access or exit, and is closed at the other end so as to prohibit through traffic.

**blind attic** An attic that is rough-floored but unfinished.

**blind casing** The rough window frame or subcasing to which the trim is added.

**blind door** A door with a louver instead of glass.


blind door

**blind dovetail** *See* **secret dovetail.**

**blind drain** **1.** A trench filled with pervious materials such as crushed stone through which water flows toward an outlet. **2.** A drain that is not connected to a sewage system.

**blind flange** *See* **blank flange (2.).**

**blind header** **1.** A brick or other masonry unit that, when laid, gives the appearance of a header while in reality is somewhat less than a whole unit. A blind header can also be a half-brick laid where only one end is visible. **2.** A header brick concealed within a wall and functioning to bond adjacent tiers of bricks.

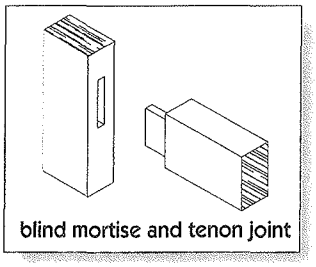
**blinding** **1.** Applying a layer of weak concrete or other suitable material to reduce surface voids or to provide a clean, dry working surface. **2.** The clogging of the openings in a screen or sieve by the material being separated. **3.** Applying small chips of stone to a freshly tarred surface.

**blind joint (bastard joint)** **1.** A masonry joint, such as that of a *blind header*, that is entirely concealed. **2.** In a double Flemish masonry bond, a thin joint between the adjacent ends of two stretchers. This joint bisects a header in the course directly below it.

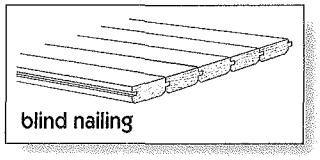
**blind miter** A joint fastened with dovetails and concealed pins.

**blind mortise (stopped mortise)** A mortise in, but not through, a member.

**blind mortise and tenon joint** A joint between a blind mortise and a stub tenon.

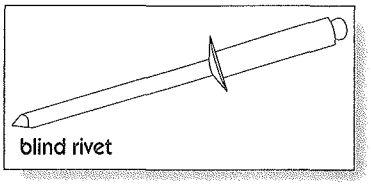

blind mortise and tenon joint

**blind nailing (concealed nailing, secret nailing)** Nailing performed so that the nailhead cannot be seen on the face of the work.


blind nailing

**blind pocket** A pocket in the ceiling at a window head. A blind pocket is used to conceal an object when not in use, such as a venetian blind in the raised position.

**blind rivet** A small-headed pin with an expandable shank used for joining light gauge metal.


blind rivet

**blind stop** A rectangular molding nailed between the outside trim and the outside sash of a window frame, which serves as a stop for storm sashes or screens.

**blind tenon** A tenon that fits a blind mortise.

**blind wall** *See* **blank wall.**

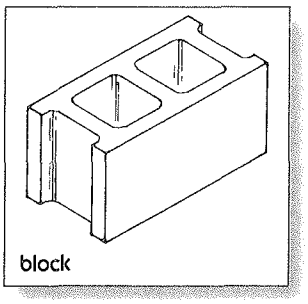
**blind window** *See* **blank window.**

**blister** **1.** Usually an undesirable moisture and/or air-induced bubble or bulge that often indicates that some kind of delamination has taken place. Blisters can occur between finish plaster and the base coat, between paint or varnish and the surface to which it has been applied, between roofing membranes or between membrane and substrate, between reinforcing tape and the gypsum board to which it has been adhered, etc. **2.** A tree disease characterized by the seepage of pitch onto the bark surface.

**bloated clay** *See* **expanded clay.**

# B

**block** **1.** A usually hollow concrete masonry unit or other building unit, such as *glass block*. **2.** A solid, often squared, piece of wood or other material. **3.** A piece of wood nailed between joists to stiffen a floor. **4.** Any small piece of wood secured to the interior angle joint to strengthen and stiffen it. **5.** A pulley and its enclosure. **6.** A solid piece of wood or other material used to fill spaces between formwork members. **7.** One of several small rectangular divisions within a city, bounded on each side by successive streets.


block

**block and tackle** A mechanical device comprised of pulley blocks and ropes or cables, and used to hoist or move heavy objects or loads.

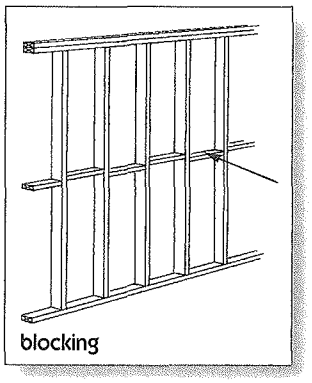
**block beam** In structural design, a flexural member composed of individual blocks joined together by prestressing.

**block bridging (solid bridging, solid strutting)** Short boards fixed between floor joists to stiffen the joists and distribute the load.

**blockholing** The breaking up of boulders by detonating a charge of explosives that has been loaded in a hole drilled into the rocks.

**block-in-course** A kind of masonry employed in heavy construction that consists of squared, hammer-dressed stones laid so that the joints are close and the course is not higher than 12".

**blocking** **1.** Small pieces of wood used to secure, join, or reinforce members, or to fill spaces between members. **2.** Small wood blocks used for shimming. **3.** A method of bonding two parallel or intersecting walls built at different times by means of offsets whose vertical dimensions are not less than 8" (20 centimeters). **4.** The sticking together of two painted surfaces when pressed together. **5.** An undesired adhesion between touching layers of material, such as occurs during storage. **6.** A situation in which all possible paths between two lines in a telephone network are in use, thereby preventing the lines from being interconnected.

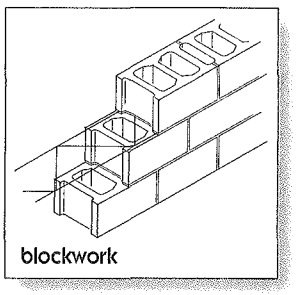

blocking

**blocking chisel** Any rugged, broad-edged stonemason's chisel.

**blocking course** In masonry, a finishing course, usually of stones, placed on top of a cornice.

**block plane** A plane with a low-angle cutting blade (about 20°) and designed to be held in one hand. A block plane is used primarily to clean end grain and miters.

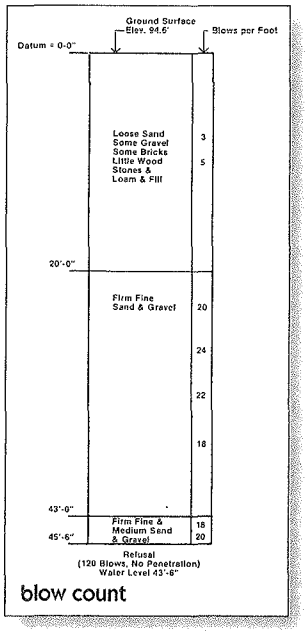
**blockwork** Masonry of concrete block and mortar.


blockwork

**bloom** **1.** A thin, hazy film on old paint, usually caused by weathering. **2.** A similar film on glass, resulting from general atmospheric deposition of impurities, or caused more by smoke, vapor, etc. **3.** Efflorescence on brickwork. **4.** A hazy or other kind of discoloration that sometimes occurs on the surface of rubber products. **5.** The term given to steel that has been reduced from an ingot by being rolled in a blooming mill to a dimension of at least 6" square; if further reduced, it becomes a *billet*.

**blowback** The difference between the pressure at which a safety valve opens and the pressure at which it closes automatically after the release of excess pressure has occurred.

**blow count** **1.** The number of times that an object must be struck to be driven into the soil to a desired or specified depth. **2.** In soil borings, the number of times a sample spoon must be struck to be driven 6" or 12". **3.** In pile driving operations, the number of times a pile must be struck to be driven 12". **4.** The number of blows per unit distance of advance.



blow count

**blower** A fan, especially one for heavy-duty use such as forcing air through ducts to an underground excavation.

**blowhole (gas pocket)** In concrete, a bug hole or small regular or irregular cavity, not exceeding 15 mm in diameter, resulting from entrapment of air bubbles in the surface of formed concrete during placement and compaction.

**blowing** *See* **popping.**

**blow joint** *See* **blown joint.**

**blown asphalt** *See* **asphalt, blown.**

**blown-in insulation** Insulation that is pumped or injected into walls, roofs, and other areas.

**blown joint (blow joint)** A plumbing joint sealed with the use of a blowtorch.

**blow-off** **1.** A discharge outlet on a boiler to allow for expulsion of undesirable accumulations of sediment and/or for drainage. **2.** In a sewer system, an outlet pipe for expelling sediment or water or for draining a low sewer.

**blowout** *See* **blow up.**

**blows (boils)** In dewatering, small springs that bubble up on the floor of an excavated pit caused by unrelieved aquifers. Blows can cause large soil movement if not attended to properly.

**blowtorch** A small, portable, gas-fired burner that generates a flame hot enough to melt soft metals. A blowtorch is used to melt lead in plumbing operations, heat soldering irons, and burn off paint.


blowtorch

**blow up (blowout)** Localized buckling or breaking up of rigid pavement as a result of excessive longitudinal pressure.

**blueboard** A water-resistant wall board finished with veneer plaster. Also used as a base for ceramic tile.

**blueprint** A negative image reproduction having white lines on a blue background and made either from an original or from a positive intermediate print. Today the term almost always refers to *diazo* prints, which are architectural or working drawings having blue or black lines on a white background.

**blue stain** A discoloration in the sapwood of some trees resulting from fungus growth. Does not affect the strength of the wood.

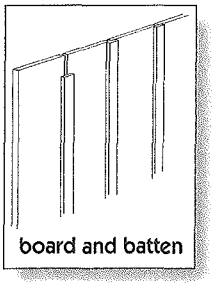
**blue stake** Visual markings on a jobsite made by a utility company to indicate locations of services.

**bluestone** A hard, fine-grained sandstone or siltstone of dark green to bluish-gray color that splits readily to form thin slabs. A type of flagstone, bluestone is commonly used for paving walkways.

**blue top** A grade stake driven into the ground that indicates the finished grade level.

**board** **1.** Lumber ranging from 4" to 12"(10 x 30 cm) wide and less than 2" (5 cm) thick. **2.** A box office seating chart or ticket board.

**board and batten** A type of siding in which the joints between vertically placed boards or plywood are covered by narrow strips of wood. *See also* **batten.**

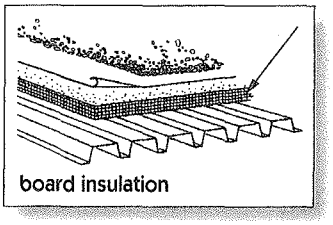

board and batten

**board and brace** A type of carpentry work consisting of boards grooved on both edges with thinner boards inserted between them and fitted into the grooves.

**board butt joint** A joint in shotcrete construction achieved by sloping the gunned surface to meet a 1" board laid flat.

**board foot** The basic unit of measurement for lumber. One board foot is equal to a 1" thick board, 12" in width and 1' in length. Thus, a 10' long, 12" wide, 1" thick piece contains 10 board feet. When calculating board feet, nominal sizes are assumed.

**board insulation (insulating board, insulation board)** Lightweight thermal insulation, such as polystyrene, manufactured in rigid or semi-rigid form, whose thickness is very small relative to its other dimensions. Board insulation offers little structural strength and is usually applied under a finish material, although some types are surface-finished on one side.


board insulation

**board knife** A knife with a replaceable blade that has a straight cutting edge. Used to secure or trim gypsum products.

**board measure** A system of measuring quantities of lumber, using one board foot as the basic unit of measurement.

**board rule** A measuring device used to find the number of board feet in a given board.

**board sheathing** A sheathing made of boards, usually tightly spaced, although open spacing may be used in some roofs.

# B

**boardwalk** A walkway made of boards or planks, often used as a promenade along a beach or shore.

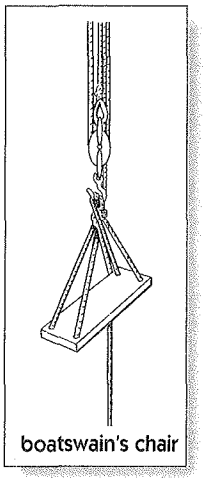
**boast** To roughly dress stone in preparation for carving.

**boasted work** A dressed stone surface with roughly parallel narrow chisel grooves of varying widths that do not extend across the entire face of the stone.

**boaster** A flat, steel, mason's chisel used to dress stone.

**boat spike** *See* **barge spike.**

**boatswain's chair** A seat supported by slings and attached to a suspended rope. Designed to accommodate one worker in a sitting position.


boatswain's chair

**bob** *See* **plumb bob.**

**bobbin** A tool used to shape lead pipe.

**bodily injury** Any form of physical injury, sickness, or disease that is experienced by a person.

**body** **1.** The principal volume of a building, such as the nave of a church. **2.** The load-carrying part of a truck.

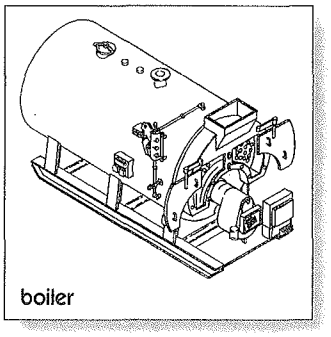
**body coat** In painting, an intermediate coat of paint applied after the priming coat but before the finishing coat.

**bogie (tandem)** **1.** A two-axial driving unit in a truck. **2.** A stage hanger for an overhead track from which scenery or flats are suspended.

**boil** **1.** A wet run of material at the bottom of an excavation. **2.** A swelling in the bottom of an excavation due to seepage. *See also* **blows.**

**boiled linseed oil** Linseed oil to which manganese, lead, or cobalt salts have been added so that it will harden rapidly when applied in thin layers.

**boiler** A closed vessel in which a liquid is heated or vaporized, either by application of heat to the outside of the vessel, by circulation of heat through tubes within the vessel, or by circulating heat around liquid-filled tubes in the vessel.


boiler

**boiler compound** A clear, concentrated liquid added to water in boilers to control hardness, corrosion and to reduce the formation of boiler scale.

**boiler economizer** The last pass of boiler tubes or a heat exchanger located in the flue pipe that extracts some of the heat from the flue gases before they are vented to the atmosphere.

**boiler horsepower** **1.** Boiler horsepower is equal to the evaporation of 34.5 lbs of water per hour from and at 212°F, 33 475 Btu/hour. **2.** The largest rating obtained by dividing the square feet of a boiler's surface by 10.

**boiler jacket** The thermal insulation surrounding a boiler. A more aesthetically acceptable enclosure, often made of metal, usually covers the jacket.

**boiler plate** **1.** Medium-hard steel from which boilers are fabricated. The steel is rolled into plates whose thicknesses may vary from 0.25" to 1.5". **2.** Standard text used in documents such as contract agreements.

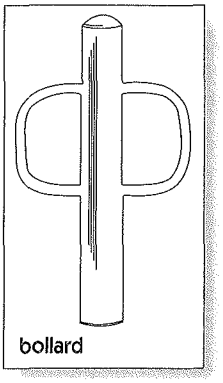
**boiler rating** The heating capacity of a boiler, expressed in Btus per hour. The boiler rating should not be confused with the horsepower rating. *See also* **boiler horsepower.**

**boiler scale** Disintegrated bits of steel plate from a boiler's interior lining, which flake and fall to the boiler floor and should be removed periodically.

**boiler steel** A medium-hard steel that is rolled to become boiler plate.

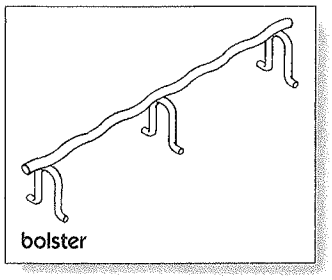
**boiserie** Floor-to-ceiling interior wood paneling, usually enhanced by carving, gilding, or painting, but seldom by inlaying.

**bollard** **1.** A series of short posts set to prevent vehicular access or to protect property from damage by vehicular encroachment. A bollard is sometimes used to direct traffic. **2.** A post on a slip or wharf for securing mooring or docking lines.

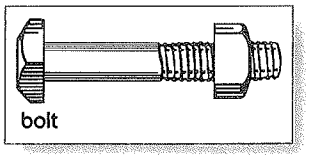

bollard

**bolster** **1.** In concrete, an individual or continuous support used to hold reinforcing bars in position. Usually used in slab work. **2.** A short wood or steel member positioned horizontally on top of a column to support beams

or girders. **3.** A mason's blocking chisel. **4.** A piece of wood, generally a nominal 4" in cross section, placed between stickered packages of lumber or other wood products to provide space for the entry and exit of the forks of a lift truck.

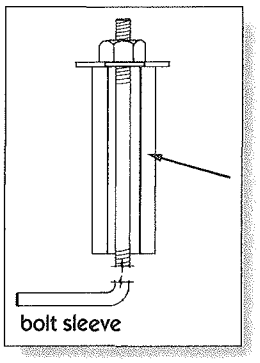



**bolt** **1.** An externally threaded, cylindrical fastening device fabricated from a rod, pin, or wire, with a round, square, or hexagonal head that projects beyond the circumference of the shank to facilitate gripping and turning. A threaded nut fits onto the end of a bolt and is tightened by the application of torque. **2.** The protruding part of a lock that prevents a door from opening. **3.** Raw material used in the manufacture of shingles and shakes. A wedge-shaped split from a short length of log that is taken to a mill for manufacturing. **4.** Short logs to be sawn for lumber or peeled for veneer. **5.** Wood sections from which barrel staves are made. **6.** A large roll of cloth or textile. **7.** A single package containing two or more rolls of wallpaper.




**bolted pressure switch** A switch that uses movable blades and stationary contacts with arcing contacts to make and break switching action.

**bolt sleeve** A tube surrounding a bolt in a concrete wall to prevent the concrete from sticking to the bolt and acting as a spreader for the formwork.

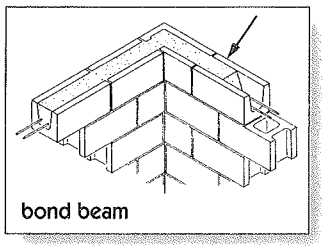



**bona fide bid** A good faith bid that is essentially complete and complies with the bidding documents. Must be signed by a properly empowered party.

**bond** **1.** The adhesion and grip of concrete or mortar to reinforcement or to other surfaces against which it is placed, including friction due to shrinkage and longitudinal shear in the concrete engaged by the bar deformations. **2.** The adhesion of cement paste to aggregate. **3.** Adherence between plaster coat or between plaster and a substratum produced by adhesive or cohesive properties of plaster or supplemental materials. **4.** In masonry, the connection between stones, bricks, or other materials formed by laying them in an overlapping arrangement, one on top of another, to form a single wall mass. **5.** The arrangement of, or pattern formed by, the exposed faces of laid masonry units. **6.** The layer of glue in a plywood joint. **7.** A written document, given by a surety in the name of a principal to an obligee to guarantee a specific obligation. *See also* **bid bond, completion bond, fidelity bond, labor and materials payment bond, performance bond, statutory bond,** *and* **surety bond.**

**bond area** The area of interface between two elements across which adhesion develops or may develop, as between concrete and reinforcing steel.

**bond beam** A horizontally reinforced concrete or concrete masonry beam built to strengthen and tie a masonry wall together. A bond beam is often placed at the top of a masonry wall with continuous reinforcing around the entire perimeter.

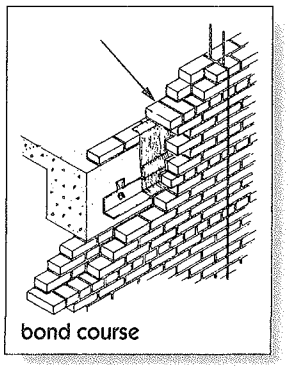



**bond blister** A blister that sometimes forms between the base material and the coating, particularly on metal-clad products.

**bond breaker** A material used to prevent adhesion between freshly placed concrete and the substrate.

**bond coat** **1.** That coat of plaster that is applied over masonry and is bonded to it. **2.** A primer coat of paint or sealer.

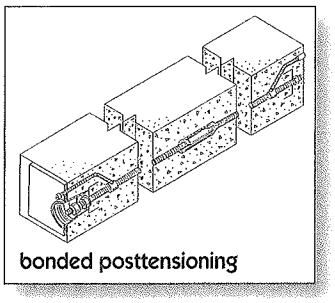
**bond course** In masonry, the course consisting of units that overlap more than one wythe of masonry.




**bonded member** A prestressed concrete member in which the tendons are bonded to the concrete either directly (pretensioned) or by grouting (posttensioned).

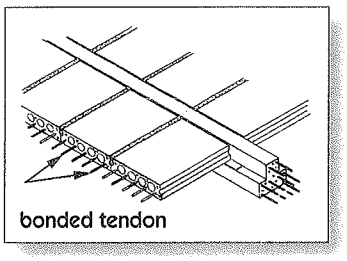
# B

**bonded posttensioning** A process in posttensioned construction whereby the annular spaces around the tendons are grouted after stressing in such a way that the tendons become bonded to the concrete section.


bonded posttensioning

**bonded roof** A type of roofing guarantee offered by the manufacturer that may or may not be purchased by the owner, and that covers materials and/or workmanship for a stated length of time.

**bonded tendon** A prestressing tendon that is bonded to the concrete either directly or through grouting.


bonded tendon

**bonder (header)** A masonry unit that ties two or more wythes of a wall together by overlapping.

**bonderizing** Treatment applied to galvanized steel to ensure paint adherence generally consisting of phosphoric acid and water bath.

**bond face** That face of a joint to which a field-molded sealant is bonded.

**bond header (throughstone)** A bondstone or masonry unit that extends through the entire thickness of a wall.

**bonding** In electrical circuitry, the connecting or joining of metal parts to form an electrical conductive path. Prevents the accumulation of static electricity and assures the safe conduction of electrical current.

**bonding agent** A substance applied to a suitable substrate to create a bond between it and a succeeding layer, as between a subsurface and a terrazzo topping or subsequent application of plaster.

**bonding capacity** The maximum total contract value a bonding company will extend to a contractor in performance bonds. The total bonding capacity is the sum of all contracts being bonded.

**bonding company** A firm providing a surety bond for work to be performed by a contractor, payable to the owner in case of default of the contractor. The bond can be for work performance or for payment for materials and labor.

**bonding conductor** *See* **bonding jumper**.

**bonding jumper (bonding conductor)** In a circuit, the connection between parts of a conductor to maintain the ampacity requirements of the circuit.

**bonding layer** A thin layer of mortar that is often used when a new concrete slab is placed over an existing hardened concrete surface. The bonding layer is spread before placing concrete for the new slab.

**bond length (development length)** The length of embedment of reinforcing steel in concrete required to develop the design strength.

**bond plaster** A thin coat of specially formulated gypsum plaster applied as a bonding coat to a concrete surface before applying succeeding coats of plaster.

**bond prevention** **1.** Procedures whereby specific tendons in pretensioned construction are prevented from becoming bonded to the concrete for a predetermined distance from the ends of flexural members. **2.** Measures taken to prevent adhesion of concrete or mortar to surfaces against which it is placed.

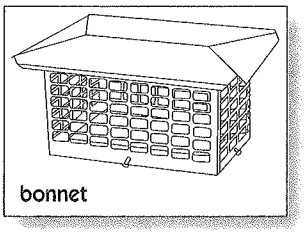
**bondstone** In stone facing, a stone that extends into the backing to tie the facing wall with the backing wall. *See also* **bonder**.

**bond strength** **1.** Resistance to separation of mortar and concrete reinforcing steel and other materials with which it comes in contact. **2.** Collective expression of all forces, such as adhesion, friction due to shrinkage, and longitudinal shear in the concrete engaged by the bar deformations that resist separation.

**bond stress** **1.** The force of adhesion per unit area of contact between two bonded surfaces. **2.** Shear stress at the surface of a reinforcing bar, preventing relative movement between the bar and the surrounding concrete.

**bond timber** Horizontal timbers placed in a masonry wall to bond it together and provide a base to which lath, battens, and other wood members can be nailed.

**bonnet** A wire mesh cover over the top of a chimney or vent. *See also* **chimney cap**.


bonnet

**bonus and penalty clause** A contract clause assigning payment of a bonus to the contractor when completing the work before a stipulated date. Also contains provision for a charge against the contractor should the work not be completed by this date.

**bonus density** An increase in the number of lots or units that would normally be allowed under a specific zoning

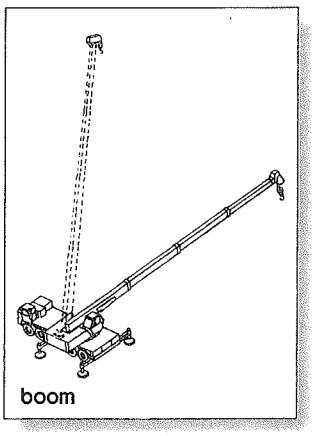
regulation, based on the agreement that the bonus density is being granted for a public good (e.g., the bonus units will be sold at a lower price).

**bonus provisions** Provisions in the contract between the owner and the contractor for granting monetary rewards to the contractor for achieving some savings that benefit the owner. For example, a stipulated bonus may be offered for early completion of the work, or the achievement of some savings in construction cost.

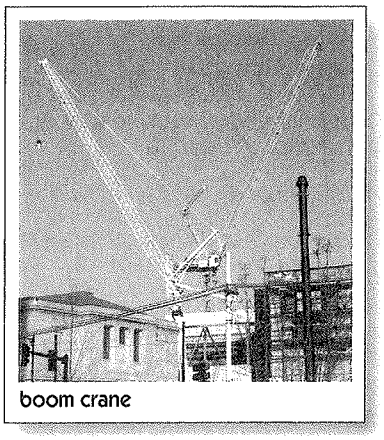
**book matching (herringbone matching)** Consecutive flitches of veneer from the same log, laid side by side so that the pattern formed is almost symmetrical from the common center line. Book matching is used in decorative paneling and cabinetry.

**book value (carrying value, undepreciated value)** The net amount at which an asset is carried on the books or reported in the financial statements; the asset's cost at acquisition, reduced by the amount of accumulated depreciation on the asset.

**boom** A long, straight member, hinged at one end, and used for lifting heavy objects by means of cables and/or hydraulics. Booms can be of lattice construction or heavy tubular material.


boom

**boom crane** A crane with a long slender boom, usually of lattice construction.


boom crane

**boom hoist** A lifting device with a vertical mast and an inclined boom commonly used to hoist materials in multistory building construction.

**boom jack** A short member on which sheaves are mounted to guide cables to a working boom on a crane or derrick.

**boost-buck transformer** A device that raises or lowers the voltage of a supply line.

**booster** Any device that increases the power, force, or pressure produced by a system.

**booster compressor** A compressor that increases the productivity of the primary compressor by discharging into its suction line.

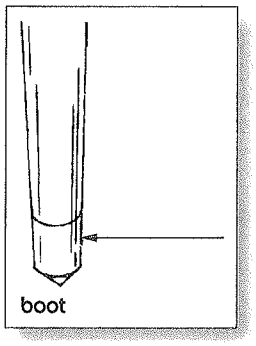
**booster fan** An auxiliary fan that increases the air pressure in a system, such as an HVAC system, during certain peak requirement times.

**booster heater** In plumbing, an auxiliary heater installed in a hot water piping system to increase the heat in one section.

**booster pump** An auxiliary pump installed in a system to increase or maintain the pressure or flow.

**booster transformer** A transformer installed to increase the voltage in an electric circuit.

**boot** **1.** A term used to describe sleeves or coverings in many construction trades, such as a boot for pile driving, a boot for passing a pipe through a roof, and a boot for cold air return to a furnace casing. **2.** The money that compensates for differences in value in a 1031-exchange. Boot is taxable even though the exchange may be tax free.


boot

**bore** **1.** The inside diameter of a pipe, valve, fitting, or other hollow tubular object. **2.** The circular hole left by boring.

**bored latch** A door latch manufactured to fit into a circular hole in a door.

**bored lock** A lock manufactured to fit into a circular hole in a door.

**bored pile** *See* **cast-in-place pile.**

**bored well** A water well constructed by drilling a hole with an auger and then inserting a casing.

**borehole** *See* **boring.**

**borescope** A fiber optic device that allows for nondestructive investigation of an area with restricted access, such as a housed mechanical assembly or a cavity inside a wall. Often used with a still or video camera.

**boring (borehole)** A hole drilled in the ground to obtain samples for subsoil investigation. Borings are important in determining the load-bearing capacity of the soil and the depth of the water table.

# B

**borrow (borrow fill material)** In earth moving, fill acquired from an excavation source outside the required cut area.

**borrowed light** A glazed unit in an interior partition to allow light to enter from an adjoining room or passageway.

**borrow fill material** *See* **borrow.**

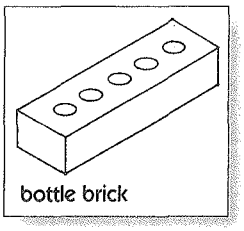
**borrow pit** An excavation site, other than a designated cut area, from which material is taken for use nearby.

**boss** **1.** A projecting block, usually ornamental, placed at the exposed intersection or termination of ribs or beams of a structure. **2.** The enlarged portion of a shaft. **3.** In masonry, a stone that is left protruding from the surface for carving in place at a later time. **4.** A projection left on a cast pipe fitting for alignment or for gripping with tools.

**Boston hip (Boston ridge, shingle ridge finish)** **1.** A method of finishing a ridge or hip on a flexible shingled roof in which a final row of shingles is bent over the ridge or hip with a lateral overlap. **2.** A method of finishing a ridge or hip on a rigid-shingled slate or a tile roof in which the last rows on either side overlap at the hip or ridge. Alternate courses overlap in opposite directions.

**Boston ridge** *See* **Boston hip.**

**bottle brick** A hollow brick shaped so that it can be mechanically connected to adjoining bricks. In each brick there is also a void available for inserting reinforcing steel, if required.


bottle brick

**bottom arm** A long strap secured to the bottom rail of a door to attach it to a floor closer or pivot hinge.

**bottom bolt** A vertically mounted bolt on the bottom of a door that slides into a socket in the floor.

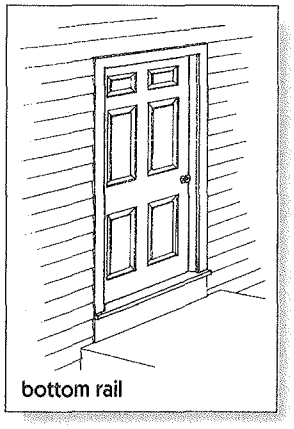
**bottom car clearance** The vertical distance between the lowest point of any mechanism attached to the underside of an elevator car and the floor of the elevator pit.

**bottom chord** The lowest longitudinal member of a truss. It is usually horizontal, but may be at an incline depending on truss design.

**bottom dump** A type of trailer with gates on the bottom, used to haul heavy materials such as sand, gravel, and crushed stone. A bottom dump is best used when material is to be distributed in layers on an embankment.

**bottom lateral bracing** In truss framing, the members interconnecting the bottom chords.

**bottom rail** The lowest bottom member of a door. The bottom rail connects the stiles.


bottom rail

**boundary survey** A closed diagram (mathematically) depicting the complete outer boundary of a site. Shows dimensions, compass bearings, and angles. A licensed land surveyor's signed certification is required, and a *metes and bounds* or other written description may be included.

**bow** The longitudinal deflection of a piece of lumber, pipe, rod, or the like, usually measured at its center.

**bowled floor** A floor that slopes downward toward a central point, as in an amphitheater.

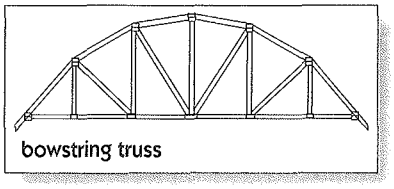
**bow saw** A hand tool with a thin saw blade held in place between the two ends of a bow-shaped piece of metal.

**bowstring beam** *See* **bowstring truss.**

**bowstring girder** *See* **bowstring truss.**

**bowstring roof** A roof supported by bowstring trusses and fabricated in the shape of a bow.

**bowstring truss (bowstring beam, bowstring girder)** A structural roof truss having a bow-shaped top cord and a straight or cambered bottom cord.


bowstring truss

**bow window** **1.** A window that projects from a wall in the shape of an arc. **2.** A rounded bay window.

**box bolt** A short piece of rectangular stock that slides inside a casing mounted on the edge of a door. The stock slides into a recess in the door frame to secure the door.

**box casing** In finished carpentry, the inner lining, as in a cabinet.

**box chisel** A special chisel used to pry open wooden boxes.

**box column** A built-up, hollow column, usually square in shape, used in porch construction.

**box culvert** A rectangular-shaped, reinforced concrete drainage structure either cast in place or precast in sections.

**box drain** A small rectangular-shaped drainage structure usually constructed

of brick or concrete. It may be covered or have an open grate on top.

**boxed mullion** A hollow mullion in a window frame built up from boards so as to appear solid; houses sash weights.

**box frame** A window frame containing hollow sections on either side in which the sash weights are suspended.

**box gutter** A rectangular-shaped wooden roof gutter recessed in the eaves to conceal them and to protect them from falling foliage.

**box-head window** A window framed with a pocket in the head so that the sash can slide into it to provide maximum ventilation.

**boxing** **1.** Enclosing or casing, as in window frame construction. **2.** In welding, continuing a principle fillet weld around a corner of the member. **3.** Pouring paint back and forth from one pail to another to ensure a uniform consistency.

**box lewis** A device used for hoisting heavy masonry units. Consists of metal components, some or all of which taper upward, and are inserted into a downward flaring hole (lewis hole) cut in the top of the masonry.

**box nail** A nail with a head similar to a common nail of the same penny designation, but having a shank smaller in diameter.

**box out** To make a form that will create a void in a concrete wall or slab when the concrete is placed.

**box scarf** A joint in a rectangular-shaped roof gutter formed by beveling the ends of the two pieces to be joined.

**box sill** A common method of frame construction using a header nailed across the ends of floor joists where they rest on the sill.

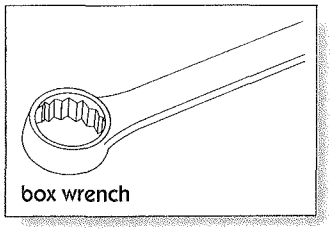
**box stair** An interior staircase in which the edges of the treads and risers are not revealed but closed in with a closed stringer. A box stair typically has a partition on both sides.

**box stoop** An elevated platform at the entrance to a building with stairs running parallel to the building. The underside of the platform and stairs is enclosed.

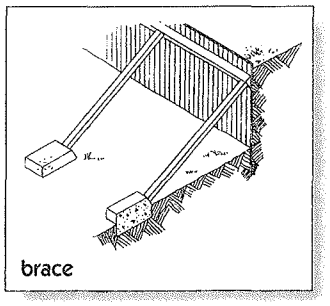
**box strike** A fastening on a door frame (a strike) with an enclosed recess to receive a lock bolt.

**boxwood** A hard, dense, light-colored wood used for turned work and inlay.

**box wrench** A mechanic's hand tool with a closed socket, usually at each end, that fits over the head of a bolt or a nut.


box wrench

**brace (bracing)** **1.** A diagonal tie that interconnects scaffold members. **2.** A temporary support for aligning vertical concrete formwork. **3.** A horizontal or inclined member used to hold sheeting in place. **4.** A hand tool with a handle, crank, and chuck used for turning a bit or auger.


brace

**braced excavation** Excavation in which the perimeter is supported by sheeting.

**braced frame (brace frame, brace framing)** A wooden structural framing system in which all vertical members, except for corner posts, extend for one floor only. The corner posts are braced to the sill and plates.

**brace frame** *See* **braced frame.**

**brace framing** *See* **braced frame.**

**brace pile** *See* **batter pile.**

**brace rod** A round steel member used as a tension brace, especially to transfer wind or seismic loads.

**brace scale** *See* **brace table.**

**brace table (brace scale)** **1.** The markings on a carpenter's square indicating the length of the hypotenuse for right triangles with various length legs. **2.** A brace table used by carpenters to determine the length to cut braces.

**bracing** *See* **brace.**

**bracket** An attachment projecting from a wall or column used to support a weight or a structural member. Brackets are frequently used under a cornice, a bay window, or a canopy.

**bracket pile** A steel H pile driven next to an existing foundation. A steel bracket is welded to the pile and extends under and supports the foundation.

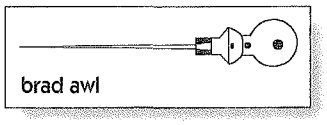
**bracket saw** A handsaw with a narrow blade attached to the open ends of a three-sided rectangular holder. Used for cutting curved shapes.

**bracket scaffold (bracket staging)** Scaffolding supported by brackets that are temporarily attached to the side of a building or column. Bolts or inserts are usually left in the previous construction to attach the brackets. This method saves the expense of shoring from the ground up.

**bracket staging** *See* **bracket scaffold.**

**brad** A slender, smooth, wire nail with a small deep head. Used for finish carpentry work.

**brad awl** A carpenter's tool that looks like an ice pick and is used to make holes for brads and wood screws.


brad awl

# B

**brad pusher** A special tool used to grip and insert a brad in an inaccessible location.

**brainstorming** Process in which a group of people, selected for their creativity and knowledge, are brought together to seek solutions to particular problems or simply to find better ways of meeting objectives.*

**brake** **1.** A device for slowing, stopping, and holding an object. **2.** A machine used to bend sheet metal.

**brake drum** A rotating cylinder with a machined surface (either internal or external) on which a brake band or shoe presses in order to slow, stop, or hold an object.

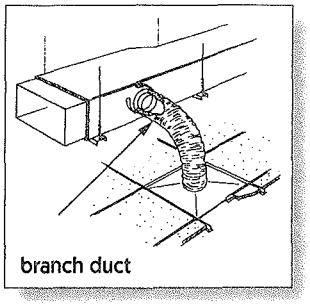
**brake horsepower** The horsepower output of an engine or other mechanical device, as measured at the flywheel or belt by applying a mechanical brake and measuring the work per unit time.

**branch** In plumbing, an inlet or outlet from the main pipeline, usually at an angle to the main pipeline. The pipe may be a water supply, drain, vent stack, or any other pipe used in a mechanical piping system.

**branch circuit** A portion of the electric system that extends wiring beyond the fuse or other device that is protecting that circuit.

**branch drain** A drainpipe from the plumbing fixtures or soil line of a building that runs into a main line.

**branch duct** In HVAC, a smaller duct that branches from the main duct. At each branch duct, the cross-sectional area of the main duct is reduced.



branch duct

**branch ell** A sharply bent pipe fitting with its back outlet in line with a run outlet.

**branch interval** A length of soil stack or waste stack, usually one story high, within which all branches from one floor are connected.

**branch sewer** A sewer that receives sewage from a relatively small area and is connected to a main sewer or manhole.

**branch vent** **1.** A vent connecting one or more individual vents to a vent stack or stack vent. **2.** A vent pipe to which are connected two or more pipes that vent plumbing fixtures.

**brander** To nail furring strips to girders, joists, or walls in preparation for installing plaster or another finish material.

**brand name or equal** A product description that identifies one or more commercial products by brand name and sets forth those characteristics of the named product that are essential to the owner's needs.

**brashy** A condition of wood characterized by coarse, conspicuous annual rings. Such wood has a low resistance to shock and has a tendency to fail abruptly across the grain without splintering.

**brass** **1.** A copper alloy with zinc as the principal alloying element. **2.** Slang for plumbing fittings and faucets, regardless of their actual material of composition.

**braze** To join two pieces of metal by soldering them together with a nonferrous metal such as brass.

**brazed joint** In plumbing, a fitting made watertight and gastight by brazing.

**Brazilian rosewood** A dark-colored hardwood used for turned articles, paneling, and veneers.

**breach of contract** The failure, without legal cause, to perform some contractually described obligation in accordance with the terms of the contract.

**breakdown** A term used to define the separation of a project or an estimate into parts.

**breakdown structure** A hierarchical structure by which project elements are broken down, or decomposed.*

**breakdown voltage** Voltage that causes the failure of existing insulation, permitting the flow of electric current.

**breaker** *See* **crusher.**

**breaker ball (wrecking ball)** *See* **headache ball.**

**breaker panel** Refers to the main electrical box and its circuit breakers, that distribute electricity to each branch circuit.

**breakeven chart** A graphic representation of the relation between total income and total costs for various levels of production and sales indicating areas of profit and loss.*

**breakeven point** **1.** In business operations, the rate of operations output, or sales at which income is sufficient to equal operating costs or operating cost plus additional obligations that may be specified. **2.** The operating condition, such as output, at which two alternatives are equal in economy. **3.** The percentage of capacity operation of a manufacturing plant at which income will just cover expenses.*

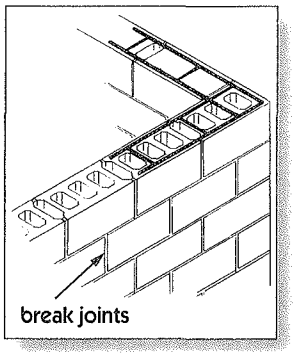
**break-in** In brick masonry, a void or socket to accept a timber.

**breaking load** The smallest load, determined by test, that would cause the failure of a structural system.

**breaking radius** The limiting radius of curvature to which a material can be bent without breaking.

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**break joints (staggered joints)** The arrangement of modular structural units, such as masonry or plywood sheathing, so that the vertical joints of adjacent units do not line up.



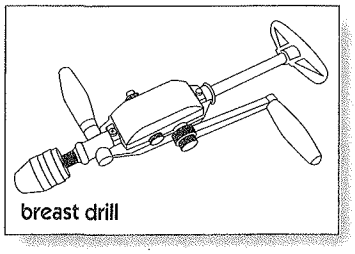

**break lines** Lines used in drafting to omit part of an object so that the representation will fit on a drawing.

**breakout schedule** Jobsite schedule, generally in bar chart form, used to communicate day-to-day activities to all working levels on the project as directed by construction manager. Detail information with regard to equipment use, bulk material requirements, and craft skills distribution, as well as the work to be accomplished, forms content of schedule. Issued on a weekly basis with a two to three week look ahead from the issue date.*

**breast** **1.** The part of a wall that extends from the window stool to the floor level. **2.** A projecting part of a wall, such as at a chimney.

**breast board** A system of movable sheeting used to retain the face of an excavation, especially in tunnel work.

**breast drill** A hand-operated rotary drill that has an attachment for applying pressure with the chest. Carpenters use a breast drill for drilling horizontal holes in wood.




**breast lining** Interior wooden paneling applied between the window stool and the baseboard.

**breast molding** **1.** The molding at a windowsill. **2.** A paneling between the windowsill and the floor.

**breastsummer** **1.** A large supporting horizontal timber that spans a wide opening in an external wall, usually the breast of the wall.

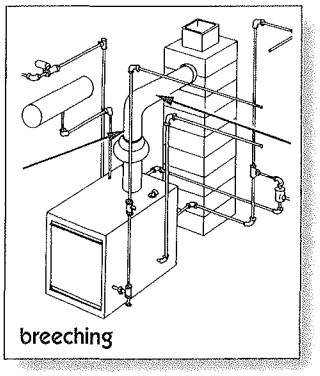
**breast timber** *See* **wale.**

**breast work** **1.** The masonry work of a chimney breast. **2.** The parapet of a building.

**breather** A mechanism that allows air to move in and out of a container to maintain even atmospheric pressure.

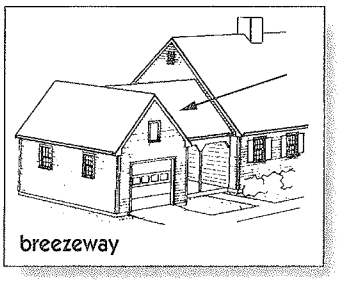
**breech fitting** A Y-shaped fitting in ductwork or pipework.

**breeching** The exhaust duct or pipe that leads from a furnace or boiler to the stack or chimney.



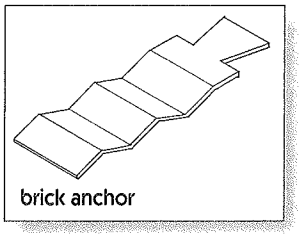

**breeze brick** A brick made from pan breeze and Portland cement, often laid into a brick wall because of its good nail-holding properties.

**breezeway** A covered passageway open at both ends, which connects two buildings or two portions of a building.




**brick** A solid masonry unit of clay or shale, formed into a rectangular prism while plastic, and then burned or fired in a kiln. *See also* **adobe brick, arch brick, beam brick, bottle brick, breeze brick, buff standard brick, building brick, economy brick, engineered brick, facing brick, fire brick, floor brick, gauged brick, jumbo brick, Norman brick, paving brick, Roman brick, salmon brick, salt-glazed brick, SCR brick, sewer brick, soft-mud brick,** *and* **stiff-mud brick.**

**brick anchor** Corrugated fasteners designed to secure a brick veneer to a structural concrete wall. *See also* **reglet** *and* **dovetail anchor.**




**brick and brick** A method of laying brick so that units touch each other with only enough mortar to fill surface irregularities.

**brick-and-half wall** A brick wall that has the thickness of one header plus one stretcher.

**brick-and-stud work** *See* **nogging.**

**brickbat** *See* **bat (1.).**

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# B

**brick beam** A lintel made of bricks held in place with iron straps.

**brick cement** A waterproofed compound used in masonry and stucco work.

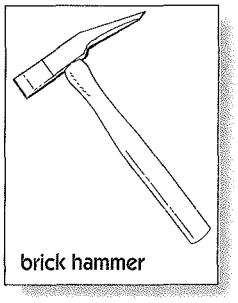
**brick closure** Short pieces of brick used in corners or jambs to maintain the pattern.

**brick facing** *See* **brick veneer.**

**brick gauge** A standard height for brick courses when laid, such as four courses in a height of 12".

**brick grade** A durability rating given to brick. SW, MW, and NW ratings refer to a brick's ability to withstand severe weathering, moderate weathering, and negligible weathering, respectively.

**brick hammer** A hand tool used by masons for breaking and dressing brick. One end of the head is square and flat and the other end is shaped like a chisel.




**bricklayer's square scaffold** A scaffold composed of framed wood squares that support a platform. A bricklayer's square scaffold is limited to light- and medium-duty.

**brick ledge** Refers to the portion of a foundation wall where brick (veneer) rests.

**brick molding** The wood molding covering between the brick masonry and a door or window frame.

**brick nogging** *See* **nogging.**

**brick set** A chisel-like tool used with a brick hammer to make exact cuts in brick.

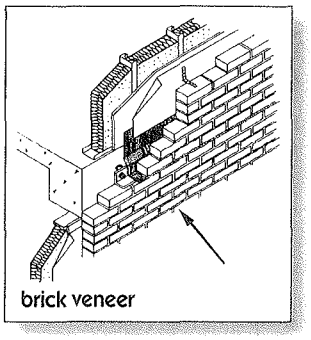
**brick tie** A small metal fastener used to join brick veneer and wall sheeting.

**brick trimmer** A brick arch supporting a fireplace hearth or shielding a wood trimming joist from flames in front of a fireplace.

**brick trowel** A hand trowel with a pointed handle used to pick up mortar from a mortar tub and place and spread it in the joints.

**brick type** A rating given to facing brick based on its tolerance, chippage, and distortion. FBS, FBX, and FBA are designations for solid brick; HBS, HBX, and HBB are for hollow brick.

**brick veneer** A facing of brick laid against a structural wall but not bonded to the wall, and which bears no load other than its own weight.




**brick whistle** **1.** A weep hole in a brick wall. **2.** A small hole in a mortar joint at the base of a wall for draining any moisture that penetrates the wall.

**bridge** **1.** A structure built to span an obstruction or depression and capable of carrying pedestrians and/or vehicles. **2.** In an electric blasting cap, the wire that heats with current and ignites the charge. **3.** The temporary structure built over a sidewalk or roadway adjacent to a building to protect pedestrians and vehicles from falling objects.

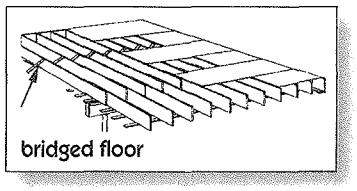
**bridgeboard** A notched or cut stringer that supports the treads and risers of wooden stairs.

**bridge crane** A crane often used in manufacturing or assembling heavy objects. A bridge crane requires a bridge spanning two overhead rails. A hoisting device moves laterally along the bridge while the bridge moves longitudinally along the rails.

**bridge deck** The load-carrying floor of a bridge that transmits the load to the beams.

**bridge financing** The short-term financing needed to bridge a shortfall between a loan presently committed or in place and the total financing required to complete a project.

**bridged floor** A floor supported by common joists.

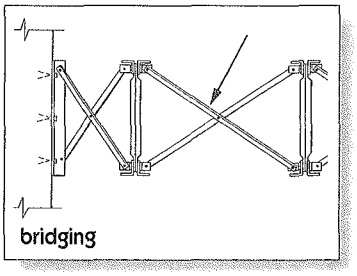



**bridge joint** *See* **bridle joint.**

**bridge plank** The subfloor on a bridge that supports the wearing surface. Usually made of corrugated steel.

**bridge thrust** The horizontal thrust from vertical loads on an arched bridge.

**bridging** A method of lateral bracing between joists for stiffness, stability, and load distribution.




**bridle joint (bridge joint)** A type of mortise and tenon joint used when two timbers are joined at an angle less than 90°.

**Briggs standard** *See* **American standard pipe threads.**

**brine** In a refrigeration system, a liquid used as a heat transfer agent that remains a liquid and has a flashpoint above 150°. The liquid is usually a salt solution.

**Brinell hardness** A measure of the hardness of a metal determined in the laboratory by measuring the indentation made by a steel ball in the surface of the metal.

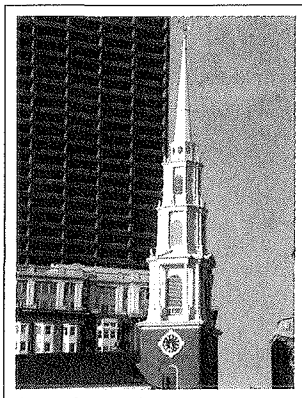
**brisance** The crack pattern that forms milliseconds after detonation of explosive, but before blasted rock dislodgement.

**British thermal unit (Btu)** A standard measurement of the heat energy required to raise the temperature of one pound of water one degree Fahrenheit.

**brittle** A characteristic of a material that makes it fracture easily without bending or deforming.

**broach** **1.** To free stone block from a quarry ledge by cutting out the webbing between holes drilled close together in a row. **2.** To cut wide parallel grooves in a diagonal pattern across a stone surface using the point of a chisel, finishing it for architectural use. **3.** Any pointed structure, such as a steeple or spire, that is built for ornamental purposes. **4.** A spire that rises directly from a tower, often without an intervening parapet. **5.** A half pyramid constructed above the corners of a square tower, serving as an architectural transition from the slat of the tower to an octagonal spire.

**broached spire** An octagonal spire set above a square tower, with broaches braced against it at the four corners of the tower to effect a visually appealing transition.


broached spire

**broaching** **1.** A method of quarrying stone in which close holes are drilled around the breakline. A chisel, called a *broach*, is used to break the remaining material. The stone is then removed with wedges. **2.** A method of making shaped holes in metal by removing small pieces in succession with a reaming tool.

**broad ax** A broad-bladed ax used to rough dress timber.

**broad knife (stripping knife)** A square-edged knife with a blade shaped like a wedge, used chiefly for scraping off old paint or wallpaper.

**broadloom** A seamless carpet woven on a wide loom, usually 6' to 18' (1.8 to 5.5 meters) wide.

**broadscope** A term describing the content of a section of the specifications, as established by the Construction Specifications Institute. A broadscope section covers a wide variety of related materials and workmanship requirements. (*Narrowscope* specifications denote a section describing a single material; *mediumscope* denotes a section dealing with a family of materials.)

**broad stone** *See* **ashlar (1.).**

**broad tool** A wide steel chisel used in the finish dressing of stone.

**broad-tooled** *See* **batted work.**

**brob** A wedge-shaped spike that is used to brace and secure the end of one timber butting against the side of another.

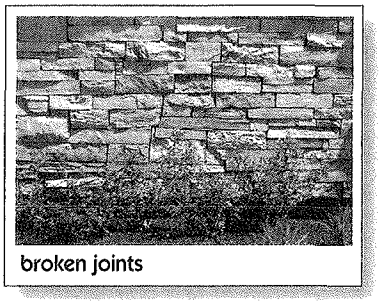
**broken arch** A segmented arch, used largely as door or window entablature, from which the center of the arch is cut out and replaced with an ornamental figure or design.

**broken ashlar** *See* **random work.**

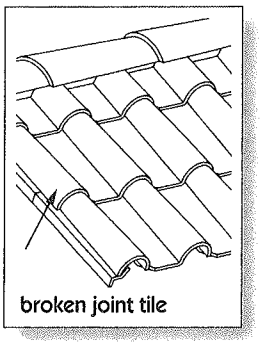
**broken-color work** *See* **antiquing.**

**broken-flight stair** *See* **dogleg stair.**

**broken joints** Vertical joints of masonry arranged in a staggered structure with no unit placed directly on top of another. Provides a more solid bond and increases structural strength.


broken joints

**broken joint tile** A roofing tile that overlaps only the tile directly below it.


broken joint tile

**broken rangework** A form of stone masonry with horizontal courses of different heights, some of which are broken at intervals into multiple courses.

# B

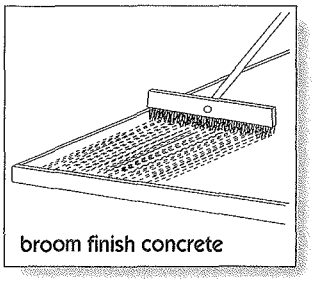
**brokered project** A project completely sublet by the general contractor or construction manager.

**bronze** **1.** An alloy composed of copper and tin. **2.** A bronze-colored alloy that uses a sizable measure of copper to alter the properties of its chief elements, as in aluminum bronze or magnesium bronze.

**bronzing** **1.** The application of metal bronze provider to an object or substance. **2.** The powdery decomposition of a paint film caused by exposure to the elements and natural wear.

**broom** **1.** To press a layer of roofing material against freshly applied bitumen in order to create a tight, thorough bond. **2.** To flatten or spread the head of a timber pile by pounding forcefully on it. **3.** To brush fresh plaster or concrete with a broom.

**broom finish concrete** Concrete that has been brushed with a broom when fresh in order to improve its traction or to create a distinctive texture.

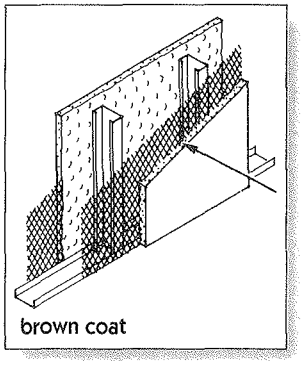


broom finish concrete

**brothers** A two- or four-leg chain or rope sling.

**Brown and Sharpe gauge** *See* **American wire gauge.**

**brown coat (floating coat)** **1.** In two-coat wet-wall construction, the first rough coat of plaster applied as a base coat over lath or masonry. **2.** In three-coat work, the second coat of plaster applied over a scratch coat to serve as a base for the finish coat.



brown coat

**brownfield sites** Abandoned or underused industrial sites that often require remediation of hazardous waste or other pollutant contamination prior to reuse.

**brown-glazed brick** *See* **salt-glazed brick.**

**brown millerite** An oxide of calcium, aluminum, and iron commonly formed in Portland cement and high alumina cement mixtures.

**brownout** **1.** To apply a base coat of plaster. **2.** The setting process of base-coat plaster, which darkens to a brown hue as it dries. **3.** A partial loss of electrical power that dims lights. A brownout is less severe than a blackout.

**brown rot** A fungus that attacks the cellulose of wood, so called for the residual brown powder it leaves behind on the destroyed matter.

**brown stain** A deep brown discoloration in the sapwood of some pines, caused by fungus.

**brownstone** **1.** Arko sandstone, dark brown or reddish-brown in hue, which was used widely throughout the eastern United States in the nineteenth century for building homes and offices. **2.** A house faced with brownstone.

**browpiece** A beam installed above a door.

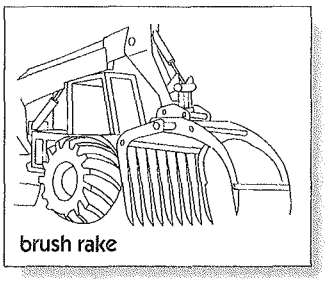
**brow post** *See* **crossbeam.**

**brush (brushed) finish** A finish created by applying a rotating wire brush to a surface.

**brushed plywood** Plywood abraded to remove softer wood and reveal a more textured surface.

**brush graining** A process in which a dark, liquid stain is drawn across a light-colored, dry base coat to produce an imitation effect of a wood grain.

**brush rake** A large apparatus that is attached to the front of a tractor to clear land of brush and debris.



brush rake

**Brussels carpet** **1.** A carpet of worsted yarn in multiple colors, attached to a backing of tough linen thread in a pattern of uncut loops. **2.** A less costly substitute for actual Brussels carpet, made in a single color of yarn.

**bubble** **1.** Either the air bubble in a leveling tube or the tube itself. **2.** A large void in gypsum board caused by air entrapment during manufacturing.

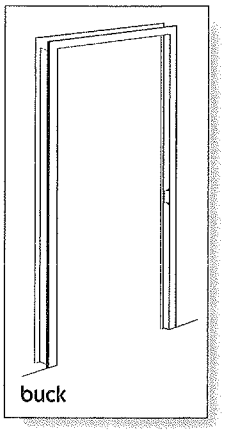
**bubble diagram** A diagram that shows the functional relationships in a building or firm.

**bubble tube** A tube containing an air bubble, used to level a tool or an instrument.

**bubbling** Trapped bubbles of air or vapors that erupt on a painted surface during application or drying.

**buck** **1.** The wood or metal subframe of a door, installed in a wall to accommodate the finished frame.

**2.** One of a pair of four-legged supporting devices used to hold wood as it is being sawed. *See also* **sawbuck** *and* **doorbuck**.


buck

**bucket** A scoop-shaped attachment for an excavating machine that digs and transports loose earthen materials. Often outfitted with opening and closing mechanisms to facilitate unloading.

**bucket trap** A mechanical steam trap that operates on buoyancy and is designed with an inverted or upright cup that prevents the passage of steam through the system it protects.

**bucket-wheel excavator** A machine that digs earth and loads it onto a conveyor belt as it moves across a site, functioning by means of a rotating wheel and a number of tooth-edged buckets. Used principally for trenching.

**buck frame (core frame, subframe)** A wood frame built into the wall studs of a partition to accommodate a door lining.

**buckle** **1.** The distortion of a structural member such as a beam or girder under load. This condition is brought on by lack of uniform texture or by irregular distribution of weight, moisture, or temperature. **2.** A flaw or distortion on the surface of a sheet of material, particularly asphalt roofing. **3.** A thin tree branch bent in the shape of a "U" to fasten thatch onto roofs.

**buckling load** In a compression member or compression portion of a member, the load at which bending progresses without an increase in the load.

**buck opening** A rough door opening.

**bucksaw** A wood-cutting saw consisting of a blade set in an H-shaped frame.

**budget** A rough estimate of the value of a portion of, or total cost of, a construction project.

**budgeted cost of work performed (BCWP)** Measure of the amount of money budgeted to complete the actual work performed as of the data date. Represents the value of work performed, rather than the cost of the actual work performed. In current earned value management system usage, it is referred to as "earned value" or EV.*

**budgeted cost of work scheduled (BCWS)** Measure of the amount of money budgeted to complete the scheduled work as of the data date. In current earned value management system usage, it is referred to as "planned value" or PV. *

**budget estimate** A budget estimate is prepared with the use of flow sheets, layouts, and equipment details.*

**budgeting** A process used to allocate the estimated cost of resources into cost accounts (i.e., the cost budget) against which cost performance will be measured and assessed. Budgeting often considers time-phasing in relation to a schedule and/or time-based financial requirements and constraints.*

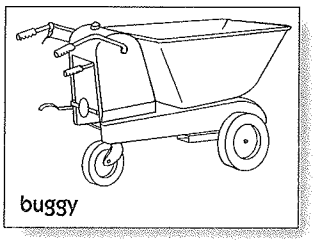
**buff** **1.** To clean and polish a surface to a high luster. **2.** To grind and polish a floor of terrazzo or other exposed aggregate concrete.

**buffalo box** **1.** A vertical sleeve buried in the ground that provides access to a curb cock. **2.** A large hopper mounted on the front of a bulldozer into which aggregate is dumped, permitting the aggregate to be spread evenly over a previously graded area.

**buffer** **1.** Blasted rock left at a face to improve fragmentation and reduce scatter during a subsequent blast. **2.** A loose metal mat used to control scattering of blast rock. *See also* **spring buffer** *and* **oil buffer**.

**buff standard brick** A buff-colored brick that may be either 2-1/4" x 3-3/4" x 7-3/4" or 2" x 4" x 8", nominal.

**buggy (concrete cart)** A two- or four-wheeled cart, with or without a motor, used to transport small amounts of concrete from hoppers or mixers to forms.


buggy

**bug holes** Small cavities, usually not exceeding 5/8" (15 mm) in diameter, at the surface of formed concrete. Bug holes are caused by air bubbles trapped during placing and compacting of wet concrete.

**bugle head screw** A flat-headed screw commonly used in drywall installation.

**builder's acid** A mixture of hydrochloric acid and water used to remove mortar stains from brick.

**builder's box** The buildable area within the front, rear, and side setback dimensions from property lines.

**builder's jack** A temporary bracket, attached to a windowsill, that projects outward and supports scaffolding.

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# B

**builder's level** **1.** A spirit level set in a wood or metal straightedge. **2.** A tilting or dumpy level not made to the accuracy of one used in surveying.

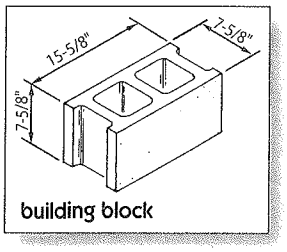
**builder's risk insurance** A special form of property insurance to cover work under construction.

**builder's staging** A heavy scaffold made from square timbers, usually used where heavy materials are handled.

**building area** The sum of the horizontal projected area of all buildings on a site. Terraces and uncovered porches are excluded, unless the stipulations of a mortgage lender or governmental program require their inclusion.

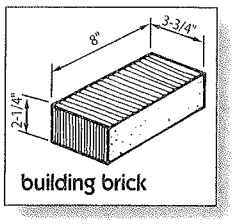
**Building Automation System** A network of integrated computer components that automatically control a wide range of building operations such as HVAC, security/access control, lighting, energy management, maintenance management, and fire safety control.

**building block** Any rectangular masonry unit (except brick) used in building construction. Typical materials are burnt clay, concrete, glass, gypsum, etc.




**building board** Any board of building material, usually with a facing, which can be used as a finished surface on walls or ceilings.

**building brick (common brick)** Brick that has not been treated for color or texture. Used as an all-purpose building material.




**building codes** The minimum legal requirements established or adopted by a government such as a municipality. Building codes are established by ordinance, and govern the design and construction of buildings.

**building drain** That part of the lowest piping of a drainage system that receives the discharge from soil, waste, and other drainage pipes inside the walls of the building and conveys it to the building sewer.

**building ecology** The environment inside a building, such as air quality, lighting, and acoustics, and its effect on a building's occupants and the overall environment.

**building envelope** The elements of a building that enclose conditioned areas and through which thermal energy may be transferred to or from the outside environment.

**building footprint, footprint** Area of building where it meets the ground; usually the area of the slab or grade.

**building grade** *See* **grade (3.)**.

**building gravity drainage system** A drainage system that employs gravity to lead waste into the building house sewer.

**building height** Generally, the greatest vertical distance measured from curb or grade level to the highest level of a flat or mansard roof, or to the average height of a pitched, gabled, hip, or gambrel roof. Penthouses and the like are usually excluded if they do not exceed a specified height or their projected area is less than a specified percentage of the main roof.

**building information modeling (BIM)** Digital, model-based technology that is linked to a database of project information, which can be used to generate cost estimates, energy projections, design comparisons, and other simulations.

**building inspector** An official employed by a municipal building department to review plans and inspect construction to determine if they conform to the requirements of applicable codes and ordinances, and to inspect occupied buildings for violations of the same codes and ordinances. *See also* **building official**.

**building insulation** *See* **thermal insulation**.

**building integrated photovoltaics (BIPV)** Substituting a conventional part of building construction with photovoltaic material. Shingles, standing seam metal roofing, spandrel glass, and overhead skylight glass are some examples.

**building line** **1.** The line, established by law, beyond which a building shall not extend, except as specifically provided by law. Exceptions may be made for terraces or uncovered porches. **2.** The outermost dimension of a building, generally used for building placement in relation to zoning or plot restrictions. *See also* **building restriction line**.

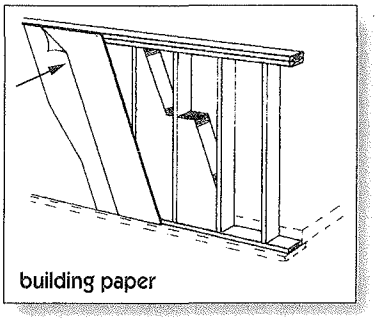
**building main** The water supply pipe (including fittings) that extends from the water main or other source of supply to the first distribution branch of a building.

**building material** Any material used in construction, such as sand, brick, lumber, or steel.

**building occupancy** A classification of the use or intended use of a structure, such as business or residential, for determining hazards, requirements, and restrictions.

**building official (building inspector)** An appointed government official who is responsible for enforcing building codes. The building official may approve the issuance of a building permit, review the contract documents, inspect the construction, and approve issuance of a certificate of occupancy.

**building paper** A heavy, asphalt-impregnated paper used as a lining and/or vapor barrier between sheathing and an outside wall covering, or as a lining between rough and finish flooring.


building paper

**building permit** A written authorization required by ordinance before construction on a specific project can begin. A building permit allows construction to proceed in accordance with construction documents approved by the building official.

**building related illness** A diagnosable illness whose cause and symptoms can be directly attributed to a specific pollutant source within a building (e.g., Legionnaire's disease, hypersensitivity, pneumonitis). (See also: sick building syndrome.)

**building restriction** Any restriction, statutory or contractual, imposed on construction of a building or use of land.

**building restriction line** A line, defined by local ordinances, beyond which a structure may not project. The line is usually parallel to the street line or other property line. *See also* **building line.**

**building section** Any portion of a building, whether a single room, a group of rooms, a floor, or a group of floors, that is within the limits of a fire division.

**building services** The utilities, including electricity, gas, steam, telephone, and water, supplied to and used within a building.

**building sewer** The pipe that carries sewage from the outside wall of the building to the public sewer.

**building storm drain** A drain in a building that conveys rainwater, surface water, condensate, and similar discharge to a building storm sewer that, in turn, extends to a specified point outside the building.

**building thermal envelope** Parts of a building that enclose conditioned spaces, including exterior walls, roof, and floors.

**building trades** The skilled and semiskilled crafts employed in building construction, such as carpentry, masonry, or plumbing.

**building trap (main trap)** A fitting installed on the outlet side of a building to prevent odors and gases from passing from a sewer to the plumbing system of the building.

**build up** To create a mass by applying successive layers.

**built-up** **1.** Fabricated of two or more pieces or sheets that are laminated. **2.** Assembled by fastening a number of pieces or parts to each other.

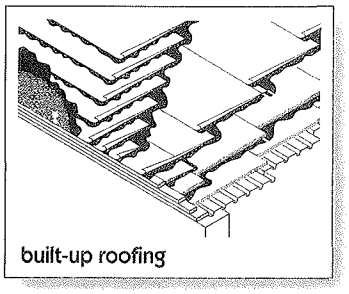
**built-up air casing** A field-fabricated enclosure for an air-handling system, with base, curbs, and drains.

**built-up beam** **1.** A metal beam made of beam shapes, plates, and/or angles that are welded or bolted together. **2.** A concrete beam made of precast units connected through shear connectors. **3.** A timber beam made of smaller pieces that are fastened together.

**built-up girder** *See* **built-up beam.**

**built-up rib** A rib made of laminations of various size timbers.

**built-up roofing (composition roofing, felt-and-gravel roofing, gravel roofing)** A continuous roof covering made up of various plies or sheets of saturated or coated felts cemented together with asphalt. The felt sheets are topped with a cap sheet or a flood coat of asphalt or pitch, which may have a surfacing of applied gravel or slag.


built-up roofing

**built-up section** In metal building systems, a structural member made from individual plates welded together.

**built-up string** A curved stair string constructed of wood members fastened together with counter clamps.

**built-up timber** *See* **built-up beam (3.).**

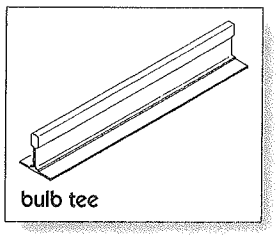
**bulb angle** A hot-rolled angle with a formed bulb on the end of one leg.

**bulb bar** A rolled steel bar with a formed bulb on one edge.

**bulb pile** *See* **pedestal pile.**

**bulb pressure** *See* **pressure bulb.**

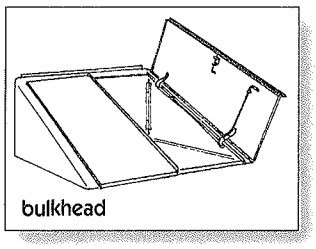
**bulb tee** A rolled steel tee with a formed bulb on the edge of the web.


bulb tee

# B

**bulk density** The weight of a material per unit volume, including voids, solid particles, and any contained water.

**bulkhead** **1.** A horizontal or inclined door providing outside access to a cellar or shaft. **2.** A partition in concrete forms to separate placings. **3.** A structure on the roof of a building to provide headroom over a stairwell or other opening. **4.** A low structure on a roof covering a shaft or protruding service equipment. **5.** A retaining structure that protects a dredged area from earth movement.


bulkhead

**bulking (moisture expansion)** An increase in the volume of a quantity of granular material when moist, over the volume of the same quantity when dry.

**bulking factor** A ratio comparing the volume of a quantity of moist granular material to the volume of the same quantity when dry.

**bulking value** In mixing paint, the specific gravity of a pigment, usually expressed as gallons per 100 pounds, or liters per kilograms.

**bulk liquid** A pumpable material that has a moisture content greater than 70%.

**bulk material** Material bought in lots. These items can be purchased from a standard catalog description and are bought in quantity for distribution as required. Examples are pipe (non-spooled), conduit, fittings, and wire.*

**bulk modulus of elasticity (modulus of volume)** The volumetric relationship between stress and strain within the elastic limit of a material. This quantity is expressed as the ratio between a pressure acting on a material and the fractional change in volume due to that pressure.

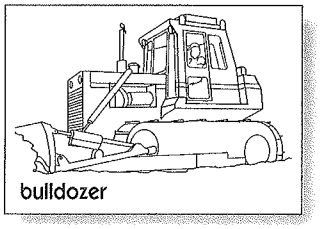
**bulk sludge** A material with a moisture content of between 30% and 70%.

**bulk solid** A material with a moisture content less than 30%.

**bulk strain (volume strain)** The ratio of the change in volume of a mass, due to an applied pressure, to the original volume.

**bulldog grip** A U-bolt threaded at each end.

**bulldozer** **1.** A tractor with a large, blunt blade attached to its front end by hydraulic-controlled arms. A bulldozer is used to push, shape, or move earth or rock short distances. **2.** A machine used to bend reinforcing bars into U-shapes.

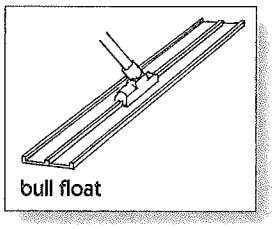

bulldozer

**bullet catch** A type of door latch consisting of a spring-loaded steel ball. The loaded ball holds the door closed but rolls free when the door is pulled.

**bulletproof glass** *See* **bullet-resisting glass.**

**bullet-resisting glass (bulletproof glass)** A laminated assembly of glass, usually at least four sheets, alternated with transparent resin sheets, all bonded under heat and pressure. Bullet-resisting glass is also made of laminations of special plastics.

**bull float** A board of wood, aluminum, or magnesium mounted on a pole and used to spread and smooth freshly placed, horizontal concrete surfaces.


bull float

**bull gear** The largest- or strongest-toothed driving gear.

**bull header (bull head)** A brick with one rounded corner used to form a corner at a door jamb or laid on edge to form a windowsill.

**bullhead tee (bullheaded tee)** A piping tee in which the outlet opening on the branch is larger than the openings on the run.

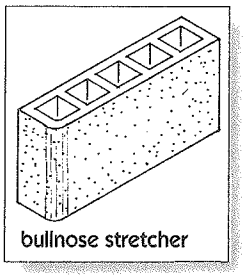
**bullnose (bull's nose)** **1.** A rounded outside corner or edge. **2.** A metal bead used in forming a rounded corner on plaster walls.

**bullnose block** A concrete masonry unit with one or more rounded corners.

**bullnose plane** A small, hand-held carpenter's plane with the blade set forward.

**bullnose step (bull stretcher)** A step, usually the bottom one in a flight, with a semicircular end that projects beyond the railing.

**bullnose stretcher** **1.** A masonry stretcher with one of the corners rounded. **2.** Any stretcher that is laid on edge, as at a windowsill.


bullnose stretcher

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**bullnose trim** A structural member or piece of trim that has a rounded edge, such as a stair tread, windowsill, or door sill.

**bull pin** A tapered steel pin used to align holes in steel members so bolts can be inserted.

**bull-point** A pointed steel hand drill that is struck with a hammer to chip off small pieces of rock or other masonry.

**bull's nose** *See* **bullnose.**

**bull stretcher** *See* **bullnose step.**

**bulwark** A low wall used as a defensive shield.

**bumper** **1.** A device, other than a spring or oil buffer, used to absorb impact from an elevator or counterweight. **2.** The rubber silencer on a door frame.

**bunching** When heavy construction haulers do not maintain constant cycle time distance apart from one another.

**bundle** Refers to a package of shingles. Typically, 3 bundles make up a square, and there are 27 shingles per bundle.

**bundle of lath** A quantity of lath for plastering, usually 50 pieces of wood lath, 5/16" x 1-1/2" x 48" (0.79 x 3.8 x 122 cm) or 6 sheets of gypsum lath, 16" x 48" (41 by 122 cm).

**bundler bars** An assembly of up to four parallel reinforcing bars connected to one another and enclosed in stirrups or ties. Used as a unit in reinforced concrete, particularly in columns.

**bungalow siding** Clapboard siding that has a minimum width of 8" (20 cm).

**bunker** **1.** A compartmentalized storage container for aggregate or ore. **2.** Space in a refrigerator for ice storage and for the cooling element. **3.** A protective shelter usually constructed of reinforced concrete and located partially or fully below ground. **4.** A metal shield in a crushing or screening operation used to direct raw material to the feed belt.

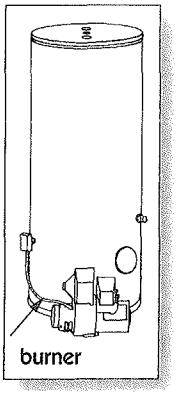
**buoyant foundation** A reinforced concrete foundation designed and located such that its weight and superimposed permanent load is approximately equal to the weight of displaced soil and/or ground water.

**burden** **1.** The loose material that overlays bedrock. **2.** The depth of material to be moved or loosened in a blast. **3.** The distance from a blast face to a line of blast holes. **4.** The cost of maintaining an office with staff other than operating personnel. Includes also federal, state and local taxes, fringe benefits and other union contract obligations. In manufacturing, burden sometimes denotes overhead.*

**burden of proof** The necessity of proving the facts in a dispute on an issue raised between the owner and the contractor. In a claim situation, the burden of proof is always on the person filing the claim. This is true whether the contractor is claiming against the owner, or the owner is making a claim against the contractor.*

**burned joint** In plumbing, a joint formed with heat that fuses two lead pipes together.

**burner** That part of a boiler or furnace in which combustion takes place.


burner

**Burnett's process** A process of preserving wood that involves infusing the wood with a hot solution of chloride of zinc.

**burning** **1.** Flame-cutting metal plates to a desired shape. **2.** A method of repairing lead roofs by replacing damaged sections.

**burning-brand test** A standard test to determine the resistance of a roof covering to exposure from flying brands.

**burnish** To polish to a smooth, glossy finish.

**burn rate** Rate at which resources such as funds or labor-hours are or were being expended on a project.*

**burnt lime** *See* **lime.**

**burnt sienna** Sienna that has been calcined to obtain a rich brown pigment. Used for coloring paint and stain.

**burnt umber** Umber that has been calcined to obtain a red to reddish-brown pigment. Used for coloring paint and stain.

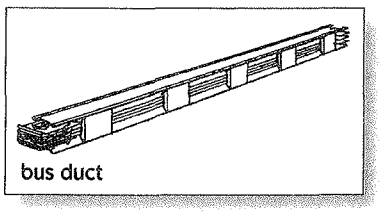
**burr** **1.** An uneven or jagged edge left on metal by certain cutting tools. **2.** Partially fused brick. **3.** A batch of bricks that were accidentally fused together. **4.** A curly figure in lumber that was cut from an enlarged trunk of certain trees, such as walnut.

**bursting strength** The ability of sheet material to resist rupture under pressure, as measured by one of several tests.

**bus (bus bar)** An electric conductor, often a metal bar, that serves as a common connection for two or more circuits. A bus usually carries a large current.

**bus bar** *See* **bus.**

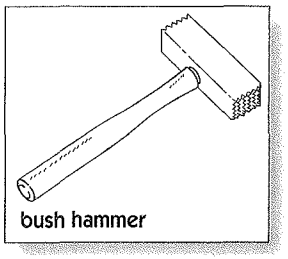
**bus duct (busway)** A prefabricated unit containing one or more protected busses.


bus duct

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# B

**bush hammer** A hand or power hammer that has a serrated face with many pyramidal points. A bush hammer is used to dress concrete or stone.


bush hammer

**bush-hammered concrete** Concrete with an exposed aggregate finish that has been obtained by removing the surface cement using a percussive hammer with a serrated face.

**bush-hammer finish** A stone or concrete finish obtained through use of a percussive hammer with a serrated face. Used for decorative purposes or to provide a rough surface for better traction or adhesion.

**bushing** **1.** A threaded or smooth (for soldered tubing) pipe or tube fitting used to connect pipes or tubes of different diameters. **2.** A metal sleeve screwed or fitted into an opening to protect and/or support a shaft, rod, or cable passing through the opening. Usually the inside surface of the bushing is machined to close tolerance to reduce friction and abrasion. **3.** An insulating structure for a conductor, with provision for an insulated mounting.

**business agent** An official of a trade union who represents the union in negotiations and disputes and checks jobs for compliance with union regulations and union contracts.

**business interruption insurance** An insurance policy that protects from the financial consquences of certain risks when there are, for example, lengthy delays in a construction project.

**business planning** The determination of financial, production and sales goals of a business organization; and the identification of resources, methods, and procedures required to achieve the established objectives within specified budgets and timetables.*

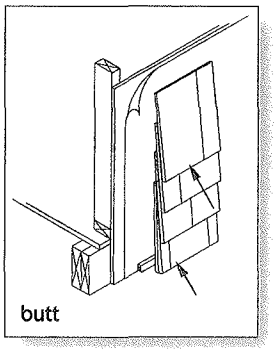
**busway** *See* **bus duct.**

**bus wire** The wire(s) to which the leg wires of blasting caps are connected.

**butcher block** A kitchen work surface made from a single slab of hardwood or a composite of rectangular pieces that have been bonded together.

**butment** *See* **abutment.**

**butt** **1.** A short length of roofing material. **2.** The thick end of a shingle.


butt

**butt and break** The staggering of joints in lath or on alternating studs in order to reduce cracking of plaster.

**butt casement hinge** A type of toe-plate hinge intended for use on casement sashes.

**butt chisel** A carpenter's chisel with a short blade used to shape recesses for hinges.

**butted frame** A door frame with a depth equal to or less than the thickness of the wall in which the frame is mounted.

**butt end** The thicker end of a handle, tapered pole, pile, or other rod-shaped object.

**butt-end joint** *See* **butt joint.**

**butt-end treatment** The process of protecting that part of a timber or post that will be exposed to soil and/or water by treating it with a preservative chemical.

**butter (buttering)** **1.** To apply mortar to a masonry unit with a trowel. **2.** To spread roofing cement smoothly with a trowel. **3.** To apply putty or compound sealant to a flat surface of a member before setting the member, such as buttering a stop before installing it.

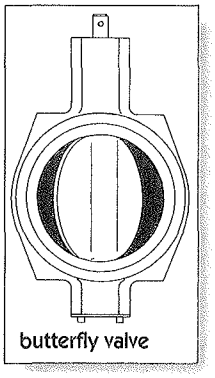
**butterfly hinge** A decorative hinge.

**butterfly nut** A wing nut.

**butterfly roof** A roof shape in which two surfaces rise from a control valley to the eaves.

**butterfly spring** A formed piece of spring metal set over the pin of a hinge to serve as a door closer.

**butterfly valve** A valve that contains a disk that rotates 90° within the valve body. Has excellent throttling characteristics.


butterfly valve

**butterfly wall tie** A masonry wall tie made from heavy wire in the shape of a figure eight.

**buttering** *See* **butter.**

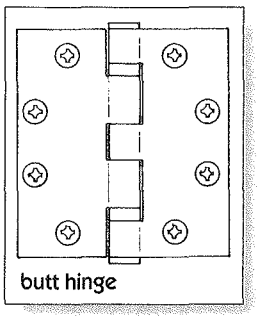
**buttering trowel** A small trowel used to apply mortar to a brick before laying the brick.

**butternut (white walnut)** A moderately soft, medium-textured wood of light to pale brown color. Butternut is used particularly for decorative veneer.

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**butt fusion** A method of joining thermoplastic resin pipe or sheets in which the ends to be joined are heated to the molten state, pressed together, and held until the material sets.

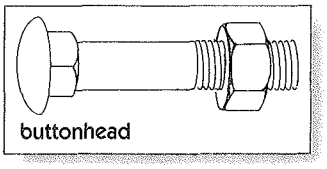
**butt hinge** The common form of hinge consisting of two plates, each with one meshing knuckle edge, connected by means of a removable or fixed pin through the knuckles.




**butt-hung door** A swing door hung with butt hinges.

**butt joint** **1.** A square joint between two members at right angles to each other. The contact surface of the outstanding member is cut square and fits flush to the surface of the other member. **2.** A joint in which the ends of two members butt each other so that only tensile or compressive loads are transferred.

**buttonhead** The head of a bolt, rivet, or screw that is shaped like a segment of a sphere and has a flat bearing surface.




**button punching** Crimping the interlocking lap of metal ducting panels with a dull punching tool. Button punching has been largely replaced by spot welding overlapping edges.

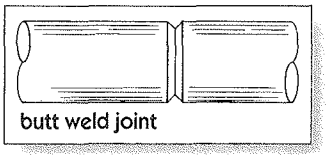
**buttonwood** North American sycamore.

**buttress** **1.** An exterior pier of masonry construction, often sloped, which is used to strengthen or support a wall or absorb lateral thrusts from roof vaults. **2.** An A-shaped formwork of timber or steel used to strengthen or support a wall.

**butt splice** A butt joint secured by fastening a short piece of wood or steel to each side of the butted members.

**butt strap** The short pieces used in a butt splice.

**butt weld joint** **1.** A joint made by welding two butted pieces or sheets together. **2.** A welded pipe joint made with the ends of the two pipes butting each other.




**butt weld pipe** Pipe that is welded along the seam, not lapped.

**buttwood** Lumber milled from the lower part of a tree.

**butyl rubber (synthetic rubber) sealant** A type of one-component sealant that may also contain fillers, such as calcium carbonate and talc powder, as well as polybutene and other additives that promote adhesion.

**butyl stearate** A colorless, oily liquid used for dampproofing concrete.

**buy a job** Accept a construction contract at bare cost or below.

**buy-in** A bidder's attempt to win a contract by submitting a price that will result in a loss, with the hope of making the contract profitable through change orders or follow-on contracts.

**buzz saw** A power saw with a circular blade.

**BX** Flexible metal conduit armored with spirals of galvanized steel and containing multiple insulated electric wires.

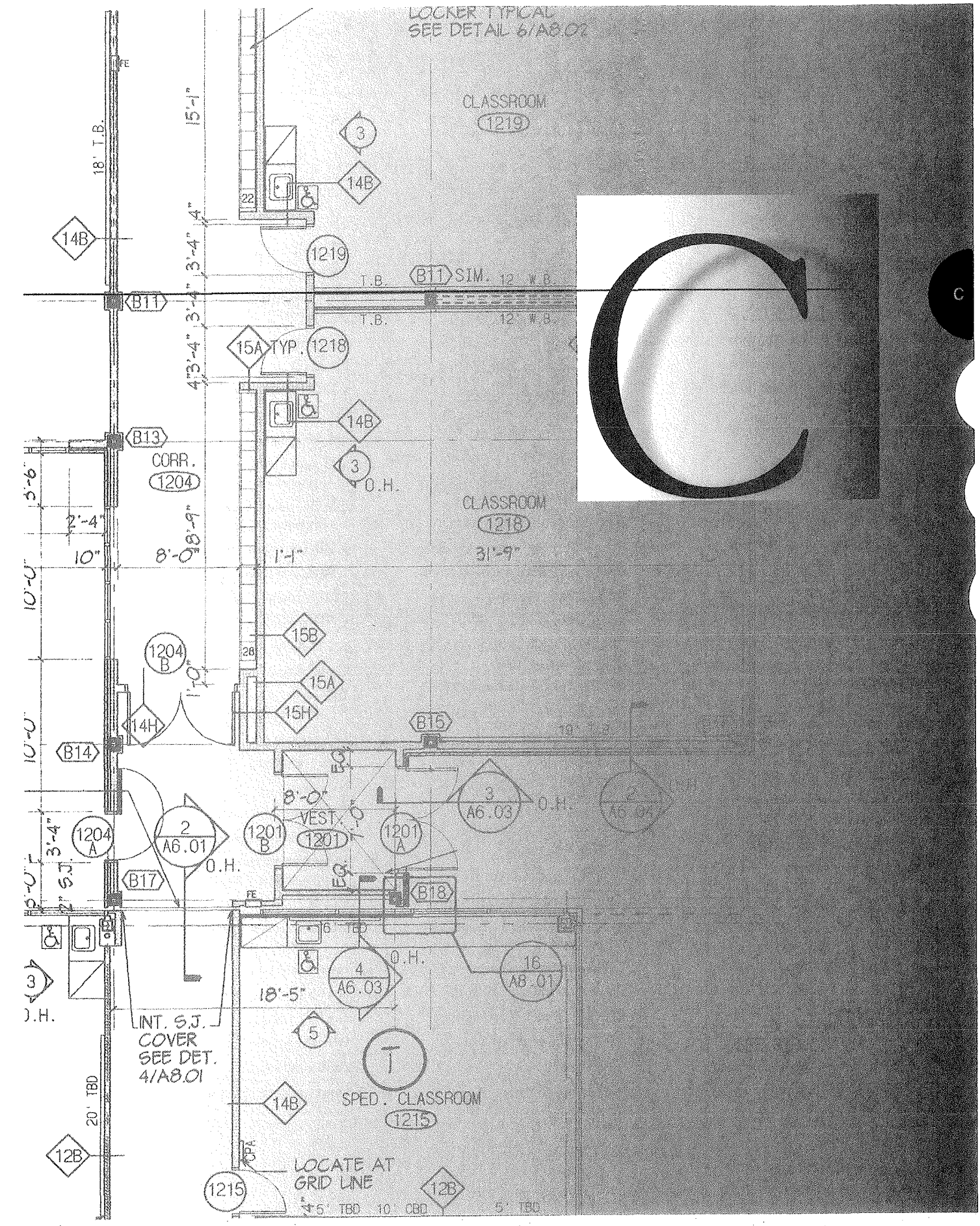
**bylaw** Any set of rules adopted collectively by an association, corporation, community, or other entity that governs itself.

**bypass** **1.** A pipe or duct used to divert flow around an element. **2.** A pipe used to divert flow around another pipe or piping system.

**bypass valve** A valve located to control a bypass.

**bypass vent** A vent stack parallel to a soil or waste stack and connected together at branch intervals.

**byre** A stable or barn for housing livestock.


LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
CLASSROOM
1218
CORR.
1204
SPED. CLASSROOM
1215
VEST.
1201
SIM.
T.B.
12" W.B.
O.H.
FE
INT. S.J. COVER SEE DET. 4/A8.01
LOCATE AT GRID LINE
18' T.B.
15'-1"
3'-4"
4'-3"
8'-0"
8'-9"
31'-9"
18'-5"
20' TBD
10'-0"
2'-4"
1'-1"
5' TBD
10' CBD
C

# C Abbreviations

*The abbreviations listed below are commonly used in the construction industry.*

**c** candle, cathode, channel, conductivity, cycle

**C** carbon, Celsius, centigrade, hundred

**CAA** Clean Air Act

**Cab** cabinet

**CAB** cabinet, cement-asbestos board

**CAD** computer-aided design

**CADD** computer-aided design and drafting

**CAFM** computer-aided facility management

**Cair** air tool laborer

**cal** calorie

**calc** calculated

**C&Btr** grade C and better (used in lumber industry)

**cap** capacity

**carp** carpenter

**CAT** catalog (catalogue)

**CATV** community antenna television

**CATW** catwalk

**CB** catch basin, center beaded, circuit breaker

**CB1S** center beam one side

**CB2S** center beam two sides

**CBMA** Certified Ballast Manufacturers Association

**CBR** California bearing ratio

**cc** cubic centimeter

**C/C** center to center

**CCA** chromate copper arsenate

**CCF** hundred cubic feet

**CCTV** closed-circuit television

**CCW** counterclockwise

**cd** candela

**CD** grade of plywood face and back

**cd/sf** candela per square foot

**CDX** plywood, grade C and D, exterior glue

**Cefi** cement finisher

**ceil** ceiling

**Cem** cement

**cem fin** cement finish

**cem m** cement mortar

**cent** central

**cer** ceramic

**CERCLA** Comprehensive Environmental Response, Compensation, and Liability Act

**CF** cubic feet, centrifugal force, cooling fan, cost and freight, hundred feet

**CFCs** chlorofluorocarbons

**CFL** compact fluorescent lamp

**cfm, CFM** cubic feet per minute

**CFR** Code of Federal Regulations

**CFS** cubic feet per second

**cg** center of gravity

**CG** ceiling grille, center of gravity, coarse gram, corner guard

**CG2E** center groove two edges

**chfr** chamfer

**CHIM** chimney

**chkd** checked

**CHRIS** Chemical Hazard Response Information System

**CHU** centigrade heat unit

**CHW** chilled water

**CI** cast iron, certificate of insurance

**CIF** cost, insurance and freight

**CIFE** cost, insurance, freight and exchange

**CII** Construction Industry Institute

**cin bl** cinder block

**CIP** cast-iron pipe, cast in place

**CIR** circle, circuit, circular

**Circ** circuit

**CIRC** circumference

**cl** closet

**CL** center line, carload lot

**Clab** common laborer

**CLF** hundred linear feet, current-limiting fuse

**clg** ceiling

**clk** caulk

**CLP** cross-linked polyethylene

**clr** clear

**cm** centimeter

**CM** center matched, construction management

**CMMS** computerized maintenance management software

**CMP** corrugated metal pipe

**CMPA** corrupted metal pipe arch

**CMU** concrete masonry unit

**CND** conduit

**c-o** cleanout

**Co** company

**CO** certificate of occupancy, change order, cleanout, cutout

**$CO_2$** carbon dioxide

**coef** coefficient

**col** column

**com** common

**COMB, Comb** combination

**comp** compartment, compensate, component, composition

**COMPF** composition floor

**COMPR, compr** composition roof, compress, compressor

**conc, Conc** concrete

**conc b** concrete block

**conc clg** concrete ceiling

**conc fl** concrete floor

**cond** conductivity

**const** constant, construction

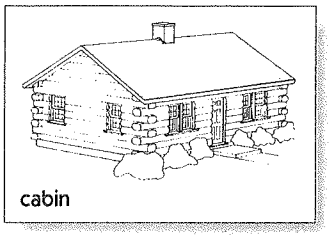
**constr** construction
**Cont** continuous, continued
**CONTR** contractor
**conv** convector
**cop** coping, copper
**corb** corbeled
**corn** cornice
**corr** corrugated
**Cos** cosine
**cot** cotangent
**Cov** cover
**CP** candlepower, cesspool
**CPA** control point adjustment
**CPFF** cost plus fixed fee
**cplg** coupling
**CPM** Critical Path Method, cycles per minute
**CPr** hundred pair
**CPU** central processing unit
**CPVC** chlorinated polyvinyl chloride
**CRC** cold-rolled channel
**Creos** creosote
**CRI** color rendering index
**crib** cribbing
**CRN** cost of reproduction/replacement new
**CRP** controlled rate of penetration
**cr pl** chromium plate
**Crpt** carpet and linoleum layer
**CRSI** Concrete Reinforcing Steel Institute
**CRT** cathode ray tube
**c/s** cycles per second
**CS** cast stone, carbon steel, commercial standard, caulking seam
**CSA** Canadian Standards Association (CSA International)
**CSC** cosecant
**CSF** hundred square feet
**csg** casing
**CSI** Construction Specifications Institute
**CSK** countersink
**ct** coat (coats)
**CT** current transformer
**CTB** cement-treated base
**c to c** center to center
**ctr** center, counter
**CTS** copper tube size
**cu** cubic
**cu ft** cubic feet
**cu in** cubic inch
**cur** current
**cu yd** cubic yard (27 cubic feet)
**CV** center vee
**CV1S** center vee one side
**CV2S** center vee two sides
**cw** clockwise, continuous wave
**CW** cool white, cold water
**CW pt** cold water point
**cwt** hundred weight
**CWX** cool white deluxe
**CY** cycle, cubic yard (27 cubic feet)
**CY/Hr** cubic yards per hour
**cyl** cylinder
**CYL L** cylinder lock
**cyp** cypress
**1/C** single conductor
**2/C** two conductors

# C Definitions

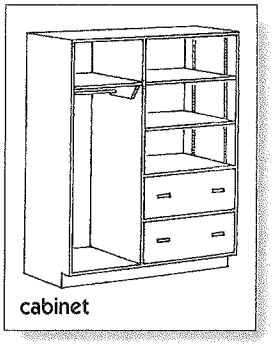
**cabana** A small shelter of open, tent, or wood-frame construction placed near swimming pools or the shoreline.

**cabba** A small cube-shaped building.

**cabin** **1.** A small, simple hut or house. **2.** A rustic shelter often made of logs.


cabin

**cabinet** **1.** A small room or private apartment, especially for study or consultations. **2.** A suite of rooms for exhibiting articles and curiosities. **3.** A case, box, or piece of furniture with sets of drawers or shelves and doors, used primarily for storage. **4.** An enclosure with doors for housing electrical devices and wiring connections.


cabinet

**cabinet file** A single-cut hand file that is half round on one side and flat on the other.

**cabinet filler** The wood piece that closes the space between cabinets and adjacent walls or the ceiling.

**cabinet finish** A varnished, oiled, or polished wood surface finish, as distinguished from a painted surface finish.

**cabinet head** A decorative molding along the top of a door frame.

**cabinet heater** A metal housing enclosing a heating element, with openings to facilitate air flow. The heater frequently contains a fan for controlling the air flow.

**cabinet lock** A spring bolt or magnetic latch.

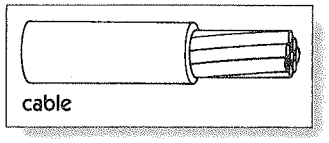
**cabinet scraper** A flat steel blade used for smoothing wood or removing a finish, such as paint or varnish, from a surface.

**cabinet units** Small air-handling units that house an air filter, heating coil, and a centrifugal blower.

**cabinet window** A projecting window or type of bay window popular during the nineteenth century for the display of shop goods.

**cabinet work** Wood joinery used in the construction of built-in cabinets and shelves.

**cable** **1.** A rope or wire comprised of many smaller fibers or strands wound or twisted together. **2.** A group of electric conductors insulated from each other but contained in a common protective cover.


cable

**cable assembly** A cable and its accompanying connectors to be used for a specific purpose.

**cable ceiling heat** A radiant heating system, installed in a ceiling, that sends current through encased conductors to produce heat.

**cable conduit** *See* **cable duct** *and* **conduit**.

**cable duct (cable conduit)** A rigid, metal, protective enclosure through which electrical conductors are run. For underground installations, concrete or plastic pipes are usually used.

**cable length** A standard surveying measurement equal to 720 feet.

**cable molding** *See* **cabling**.

**cable pulling compound** A lubricant used to facilitate the pulling of wires through a cable duct or conduit.

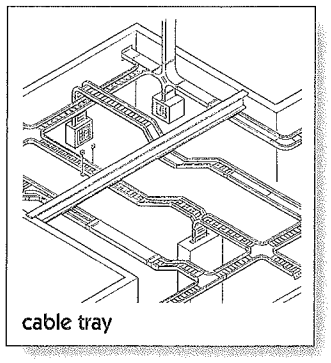
**cable roof** A system comprised of a roof deck and covering that are supported by cables.

**cable sheath** The protective cover that surrounds a cable.

**cable support box** An electrical box that is mounted on a wall and provides support for the weight of cables within a vertically installed conduit.

**cable-supported construction** A structure that is supported by a system of cables. This system is used for long-span roofs and for suspension bridges.

**cable tray** An open, metal framework used to support electrical conductors. Similar to cable duct except that the cable tray has a lattice-type construction and an open top.


cable tray

**cable vault** An underground structure utilized in the pulling and joining of underground electric cables.

**cableway** A cable that bridges a gap between two points and permits

materials to be pulled across the gap between the points.

**cabling (cable molding)** An ornament or molding of spiral design, similar to the twists of a cable.

**cadastral survey** A large-scale land survey conducted to define boundaries, areas, and ownership of real estate for purposes of subdivision or apportioning taxes.

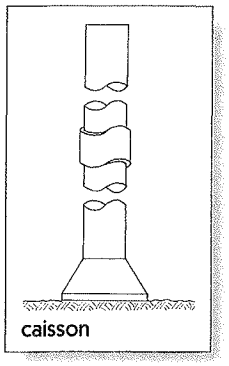
**cadmium plating** A coating of cadmium metal applied over a base metal, usually for corrosion protection.

**cadmium yellow** A yellow pigment of cadmium sulfide valued in paint manufacturing for its quality and permanence.

**Caen stone cement** A plaster material of crushed limestone and cement that is finished to resemble stone. Named for Caen, Normandy, where its limestone was originally mined. Caen stone was sometimes used in English Medieval buildings.

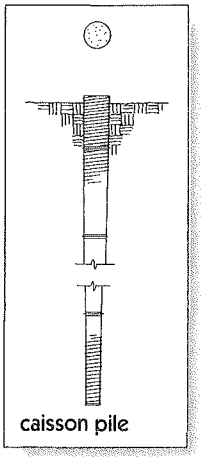
**cage** **1.** The box or enclosed platform of an elevator or lift. **2.** An enclosure for electrical lights or signals. **3.** Any rigid open box or enclosure.

**caisson** **1.** A drilled, cylindrical foundation shaft used to transfer a load through soft strata to firm strata or bedrock. The shaft is filled with either reinforced or unreinforced concrete. **2.** A watertight box or chamber used for construction work below water level.


caisson

**caisson drill** A piece of boring equipment used to excavate a shaft (usually vertical) in the earth for construction of a building footing.

**caisson pile** A cast-in-place pile formed by driving a hollow tube into the ground and filling it with concrete.


caisson pile

**caking** The undesirable mass of pigment that collects in the bottom of paint cans.

**calcareous** A term referring to any material containing calcite, calcium carbonate, or calcium, as in *calcareous soils*.

**calcimine (kalsomine)** A low-cost wash, white or colored, used on ceilings, interior plaster, or other masonry-type surfaces.

**calcine** The process of heating a substance to a point just below its melting temperature in order to remove chemically combined water.

**calcined gypsum** Gypsum that has been partially dehydrated. In this form it is used as a base material to which mineral aggregate, fiber, or other material may be added to produce the desired plaster.

**calcite** The main raw material used in the manufacture of Portland cement. Calcite is a crystallized form of calcium carbonate and is the principal component in limestone, chalk, and marble.

**calcite streak** A break or fault in a mineral limestone deposit that has been filled in by calcite sedimentation.

**calcium aluminate cement** A combination of calcium carbonate and aluminates that have been thermally fused or sintered and ground to make cement.

**calcium chloride** A saltwater solution added to concrete and mortar during mixing. Acts as a drying agent and decreases setting time.

**calcium silicate brick** A concrete product made primarily from sand and lime that is hardened by autoclave curing.

**calcium silicate insulation** Hydrated calcium silicate that has been molded into rigid shapes and forms. The material is commonly used for pipe insulation where service temperatures reach 1,200°F. Particularly well-suited for pipe insulation because it is not appreciably affected by moisture.

**calcs** An engineer's formal mathematical analysis of loads.

**calculate** To do mathematical work; to seek a numerical value.

**calculated live load** The useful load-supporting capability above the weight of the structural members, usually specified in the applicable building code.

# C

**calculate schedule** A modeling process that defines all critical activities and individual activity scheduling data. The process applied in most scheduling software calculates the start and finish dates of activities in two passes. The first pass calculates early start and finish dates from the earliest start date forward. The second pass calculates the late start and finish activities from the latest finish date backwards. The difference between the pairs of start and finish dates for each task is the float or slack time for the task.*

**calculation** The product or result of mathematical work.

**calendar** Defined work periods and holidays that determine when project activities may be scheduled. Multiple calendars may be used for different activities, which allows for more accurate modeling of the project work plat (e.g., 5-day work week calendar vs. 7-day work week).*

**calendar start date** The date assigned to the first unit of the defined calendar; the first day of the schedule.*

**calf's-tongue molding (calves-tongue molding)** A molding with repeating semi-oval shapes, half pointing in the same direction or, when surrounding an arch, pointing to a common center.

**caliber** The internal diameter of a pipe. In construction, most pipe is specified by outside diameter, with a further designation for wall thickness.

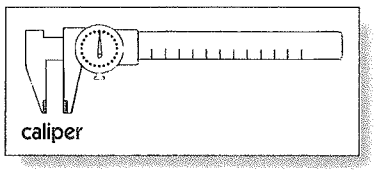
**caliche** A term used to describe gravel or sand loosely cemented together by calcium carbonate or other salts.

**caliduct** A conduit for conveying hot air, hot water, or steam for heating.

**California bearing ratio** A ratio used to determine the bearing capacity of a foundation. It is a ratio of the force per unit area per minute required to penetrate a soil mass, to the force required for a similar penetration of a standard crushed rock material.

**California brass ring** A sampler used to collect soil samples during well installation. Samples are tested for volatile organic compounds.

**caliper (calliper)** An instrument with two hinged legs used to determine the thickness or diameter of objects.




**calk** *See* **caulk**.

**calked rivet** A rivet that has not been properly driven, but has been tightened to fit its hole by having the edge of its head driven under with a cold chisel.

**calking** *See* **caulking**.

**calliper** *See* **caliper**.

**call loan** A loan that is payable on formal notice of demand by the lender.

**calorie** The amount of heat required, at a pressure of one atmosphere, to raise the temperature of one gram of water 1°C.

**calorific value** The amount of heat liberated by the oxidation or combustion of the unit weight of a solid material, or the unit volume of a gas or liquid.

**calves-tongue molding** *See* **calf's-tongue molding**.

**cam** **1.** An eccentric wheel mounted on a rotating shaft and used to produce reciprocal or variable motion in an engaged or contacted part. **2.** In a lock, the rotating piece attached to the cylinder that actuates the locking mechanism.

**camber** A slightly convex curvature built into a beam or truss to compensate for deflection under a load. Camber is also built into structural components, roadways, or bridges to facilitate run off of water.

**camber arch** A flat arch with a very small upward curve of the undersurface. The upper surface may or may not be curved.

**camber beam** A beam constructed with a slight upward curve in the center.

**camber diagram** A construction drawing that shows the desired design camber along the beam, truss, or structural component.

**camber piece** The temporary wood support or template used to lay a slightly curved brick arch.

**camber window** A window constructed with a slightly arched head.

**cambium** The thin layer of tissue that lies between a tree's bark and its wood.

**came** A flexible, cast-lead rod used in stained glass windows to hold together panes or pieces of glass.

**camelback truss** A truss whose upper chord is comprised of a series of straight segments so that the assembly looks like the hump of a camel's back.

**camelhair mop** A high-quality, soft-haired brush used for varnishing, gilding, or painting.

**cameo window** A fixed oval window, often highly decorative.

**cames** H-shaped lead strips that hold glass in place in leaded windows.

**cam handle (locking handle)** On a hinged window, the handle that rotates against its keeper plate, thus pulling the window tight and locking it.

**campaniform** A term used to describe a structure in the shape of a bell.

**Canadian Standards Association** A non-governmental body established in Canada for the purpose of developing uniform standards on products, processes, and procedures.

**canal (canalis)** **1.** Any watercourse or channel. **2.** A channel or groove fluting in carved ornamentation.

**canalis** *See* **canal**.

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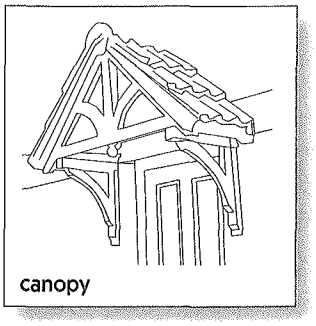
**candela** A unit of luminous intensity; formerly called *candle*.

**candle** *See* **candela**.

**candlepower** The luminous intensity of a light source expressed in *candelas*.

**candle wicking** In plumbing, a pipe thread tape used to make watertight seals.

**canopy** **1.** An overhanging shelter or shade covering. **2.** An ornamental roof-like structure over a pulpit.


canopy

**cant** **1.** To slope, tilt, or angle from the vertical or horizontal. **2.** A log that has been slabbed on one or more sides.

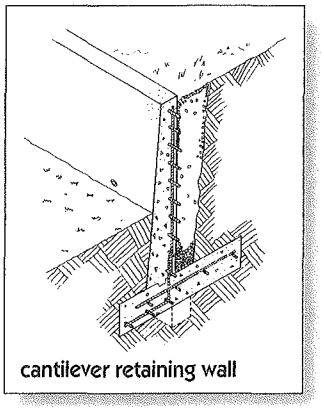
**cant brick** *See* **splay brick**.

**cantilever** **1.** A structural member supported at one end only. **2.** A beam, girder, or supporting member that projects beyond its support at one end.

**cantilever footing** **1.** A footing with a tie beam connected to another footing to counterbalance an asymmetrical load. **2.** In retaining wall construction, a wide, reinforced footing with reinforcing steel extending into the retaining wall to resist the overturning moment.

**cantilever form** In concrete construction, a form that is jacked up slowly and supported by the hardened concrete of the wall previously poured. *See also* **slip form**.

**cantilever retaining wall** A retaining wall that has a wide footing to resist its overturning moment.

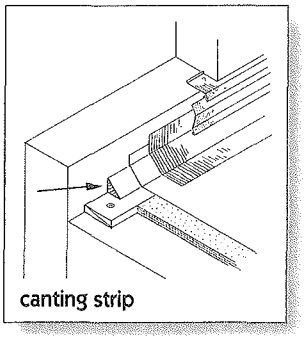

cantilever retaining wall

**cantilever steps** Steps supported at one end by a wall and at the other end by the next lower step.

**cantilever truss** A truss that is anchored at one end and overhangs a support at the other end.

**cantilever wall** A wall that resists its overturning moment with a cantilever footing.

**canting strip** A horizontal ledge near the bottom of an exterior wall sloped to conduct water away from the face of a building or its foundation.


canting strip

**cant molding** A molding with one beveled face.

**cant strip (chamfer strip)** A three-sided piece of wood, one angle of which is square, used under the roofing on a flat roof where the horizontal surface abuts a vertical wall or parapet. The sloped transition facilitates roofing and waterproofing. *See also* **chamfer**.

**canvas** A closely woven cloth, usually made of cotton, used for tarpaulins, awnings, sun covers, and temporary canopies.

**canvas ceiling** A ceiling made of tightly stretched canvas.

**canvassing** A process used to repair uneven plaster. Performed by adhering canvas strips or other fabric-like material to the surface. Also provides a stable base for paint or wallpaper.

**canvas wall** A plaster wall with a canvas covering, that may be painted or wallpapered.

**cap** **1.** The top piece, often overhanging, of any vertical architectural feature or wall. A cap may be external, as on an outside wall or doorway; or it may be internal, as on the top of a column, pilaster, molding, or trim. **2.** A layered system of cover—whether natural soils, rock, synthetics, pavement, and/or polymeric liners—that controls hydrogeologic processes. **3.** Decorative molded cornice or projection covering the lintel of a window.

**capacitance** The property of a system that permits the storage of electronically separated charges when potential differences exist between the conductors. Expressed as a ratio of the quantity of electricity to the potential difference, usually measured in *farads* or *microfarads*.

**capacitor** A device used to introduce capacitance into an electric circuit. The device consists of conducting plates insulated from each other by a layer of dielectric material.

**capacitor motor** A single-phase induction motor with a main winding arranged for direct connection to a source of power and an auxiliary winding connected in series with a capacitor. The capacitor may be directly in the auxiliary circuit or connected to it through a transformer.

**capacity insulation** The properties of masonry that enable it to store heat: its mass, density, and specific heat.

# C

**Cape Cod house (cape)** A simple frame house with a shingled, steeply-pitched roof, central chimney, and one or one-and-a-half floors. The style originated in colonial Cape Cod, Massachusetts, and has evolved over hundreds of years into several popular variations.

**cap flashing** A section of flashing attached to a vertical surface in order to prevent water from entering behind the base flashing.

**capillary action** In subsurface soil conditions, the rising of water above the horizontal plane of the water table.

**capillary break** A space that is intentionally made large enough to prevent moisture flow by capillary action.

**capillary flow** The flow of moisture through any form, shape, or porous solid by means of capillary action.

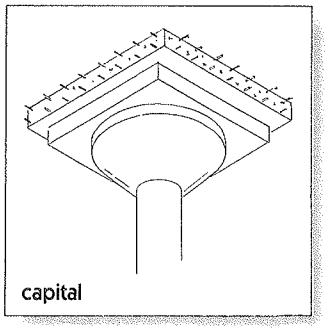
**capillary joint** A pipe or fitting connection made by melting a solder material at the edge of a slip fit so that it is drawn into the joint by capillary action and, on cooling, makes a tight joint.

**capillary space** A term used to describe air bubbles that have become embedded in cement paste.

**capillary tube** **1.** A small-diameter tube used in refrigeration to restrict the flow of refrigerant from the condenser to the evaporator. **2.** The small-diameter tubing used to connect temperature- and pressure-sensing bulbs to a control mechanism.

**capillary water** Water that, by virtue of capillary action, is either above the surrounding water level or has penetrated where a body of water would not normally go.

**capital** The top member of a column, pier, pillar, post, or pilaster; usually decorative.


capital

**capital, fixed** The total original value of physical facilities that is not carried as a current expense on the books of account and for which depreciation is allowed by the Federal Government. It includes plant equipment, building, furniture and fixtures, and transportation equipment used directly in the production of a product or service. It includes all costs incident to getting the property in place and in operating condition, including legal costs, purchased patents, and paid-up licenses. Land, which is not depreciable, is often included. Characteristically it cannot be converted readily into cash.*

**capital, working** The funds in addition to fixed capital and land investment which a company must contribute the project (excluding startup expense) to get the project started and meet subsequent obligations as they come due. Working capital includes inventories, cash and accounts receivable minus accounts payable. Characteristically, these funds can be converted readily into cash. Working capital is normally assumed recovered at the end of the project.*

**capitalization** The total value of a corporation's equity.

**capitalize** To increase the total value of a corporation's equity through expenditures that increase the evaluation of property, plant, and equipment.

**capital project** A project in which the cost of the end result or product is capitalized (i.e., cost will be depreciated). The product is usually a physical asset such as property, real estate, or infrastructure, but may include other assets that are depreciable.*

**cap load** The lumber supplies needed for construction of the first floor deck of a structure.

**cap molding (cap trim)** The molding or trim above a door or window casing.

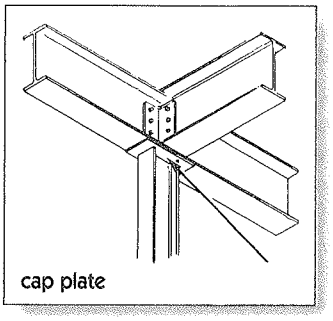
**cap piece** *See* **capping piece.**

**capping** The top component of an assembly after covering and weatherproofing a joint.

**capping brick** Brick that is used to cap off the top of a wall.

**capping piece (cap piece, cap plate)** The timber used to cover the top of a series of uprights or other vertical members.

**cap plate** The plate on top of a column or post that supports the load. *See also* **capping piece.**


cap plate

**cap screw** A threaded fastener that screws into a threaded hole rather than into a nut. Cap screws are specified by diameter, length, and thread pitch.

**cap sheet** The top ply of mineral-coated felt sheet used on a built-up roof.

**capstone** A stone segment in a coping.

**captain's walk** A walk or platform, with a view of the sea, on the roof of early New England-style houses.

**cap trim** *See* **cap molding.**

**caracole** **1.** A zigzag course or path. **2.** A spiral staircase.

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**car annunciator** The floor indicator panel or dial in an elevator.

**carbolineum** A wood preservative made of antracene oil and zinc chloride.

**carbon absorption** A water treatment system most often used for residential applications that removes the odor and unpleasant taste sometimes found in municipal water supplies. Carbon filters are not certified for removing VOCs, lead, coliform, or asbestos.

**carbonaceous** Material containing or composed of carbon, such as organic matter.

**carbon-arc cutting** A metal cutting process in which arc heat melts a path through metal. The arc is established between an electrode, which forms one terminal of an electric circuit, and the workpiece, which forms the other terminal.

**carbon-arc lamp** An electric-discharge lamp employing an arc discharge between carbon electrodes. One or more of the electrodes may have a core of special chemicals to enhance the discharge.

**carbon-arc welding** An arc-welding process in which the heat for fusion is generated by an electric arc between a carbon electrode and the workpiece.

**carbonation** The process of burning or converting a substance through chemical reaction into a carbonate. For example, the reaction between carbon dioxide and the calcium compounds in cement paste or mortar to produce calcium carbonate.

**carbon black** A fine carbon in the form of soot obtained by the direct impingement of a flame on a metal surface. Carbon black is used as a pigment to color paints and other materials.

**carbon dioxide ($CO_2$)** An odorless, incombustible gas emitted by respiration, organic decomposition, and fossil fuel combustion. Among its uses are fire extinguishers, aerosols, and refrigeration. Carbon dioxide is considered a greenhouse gas, because it traps radiation and effects global warming.

**carbon steel** Steel that owes its distinctive properties (primarily its strength) to the carbon it contains, as opposed to the characteristics imparted by other alloying elements.

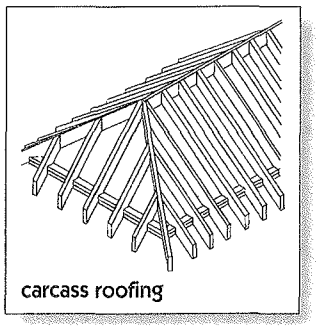
**carborundum** A combination of carbon and silicon that is used for woodworking and metalworking tools, blades, and abrasives.

**carcase** *See* **carcass.**

**carcass (carcase)** **1.** A body or shell without adornment or life. **2.** The structural framework of a building without walls, trim carpentry, masonry, etc.

**carcass flooring** The joists and associated structures that support the floorboards above and the ceiling below.

**carcass roofing** The roofing framework before the decking, membrane, shingles, etc., have been applied.


carcass roofing

**carcinogen** A cancer-causing substance.

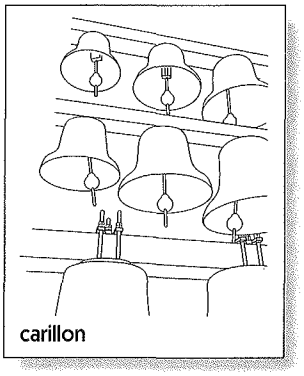
**card frame (card plate)** The small frame that attaches to a door surface for insertion of a name card or plate.

**cardinal change** A series of changes in the work that are so extensive and significant as to change the entire character of the work required by the contract, thereby constituting a breach of contract.

**card plate** *See* **card frame.**

**care, custody, and control** A feature of construction liability insurance policies that excludes damage to property in the care, custody, or control of the insured.

**carillon** A set of fixed bells sounded by striking with hammers operated either mechanically or from a keyboard. By extension, a bell tower or campanile.


carillon

**carnauba wax** A wax made from the leaves of the Brazilian wax palm. The wax is hard and is used in wood polishes and protective coatings.

**carpenter Gothic** Gothic-style architecture and ornamentation constructed of wood.

**carpenter's brace (bit brace)** A crank-shaped tool with a chuck on one end to hold a drill bit or auger. A hole is bored by rotating the crank.

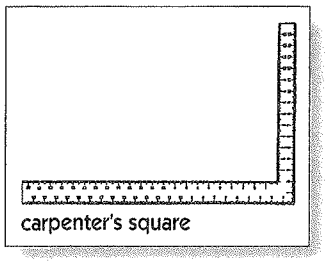
**carpenter's bracket scaffold** A scaffold that supports a platform using wood or metal brackets.

**carpenter's level** A hand tool used by carpenters to determine a horizontal or vertical plane or line. The level is a wood or metal bar about 2' long with four spirit levels set into it.

**carpenter's punch** A hand tool similar to a nail set, but with a long, slender neck. The punch removes nails by driving them through a piece of wood, rather than by pulling them out.

# C

**carpenter's square (framing square)** A flat, metal, L-shaped tool that constitutes an accurate right angle and is engraved with divisions and markings useful to a carpenter laying out and erecting framing.


carpenter's square

**carpet backing** The base material on the back of a carpet. The backing is usually made of jute, cotton, or carpet rayon, and may have a coating of latex.

**carpet bedding** Beds of low-growing plants, which may be used in ornamental design or as an erosion-preventing ground cover.

**carpet cushion (carpet underlayment)** A padding made of hair, felt, jute, foam, or sponge rubber that is placed on the floor before a carpet is laid. The cushion helps to provide resilience and extends the life of a carpet.

**carpet density** The number of pile rows per inch, for the length of the carpet.

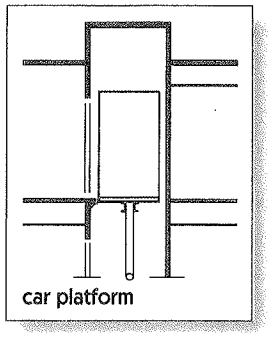
**carpet float** A tool used by plasterers to give texture to a sand finish. The tool consists of a wood float covered with a piece of carpeting. The density of the carpet determines the type of finish.

**carpet pitch** The number of yarns across the width of the carpet, expressed in yarn ends per 27" of width.

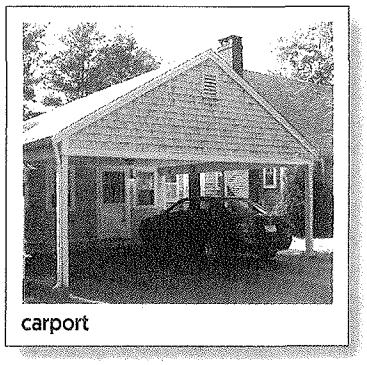
**carpet strip** **1.** A flat strip of molding used to fasten the edge of carpeting. **2.** A piece of wood or metal, approximately the same thickness as the carpet, installed at the edge of a carpet, as at a threshold.

**carpet underlayment** *See* **carpet cushion.**

**car platform** The structural floor of an elevator car that supports the load.


car platform

**carport** A roofed shelter for automobiles, usually attached along the side of a dwelling, with one or more sides open.


carport

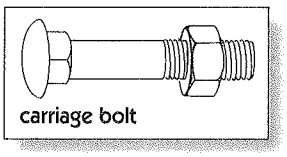
**carreau** A square or diamond-shaped piece of glass or tile used in ornamental glazing.

**carrel (cubicle)** A small alcove, as in a cloister or a library, for individual study.

**carrelage** Decorative tiling used particularly in terra-cotta flooring.

**carriage** The sloping beam that is installed between the stringers to support the steps of a wooden staircase.

**carriage bolt** A threaded bolt with a round, smooth head. The bolt is prevented from rotating in its hole by a square neck directly under the head.


carriage bolt

**carriage clamp** A clamp used in carpentry and cabinetry.

**carriage house** *See* **coach house.**

**carriage porch** A canopy structure that extends from the doorway of a building over a driveway.

**carrier angle** A metal angle attached to stair carriers or stringers to support the tread or riser.

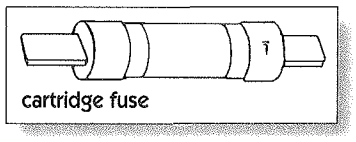
**carrier bar** A flat metal bar used to support stair treads or risers in a manner similar to carrier angles.

**carrier fitting** A support for a plumbing fixture that is also an integral part of the soil piping system.

**carrying channel** A three-sided metal molding used in the construction of a suspended ceiling.

**carryover** In a steam system, water that produces water hammer and may lead to pipe rupture.

**cartridge fuse** A low-voltage fuse consisting of a current-responsive element inside a cylindrical tube with a terminal on each end.


cartridge fuse

**cartridge heater** An electric heater in the shape of a cylindrical cartridge, with the heating coils at one end and a fan at the other.

**carvel joint** A flush, longitudinal joint between boards or planks with no tongues, grooves, or laps.

**cascade refrigerating system** Two or more refrigerating systems connected in series. The cooling coil of one system is used to cool the condenser of the next system. This type of system is an efficient way to produce and maintain ultra-low temperatures.

**case** **1.** A box, sheath, or covering. **2.** The process of covering one material with another; to encase. **3.** A

product or food display counter, such as a refrigerated case for displaying ice cream or frozen produce. **4.** A lock housing.

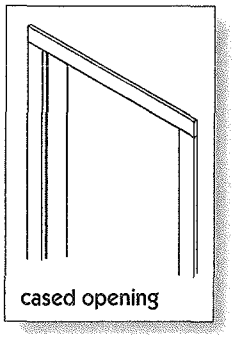
**case bay** The area of a building floor or roof between two beams or girders.

**cased beam** An exposed interior beam encased in finished millwork.

**cased frame (box frame, boxed frame, cased sash-frame)** The hollow frame for double-hung windows with sash weights. The weights travel in the hollow frame.

**cased glass (case glass, overlay glass)** Ornamental glass made of two or more layers with cuts so that sublayers may show.

**cased opening (trimmed opening)** An interior doorway or opening with all the trim and molding installed, but without a door or closure.


cased opening

**cased post** An exposed interior post or column encased in finished millwork.

**cased sash-frame** *See* **cased frame.**

**case glass** *See* **cased glass.**

**case-hardened** **1.** Term used to describe a steel or iron alloy with a hard surface developed by a special heat-treatment process. **2.** Timber whose outer fibers have dried too rapidly, thus causing checking and cracking.

**case-hardened glass** Glass that has been heated and quenched, thus giving it a hardness and strength several times greater than it originally possessed.

**casein glue** Glue made from the white amorphous phosphoprotein occurring naturally in milk. The glue is frequently used in carpentry and joinery.

**casein paint** A paint using the white amorphous phosphoprotein emulsion from milk as a base adhesive and binder.

**casement** **1.** A window sash that opens on hinges that are fixed on either side. **2.** A ventilation panel that opens on vertical hinges like a door. **3.** A casing.

**casement adjuster** A mechanism used in casement windows to hold them open in any position.

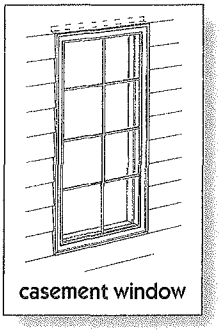
**casement door** **1.** A door consisting of a wooden frame around glass panels, which make up a major portion of the area of the door. **2.** A French door.

**casement molding** A deeply concave, curved molding. *See also* **scotia.**

**casement stay** The brace or bar used to hold a casement window open in any of several positions.

**casement ventilator** A ventilation panel that opens on hinges along one side.

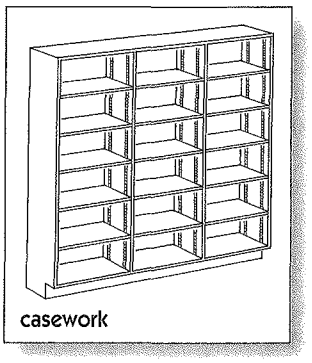
**casement window** A window assembly that has at least one casement or vertically hinged sash.


casement window

**case mold** A frame support, usually made of plaster, that holds smaller plaster pieces in position in a mold.

**case steel** *See* **case-hardened.**

**casework** A term for assembled cabinetry or millwork.


casework

**cash allowance** A sum included in the contract for construction that covers required items not specifically described. Any differences in cost between the total charges for these items and the cash allowance amount are handled through change orders.

**cash flow** The amount of cash a company or construction project generates, or fails to generate, over a specific period of time.

**cash flow (net)** The net flow of funds into or out of a project. The sum, in any time period, of all cash receipts, expenses, and investments. Also called cash proceeds or cash generated. The stream of monetary values—costs and benefits—resulting from a project investment.*

**cash flow management** The planning of project expenditures relative to income or authorized funding in such a way as to minimize the carrying cost of the financing of the project to keep within the constraints of a time-phased budget. This may be achieved by accelerating or delaying some activities, but at the risk of ineffective performance, late completion and consequent increased cost.*

**cash method** A method of accounting whereby expenses and revenues are recorded when the item of income or expense is actually paid or received in cash.

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# C

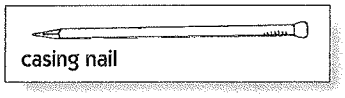
**casing** **1.** The exposed millwork enclosure of cased beams, posts, pipes, etc. **2.** The exposed trim molding or lining around doors and windows. **3.** The pipe liner of a hole in the ground, such as that used for a well, caisson, or pile.

**casing bead** A metal molding or wood strip that acts as a stop, an edge, or a separation between different materials.

**casing-bead door frame** A metal door frame used in plaster walls that includes a strip or molding along its outer edges as a ground or guide for the plaster.

**casing knife** A knife used to trim wallpaper around casing, molding, or other edges.

**casing nail** **1.** A nail with a very small head. **2.** A finishing nail.


casing nail

**cassoon** A deep panel in a ceiling or soffit.

**castable refractory** A dry-prepared mixture that, when reconstituted with water, becomes a concrete or mortar suitable for refractory use.

**casting** Any object that has been cast in a mold. The object may be made of iron, steel, plaster, concrete, plastic, or any other castable material.

**casting plaster** A plaster mixture with additives to provide properties desirable for casting work.

**cast-in-place concrete (in situ concrete)** Concrete poured into forms at its final location.

**cast-in-place pile (bored pile)** A concrete pile cast or formed at its permanent location. Such a pile can be cast with or without a casing.

**cast iron** An iron alloy cast in sand molds and machined to make many building products such as ornamentation, pipe and pipe fittings, and fencing.

**cast-iron boiler** A boiler made of cast-iron sections. Large cast-iron boilers may be transported in sections and assembled in place. Provides long-lasting, heavy-duty service.

**cast molding** A molding or molding component that has been cast, removed from the mold, and then fastened in place. The molding may be made of plaster, concrete, plastic, or some similar material.

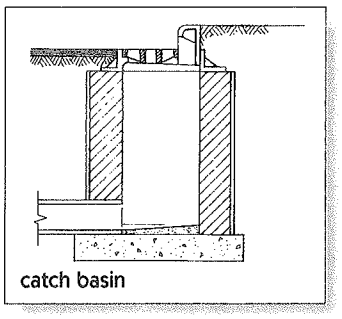
**cast stone** A mixture of paste or mortar, with an aggregate of stone chips or fragments. Has the appearance of stone when cast into the desired form or structural shape.

**catalyst** **1.** A substance that accelerates or retards chemical reactions. **2.** The hardener that accelerates the curing of adhesives, such as synthetic resins.

**catalytically blown asphalt** Asphalt that has had air with a catalyst blown through it while hot to give it the desired characteristics for a special use.

**catch** The fitting that mates with a latch or cam to lock a door, gate, or window.

**catch basin (catch pit)** A receptacle or reservoir that receives surface water runoff or drainage. Typically made of precast concrete, brick, or concrete masonry units, with a cast-iron frame and grate on top.


catch basin

**catch drain** A long drain installed across or along a slope to collect and convey surface water.

**catch pit** *See* **catch basin.**

**category** One of the divisions of the breakdown in construction specifications, smaller than a trade.

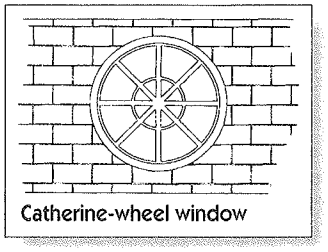
**catenary** The curve formed by a flexible cord hanging between two points of support, as in power lines strung between poles.

**catenary arch** An arch constructed on the curve of an inverted catenary.

**catface** A rough flaw in a finish coat of plaster.

**cathead** The top piece of a hoist tower to which pulleys or sheaves are attached.

**Catherine-wheel window** **1.** A round window with mullions like wheel spokes. **2.** A rose window.


Catherine-wheel window

**cathodic corrosion** *See* **electrochemical corrosion.**

**cathodic protection** A form of protection against electrolytic corrosion of fuel tanks and water pipes submerged in water or embedded in earth. Protection is obtained by providing a sacrificial anode that will corrode in lieu of the structural component, or by introducing a counteracting current into the water or soil. This type of protection is also used for aluminum swimming pools, cast-iron water mains, and metal storage tanks.

**cat ladder (gang boarding roof ladder)** A board with a series of cross pieces nailed to it, used to provide footing on steep surfaces like a slope of a roof.

**cat's eye** In a piece of lumber, a small knot 1/4" or less in diameter.

**cat short** A colloquial term for the bracing lumber used to strengthen wall construction. Cat shorts are placed horizontally between wall studs about halfway up the wall. *See also* **blocking (1.)**.

**catslide** **1.** The term used in the southern United States for a *saltbox* home. **2.** The long pitched roof at the rear of a saltbox, which often sweeps down to the ground.

**catwalk** A small, permanent walkway, usually elevated, to provide access to a work area or service/maintenance access to lighting units, stage draperies, etc.

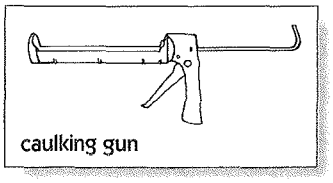
**caul** A sheet of metal or plywood used to protect the surface of a sheet of plywood, particle board, or fiberboard from the presses during molding.

**caulk (calk)** **1.** To fill a joint, crack, or opening with a sealer material. **2.** The filling of joints in bell-and-spigot pipe with lead and oakum.

**caulking (calking)** A resilient silicone- or rubber-based compound used to prevent infiltration of water or outside air.

**caulking ferrule** A metal ring, usually brass, that is sealed with caulk.

**caulking gun** A hand or power tool that extrudes caulking material through a nozzle.


caulking gun

**caulking recess** In plumbing, the space between the bell or hub of one piece of pipe and the spigot that is inserted into it. The space is filled with caulking.

**causeway** A passage or roadway that has been raised above wet ground.

**caustic** An alkaline material that has a corrosive or irritating effect on living tissue.

**caustic dip** A strong cleaning solution into which materials are immersed.

**caustic etch (frosted finish)** A finish or decorative design produced on glass or other materials by a corrosive chemical.

**caustic lime** A material, white when pure, that is obtained by calcining limestone, shells, or other forms of calcium carbonate. Caustic lime is also called *quicklime* or *burnt lime* and is used in mortars and cements.

**cavil** *See* **kevel.**

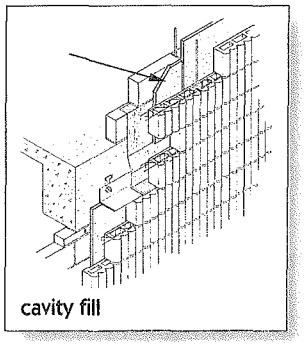
**cavitation** The formation of a cavity or hollow in a fluid, as in the partial vacuum in water around a rapidly revolving propeller.

**cavitation damage** **1.** The pitting damage done to propellers, turbine wheels, or other rotating equipment. **2.** The pitting of concrete due to the collapse of bubbles in flowing water.

**cavity** The empty space between studs and joists.

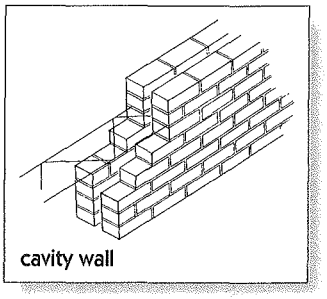
**cavity batten** A length of wood placed in a cavity wall to catch mortar droppings during construction.

**cavity fill** Material placed in the hollow of a wall, ceiling, or floor to provide insulation or sound deadening.


cavity fill

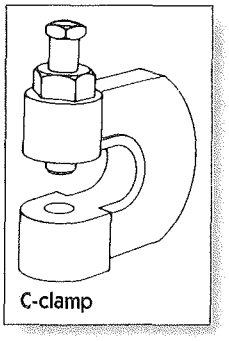
**cavity flashing** The continuous waterproof barrier that covers the longitudinal opening in a cavity wall.

**cavity wall (hollow masonry wall, hollow wall)** An exterior masonry wall in which the inner and outer wythes are separated by an air space, but tied together with wires or metal stays.


cavity wall

**C/B ratio saturation coefficient** The ratio of the weight of water absorbed by a masonry brick or block immersed in cold water to the weight absorbed when immersed in boiling water. This is a measure of the resistance of the masonry to spalling due to freezing and thawing.

**C-clamp** A C-shaped clamp frequently used in carpentry and joinery. Force is applied by rotating a threaded shaft through one jaw of the C to force the work against the other jaw.


C-clamp

**cease and desist order** An order from an administrative entity directing a party to refrain from unlawful specified conduct or action.

**cedar** A softwood with reddish heartwood and white sapwood noted for decay resistance and used for shingles, shakes, posts, and gutters.

**ceiling** **1.** The overhead inside lining or finish of a room or area. **2.** Any overhanging surface viewed from below.

# C

**ceiling area lighting** A lighting system in which the entire ceiling functions as a single large luminaire. This lighting includes luminous and louvered ceilings.

**ceiling cornice** The molding installed at the intersection of the wall and ceiling planes.

**ceiling diffuser** Any air diffuser, located in a ceiling, through which warm or cold air is blown into an enclosure. The diffuser is designed to distribute the conditioned air over a given area.

**ceiling fitting** A fitting, usually electrical, that is attached to a ceiling, such as the attaching part of a ceiling light fixture.

**ceiling flange** An escutcheon or cover placed around holes in ceilings through which pipes pass or sprinkler heads protrude.

**ceiling floor** Framing intended to support a ceiling, but not a floor.

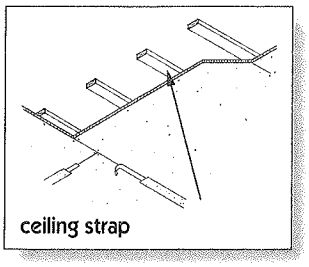
**ceiling height** The distance between a room's finished ceiling and floor.

**ceiling outlet** In a ceiling, a metal or plastic junction box that supports a light fixture and encloses the connecting fixture wires.

**ceiling plenum** In air conditioning systems, the air space between a hung ceiling and the underside of the floor or roof above. Acts as a return to the air handling unit.

**ceiling sound transmission** The transmission of sound between adjacent rooms through the ceiling plenum above.

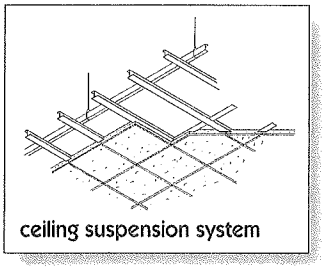
**ceiling strap** Wood strips nailed to the bottom of roof rafters or floor joists for the support or suspension of a ceiling.



ceiling strap

**ceiling strut** A temporary brace suspended from an overhead structure or framing and used to hold door frames in place while the adjacent walls are being constructed.

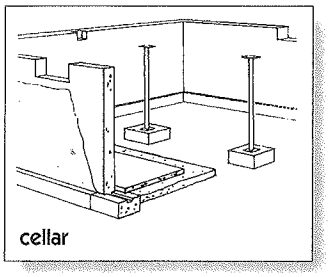
**ceiling suspension system** A gridwork of metal rails and hangers erected for the support of a suspended ceiling and ceiling-mounted items, e.g., air diffusers, lights, fire detectors, etc.



ceiling suspension system

**ceiling switch** A chain pull switch.

**cellar** A room or set of rooms below or predominantly below grade, usually under a building.



cellar

**cellar hole** The excavation for a cellar.

**cellular concrete (aerated concrete)** Concrete that has had gas-forming chemicals mixed with the basic ingredients, so that the final set material is lighter than ordinary concrete, due to its porosity. This type of concrete is often used as insulation when it is placed over a roof slab.

**cellular construction** Construction with concrete components that have been cast with voids for sound and thermal insulation and for decreased weight.

**cellular-core door** A hollow-core door filled with a lightweight, honeycomb-shaped, expanded material to provide rigidity and support.

**cellular floor** A flooring system that incorporates prefabricated raceways for telecommunications and electrical wiring.

**cellular framing** A method of framing in which the walls are composed of cells, with the cross walls transmitting the bearing loads to the foundation.

**cellular material** Material that contains voids or air pockets.

**cellular plastic** Plastic molding or extrusion with a pattern of cells that give it rigidity and reduce its weight.

**cellular raceway** A channel in a modular floor or wall that may be used as a raceway for electrical conductors.

**cellular striation** A pattern in a material that contains an integral layer of cells or voids.

**celluloid** A thermoplastic material often used in thin sheets because of its good molding properties.

**cellulose** A naturally occurring substance made up of glucose units. Constitutes the main ingredient in wood, hemp, and cotton, and is used in many construction products.

**cellulose acetate** Any of several water-insoluble compounds formed by the action of acetic acid, anhydride of acetic acid, and sulfuric acid on cellulose. Used for making lacquers, varnishes, rayon, and packaging sheets.

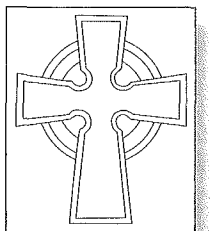
**cellulose enamel** A lacquer paint made with a cellulose base.

**cellulose fiber insulation** A loose-fill insulation of recycled wood-based fiber with chemicals introduced to provide properties such as flame resistance.

**cellulose fiber tile** A sound-absorbing acoustical tile made from cellulose fiber.

**Celsius scale** A thermometer in which the interval between the freezing point and boiling point of water is divided into one hundred parts or degrees. Named after Aners Celsius, a Swedish astronomer. Also called a *centigrade thermometer.*

**Celtic cross** A cross formed from a long vertical column, a shorter horizontal bar, and a circle about their intersection.


Celtic cross

**cement** Any chemical binder that makes bodies adhere to it or to each other, such as glue, paste, or Portland cement.

**cement-aggregate ratio** The ratio of cement to aggregate in a mixture, as determined by weight or volume.

**cement-asbestos board** A hard, noncombustible board fabricated from asbestos fibers impregnated and bonded with cement. Formerly used as roofing slates and wall shingles.

**cementation** The firming and hardening of a cementitious material.

**cement board (cement backer board)** A water-resistant wallboard made of concrete faced with fiberglass on both sides. Commonly used as an underlayment in wet areas like bathtub surrounds and as a backer for ceramic tile. Brand names include Durock® and Wonder Board®.

**cement block** An inaccurate term, usually in reference to concrete block or to a hollow or solid-cast masonry unit.

**cement clinker** A lump or ball of fused material, usually 1/8" to 1" in diameter, formed by heating cement slurry in a kiln. When cool, the clinker is interground with gypsum to form cement.

**cement-coated nail** A nail coated with cement to increase its friction and holding power.

**cement content (cement factor)** The quantity of cement per unit volume of concrete or mortar, expressed in pounds or bags per cubic yard.

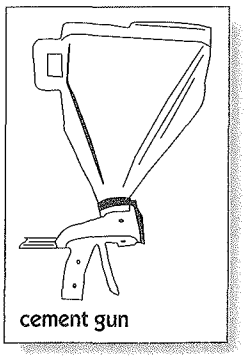
**cement factor** *See* **cement content.**

**cement fillet (weather fillet)** A mortar bead or caulk used in place of flashing to provide a watertight seal in the joint between roofing and a wall.

**cement gravel** Gravel bound together in nature by clay or some other natural binding agent.

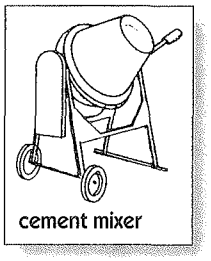
**cement grout** **1.** A thin, watery mortar or plaster that is pumped or forced into joints, cracks, and spaces as an adhesive sealer. **2.** A mixture that is pumped into the soil around a foundation to firm it up and provide better load-bearing characteristics.

**cement gun** A tool used for spraying or injecting cement grout or mortar material.


cement gun

**cementitious** Capable of setting like a cement.

**cement mixer** **1.** A concrete mixer. **2.** A container used to mix concrete ingredients by means of paddles or a rotary motion. The container may be manually or power-operated.


cement mixer

**cement mortar** A plastic building material made by mixing lime, cement, sand, and water. Cement mortar is used to bind masonry blocks together or to plaster over masonry.

**cement paint (concrete paint)** Paint containing white Portland cement and usually applied over masonry surfaces as a waterproofing.

**cement paste** A mixture of cement and water.

**cement plaster** Plaster containing Portland cement as the binder and commonly used on exterior surfaces or in damp areas.

**cement, Portland** A fine gray powder made from three main ingredients: silica, alumina and lime. May also include slag or flue dust. Used as a base material for mortar and concrete.

**cement rendering** A wash of Portland cement and sand applied over a surface.

**cement rock (cement stone)** A natural, impure limestone that contains the ingredients for the manufacture of Portland cement.

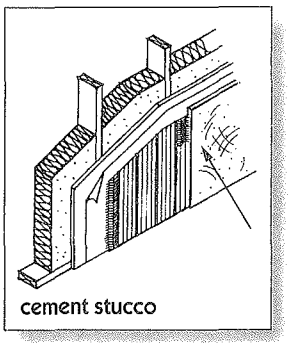
**cement screed** *See* **screed.**

**cement slurry** A thin, watery cement mixture for pumping or for use as a wash over a surface.

**cement stone** *See* **cement rock.**

# C

**cement stucco** **1.** A mixture of Portland cement, sand, and a small percentage of lime. Used to form a hard covering for textured exterior walls. **2.** A fine plaster used for interior decorations and moldings.


cement stucco

**cement temper** The addition of Portland cement to lime plaster to improve its strength and durability.

**cement-wood floor** The addition of sawdust to a mixture of Portland cement and sand for use as a poured floor.

**center** **1.** A point that is exactly halfway between two other points or surfaces. **2.** A point equidistant from all points on the circumference of a circle. **3.** The internal core of a built-up construction.

**center bit** A cutter used for boring holes in wood. The cutting end consists of a sharp, threaded screw for guidance and for pulling the tool deeper into the work piece. The bit also has a scorer for marking the outline of the hole and a lip for cutting away the wood inside the hole. The other end of the bit is usually a tapered rectangular block that is clamped in the chuck of a brace.

**center-hung door (center-pivoted door)** A door that is supported by, and swings about, pivot pins. The pins are inserted into or attached to the door on the center line of its thickness.

**center-hung sash** A window sash hung so that it rotates horizontally about hinge pins at its center. To open, the top part of the window swings into the room and the bottom part projects outside the building.

**centering** **1.** The temporary support for a masonry arch while the arch is being built. **2.** The temporary forms for all supported concrete work.

**center line** A line of alternating long and short segments that indicates the center of a particular object. Frequently labeled with the letter C superimposed over the letter L.

**center of gravity (center of mass)** The location of a point in a body or shape about which all the parts of the body balance each other.

**center of mass** *See* **center of gravity.**

**center pivot** **1.** The pins of a window sash that are centrally located in the frame so that the window rotates horizontally about its center line. **2.** The pivot pins of a door that support the door on the center line of its thickness.

**center-pivoted door** *See* **center-hung door.**

**center punch** A tool for making starter indentations in metal where a hole is to be drilled. The punch has a sharp conical point on one end and is hit by a hammer on the other end.

**center rail** The horizontal portion or member that separates the upper and lower sections of a recessed panel door.

**center stringer** The structural member of a stair system that supports the treads and risers at the midpoint of the treads.

**center-to-center (on center)** The distance from the center line of one beam, part, or component of a structure to the corresponding center line of the next similar unit (for example, center-to-center of rafters or joists).

**centimeter** A metric unit of length equal to one one-hundredth of a meter. One inch equals 2.54 cm.

**central-mixed concrete** Concrete that is mixed in a stationary mixer and then transported to the site, as opposed to *transit-mixed concrete*.

**central system** A system that utilizes a single source and distribution system for an area. Examples are central heating and/or air-conditioning systems, central power systems, and central water systems.

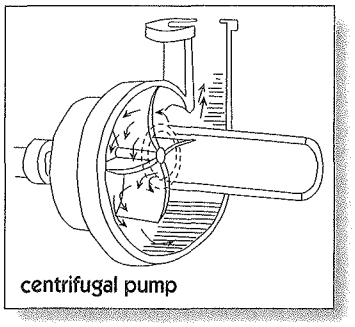
**centric load (concentric load)** A load applied perpendicular to the neutral axis of a beam or column. The load acts through the geometric center (centroid) of gravity.

**centrifugal chiller** A gas compressor used for chilling in which the compression is obtained by centrifugal force.

**centrifugal compressor** An air or gas compressor in which the compression is obtained by centrifugal force.

**centrifugal force** The force away from the center of a rapidly spinning impeller.

**centrifugal pump** A pump that draws fluid into the center of a rapidly spinning impeller and uses the force of the spin (centrifugal force) to impart pressure and velocity to the fluid as it leaves the periphery.


centrifugal pump

**ceramic** Items made of clay or similar materials that are baked in a kiln to a permanent hardness. Ceramic products include pottery, tile, and stoneware.

**ceramic coating** A coating made of a nonmetallic mineral, such as clay, and compounded to provide the desired properties when baked or cured. A coating is usually applied to metals to provide heat or abrasive-wear protection.

**ceramic-faced glass** Glass that has had ceramic material fused to it during the heating and tempering process.

**ceramic glaze** A material that is applied over a clay product and then baked to produce a hard, vitreous, glassy surface. The glaze may be transparent or colored.

**ceramic granules** A coating applied to asphalt roof shingles to reflect heat, increase durability and provide color.

**ceramic mosaic tile** Small, unglazed tiles commonly used for flooring and walls. Patterns of various colors and shapes are first placed on sheets for ease in laying.

**certificate** A written document appropriately signed by responsible parties testifying to a matter of fact in accordance with a requirement of the contract documents.

**certificate for insurance** A document prepared by an insurance company or its agent that states the period of time for which the policy is in effect, along with the types and amounts of coverage for the insured.

**Certificate of Appropriateness** An authorization, awarded by a preservation commission or local architectural review board, allowing alteration, demolition, or new construction to a historic site, provided the changes are consistent with the property's character.

**certificate of occupancy** A written document issued by the governing authority in accordance with the provisions of the building permit. The certificate of occupancy indicates that, in the opinion of the building official, the project has been completed in accordance with the building code. This document gives the owner permission from the authorities to occupy and use the premises for the intended purpose.

**certificate of payment** A statement issued by a design professional notifying the owner of the amount due to a contractor for work completed and/or the delivery or storage of building materials.

**certified ballast** Fluorescent lighting manufactured to meet standards set by the Certified Ballast Manufacturer's Association.

**certified construction specifier** A construction professional who, by experience and examination by the Construction Specifications Institute, has been certified as proficient in the knowledge and art of preparing technical specifications for the construction process.

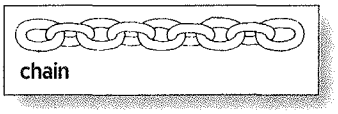
**certified forest product** A product created from materials obtained from forests that have met specific environmental guidelines, and that are certified for use in green construction. *See also* **Forest Stewardship Council**.

**certified output rating** The output capacity of a piece of equipment or machinery that is accepted as meeting the standards of the government regulatory body or trade organization.

**certified wood** Wood from well-managed forests that replenish, rather than deplete, old growth timber.

**cesspool** A lined excavation in the ground that receives the discharge of a drainage system, especially from sinks and water closets, and is designed to retain the organic matter and solids, while permitting the liquids to seep through the bottom and sides.

**chain** **1.** A unit of length used by land surveyors (*Gunter's Chain*): 7.92" = 1 link; 100 links = 66' = 4 rods = 1 chain; 80 chains = 1 mile. **2.** An engineer's chain is equal to 100'. **3.** A series of rings or links of metal connected to each other to form useful lengths.



chain

**chain block (chain hoist)** A grooved pulley or sheave suitable for chain. Typically, a chain hook is provided for hoisting or hauling.

**chain bolt** A spring bolt at the top of a door that is operated by pulling an attached chain.

**chain course** A bond course formed by masonry headers and held in place by cramps.

**chain door fastener** A chain that can be secured by a slide bolt between a door stile and a door jamb to allow the door to be opened slightly while remaining securely fastened.

**chain fall** An assembly of chain with blocks or pulleys for hoisting or pulling a heavy load.

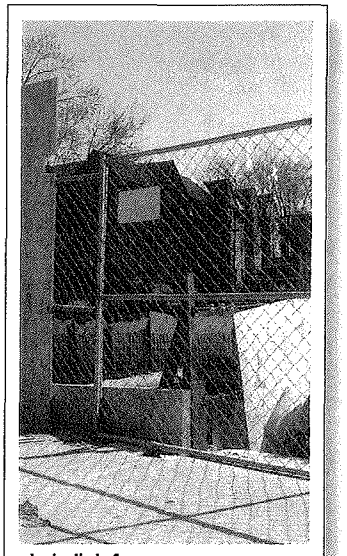
**chain hoist** *See* **chain block**.

**chaining** The process of measuring a distance using a surveyor's chain.

**chaining pin** A metal pin used for marking measurements on the ground.

**chain intermittent fillet weld** An interrupted fillet weld on both sides of a joint. The weld segments are opposite one another.

**chain link fence** A fence made of steel wire fabric supported by metal posts.



chain link fence

# C

**chain molding** A molding carved to simulate the appearance of a chain.

**chain-pipe vise** A pipe vise that uses a chain to restrain a pipe.

**chain-pipe wrench (chain tongs)** A wrench for turning or restraining pipe. The wrench consists of a lever handle with a serrated jaw. The jaw is held in contact with the pipe by a roller chain that wraps around the pipe.

**chain pull switch** An electrical switch that is operated by pulling a bead chain. Frequently, this type of switch is an integral part of a light bulb socket.

**chain pump** A pump in which an endless chain with disks mounted on it is pulled through a pipe to move viscous material.

**chain riveting** A type of riveting in which the rivets are placed in parallel adjacent rows. Chain riveting is not as strong as the staggered riveting pattern, which has more tear material between rivets.

**chain saw** A gas- or electric-powered saw having cutting teeth running around a bar of flat steel. Used for cross-cutting logs, etc.

**chain scale** An engineer's scale on which the inch divisions are subdivided into 10 parts, or multiples of 10, such as 20, 30, 40, 50, etc.

**chain timber** Large beams built horizontally into a masonry wall to provide support and a tie-in during construction.

**chain tongs** *See* **chain-pipe wrench.**

**chain trencher** A machine that uses a chain belt to excavate a trench.

**chair** **1.** A frame built into a wall to provide support for a sink, lavatory, urinal, or toilet. Also called a *carrier*. **2.** In concrete construction, a small metal or plastic support for reinforcing steel. The support is used to maintain proper positioning during concrete placement.

**chair rail** A horizontal piece of wood attached to walls to prevent damage to plaster or paneling from the backs of chairs.

**chalk** A soft limestone, white, gray, or buff-colored, composed of the remains of small marine organisms. In construction, chalk is commonly dyed blue and used with a chalk line or snap line for marking lines.

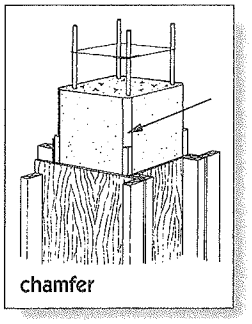
**chalked** A term for porcelain enamel that has lost its hard, glossy surface and is powdery when rubbed.

**chalking** A surface condition in which the binder of a coating breaks down so that the pigment comes off on anything touching it, or is washed away by rain, as can happen, for example, with self-cleaning white paint.

**chalk line** **1.** A light cord that has been surface-coated with chalk (usually blue) and is used for marking. **2.** The line left by a chalked string.

**chamber test** A test developed and conducted by Underwriters' Laboratories to determine the fire-hazard classification of building materials.

**chamfer** The beveled edge formed at the right-angle corner of a construction member. *See also* **cant strip.**



chamfer

**chamfer bit** A tool bit for beveling the upper edge of a hole in wood so that a flat-head wood screw can be driven flush with the wood surface.

**chamfered rustication** Masonry work in which the corner edge around the exposed face of each block is deeply chamfered, and the joint mortar is recessed, so that between two adjacent blocks an internal right angle is formed.

**chamfer plane** A carpenter's plane designed for cutting chamfers.

**chamfer stop** Any ornamentation or construction piece that ends or blocks the continuation of a chamfer.

**chamfer strip** *See* **cant strip.**

**chancel** An area in the front of a church that is reserved for use by the clergy and choir.

**chancel aisle** The side aisle of a chancel.

**chancel arch** An arch employed in some church designs to indicate the separation of the church body (*nave*) from the chancel or sanctuary.

**chancel rail** A railing or barrier used in place of a screen to separate the church body (*nave*) from the chancel.

**chancel screen** The screen that separates the church body from the chancel.

**chancery** **1.** A room, suite of rooms, or building used as a court of record or office of records. **2.** A chancellor's court or office; a secretariat.

**chandelier** A branched light fixture that is often ornate, and usually suspended from a ceiling.

**chandlery (chandry)** A place where lamps, candles, and other lighting supplies were kept before electricity was available.

**chandry** *See* **chandlery.**

**change** In construction, a deviation in the design or scope of the work as defined in the plans and specifications that are the basis for the original contract.

**change, constructive** An act or failure to act by the owner or the engineer that is not a directed change, but which has the effect of requiring the contractor to accomplish work different from that required by the existing contract documents.*

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**change documentation/log** Records of changes proposed, accepted and rejected.*

**change in scope** A change in the defined deliverables or resources used to provide them.*

**change in sequence** A change in the order of work initially specified or planned by the contractor. If this change is ordered by the owner and results in additional cost to the contractor, the contractor may be entitled to recovery under the changes clause.*

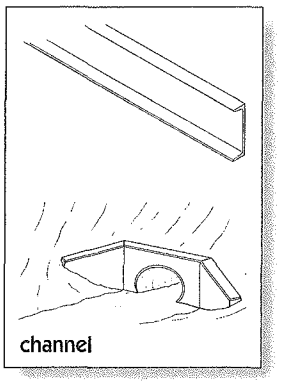
**change management** The formal process through which changes to the project plan are identified, assessed, reviewed, approved and introduced.*

**change order** Written authorization provided to a contractor approving a change from the original plans, specifications, or other contract documents, as well as a change in the cost. With the proper signatures, a change order is considered a legal document.

**changeover point** That temperature and time at which a building requires neither heating nor cooling.

**changes in the work** Changes to the original design, specifications, or scope of work as requested by the owner. All changes in the work should be documented on change orders. *See also* **change order.**

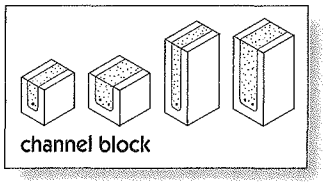
**channel** **1.** A structural steel member shaped like a "U." **2.** In glazing, a U-shaped member used to hold a pane or panel. **3.** A watercourse, usually manmade. **4.** The suspension system for a suspended ceiling. **5.** A path for the transmission and reception of electromagnetic signals between two or more points.


channel

**channel bar** *See* **channel iron.**

**channel beam** A construction member with a U-shaped cross section.

**channel block** A hollow concrete masonry block with a groove or furrow in it to provide a continuous recess for reinforcing steel and grout.


channel block

**channel clip** A metal spring clip used to support perforated metal pans in a suspended ceiling system.

**channel cutter** A hand tool used to cut light-gauge metal framing.

**channel glazing** A window glazing system in which glass panels are set in a U-shaped channel using removable beads or glazing stops.

**channeling** Decorative fluting or grooving, as in the grooves in a vertical column.

**channel iron (channel bar)** A U-shaped, rolled, structural steel member, the web of which is always deeper than the width of the flanges. The web depth is the size of the channel.

**channel pipe** A section of pipe with the top quarter or half removed. Channel pipe is used for directing flow in a manhole.

**channel runner** A primary horizontal support in a suspended ceiling system.

**channel section** A U-shaped section. *See also* **channel.**

**chantlate** The piece of wood across the rafters at the eaves and projecting so as to prevent rainwater from running straight down the wall.

**charcoal filter** **1.** A filter containing pulverized charcoal for removing odors, smoke, and vapors from the air. **2.** A filter for purifying and cleaning water.

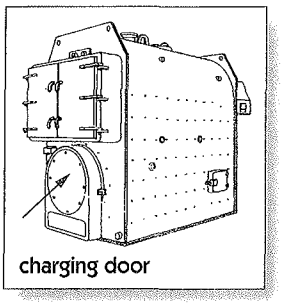
**charette** **1.** The push or effort to complete an architectural problem within a specified time. **2.** A meeting held early in the design phase of a project during which the design team, contractors, end users, community stakeholders, and technical experts are brought together to develop goals, strategies, and ideas for maximizing the environmental performance of the project.

**charge** **1.** A quantity of explosives set in place. **2.** A load of refrigerant in a refrigeration or air-conditioning system.

**charging** **1.** The insertion of refrigerant into a refrigeration or air-conditioning system. **2.** The insertion of a predetermined mixture or quantity of materials into a concrete mixer, furnace, or other piece of processing equipment.

**charging chute** An enclosed slide in which waste material is dumped and subsequently fed into an incinerator.

**charging door** The door of a furnace or incinerator through which loads or charges are inserted.


charging door

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# C

**Charpy test** A measurement of material strength at impact. A specimen, usually notched, is struck by a pendulum at a velocity of 17.5 feet per second. The energy absorbed in the fracture is then measured.

**chase** A continuous enclosure in a structure that acts as a housing for pipe, wiring conduits, ducts, etc. A chase is usually located in or adjacent to a column, which provides some physical protection.

**chase bonding** The continuous vertical joint bond by which new masonry is joined to an older existing wall.

**chase mortise (pulley mortise)** A mortise or recess cut into a beam or structural member that has one side elongated and sloped to allow the tenon to be rotated in place from the side when space will not permit a direct perpendicular insertion.

**chase wedge** A wedge-shaped hand tool used for bossing and forming soft materials, such as lead and copper.

**chat** A stony material used as a base in asphalt paving.

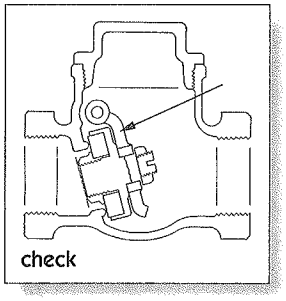
**chattel** Any item of property, movable or immovable, except real estate or a freehold.

**chattel mortgage** A mortgage or security interest in personal property as collateral for a loan.

**chatter marks** The marks left on a work piece by a vibrating tool.

**cheapener** An additive in paint that is used to impart desirable characteristics to or extend coverage of the paint. Cheapener does not necessarily make the paint cheaper in cost.

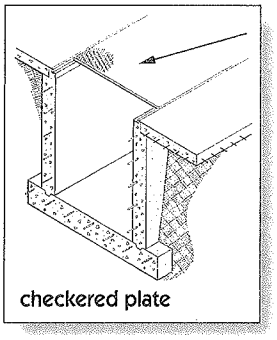
**check** **1.** A flapper or valve that permits fluid to flow in one direction only. **2.** An attachment that regulates movement, such as a door check. **3.** A small split in wood that runs parallel to the grain. Caused by shrinking during drying.



check

**check cracks** *See* **check (3.)** *and* **checking.**

**checkered plate** A metal plate with a waffle-like pattern of squared projections cast or rolled into its surface.



checkered plate

**check fillet** A water-control barrier or curb used on roofs.

**checking (alligatoring, check cracks, map cracks, shelling)** **1.** Small cracks that appear in paint or varnish, but which usually do not expose the base material. **2.** Small, closely spaced, irregular surface cracks in concrete, mortar, or plaster. *See also* **crazing.**

**checking floor hinge** A mechanism fixed on or in the floor that acts both as a door hinge and a closing speed controller.

**check lock** A small, supplementary lock designed to control the bolt or action of a larger lock.

**check nut (locknut)** A second nut, usually thin, that is installed on a bolt or shaft and tightened against the first nut to prevent it from vibrating or shaking loose.

**check rail** The horizontal meeting rail of a double-hung window.

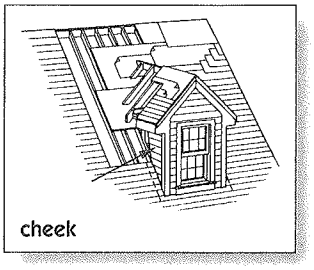
**check stop** A molding strip or bead used to restrain a sliding unit such as a window sash.

**check strip** A bead or molding used for parting.

**check throat** The groove cut longitudinally along the underside of window and door sills to prevent rainwater from running back to the building wall.

**check valve (back-pressure valve, clack valve, reflux valve)** A valve designed to limit the flow of fluid to one direction only.

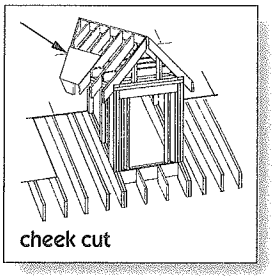
**cheek** In general, the side of any feature, such as the side of a dormer.



cheek

**cheek boards** **1.** The vertical stops or bulkheads placed at the ends of a concrete wall form. **2.** Trim applied to the side of a dormer.

**cheek cut (side cut)** The oblique cut made in a rafter or jack rafter to permit a tight fit against a hip or valley rafter or to square the lower end of a jack rafter.



cheek cut

**cheesiness** A term used to describe the property of paint that has partially dried and can be torn and shredded.

**chemical bond** A bond between similar materials caused by the interlocking of their crystalline structures. Once formed, there is no defined parting line in the bond that would permit a clean separation.

**chemical brown stain** The brown stain that appears during kiln- or air-drying of lumber due to changes in the concentration of moisture in the wood.

**chemical closet (chemical toilet)** A toilet that contains or recirculates a chemical that breaks wastes down while serving as a disinfectant and deodorant. It does not use water to flush and carry away sanitary waste to a public septic system.

**chemical flux cutting** The use of a chemical compound or flux to expedite oxygen torch cutting.

**Chemical Hazard Response Information System (CHRIS)** A series of monographs prepared for the U.S. Coast Guard, each of which provides detailed information on the hazards of a particular chemical.

**chemically foamed plastic** Spongy or cellular plastic material formed by the gas-producing action of its component chemical compounds.

**chemical membrane** A material applied to fresh concrete to aid curing by inhibiting evaporation.

**chemical oxidation** A chemical process that causes the loss of electrons from an element or ion.

**chemical stability** The tendency of a substance to remain unchanged over a wide range of physical, environmental, and chemical conditions.

**chemical stabilization** The introduction of chemicals into soil to increase its bearing strength and decrease its permeability.

**chemical toilet** *See* **chemical closet.**

**cherry picker** A powered lift for raising workers or materials. Consists of a basket or a lift attached to the end of a telescoping boom, and may be either self-propelled or mounted on a truck.

**chert** An impure, flintlike rock, usually dark in color. Some of its common impurities react with cement, making its use as an aggregate undesirable for certain applications.

**chevron** **1.** A V-shaped stripe that may point up or down. Used as a distinguishing mark to indicate rank or service. Architecturally, it may be used as an ornamental repeating pattern on molding or trim. **2.** On a gable roof, the place where the rafters meet at the ridge.

**chevron slat** A V-shaped configuration used in fences and other architectural elements to provide privacy while permitting ventilation.

**Chicago window** A large fixed sash flanked with narrow sashes on either side, first used by Chicago School architects in the late 19th century.

**chicken ladder** A board with wood strips or cleats nailed across it at regular intervals to provide safe footing across a void or on an inclined surface like a roof.

**chiding** A method of gilding.

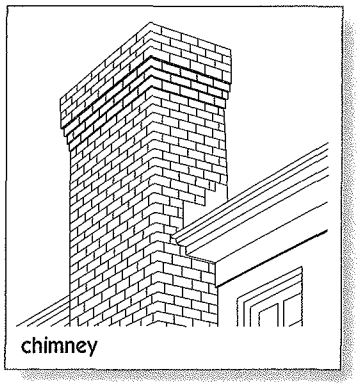
**chilled-water refrigeration system** A cooling system in which cold water is circulated to remote cooling coils/blower units.

**chiller** A piece of equipment that utilizes a refrigeration cycle to produce cold (chilled) water for circulation to the desired location or use. *See also* **absorption chiller** *and* **compression chiller.**

**chilling** The process of applying refrigeration in moderation so as to achieve cooling without freezing.

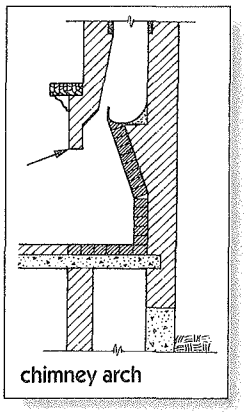
**chimbley** A regional term for chimney.

**chimney** A vertical, noncombustible structure with one or more flues to carry smoke and other gases of combustion into the atmosphere.


chimney

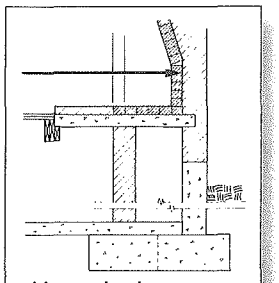
**chimney apron** The metal flashing built into the chimney and roof at the point of penetration. Serves as a moisture barrier.

**chimney arch** The upper structure over a fireplace.


chimney arch

# C

**chimney back** The inside back wall of a fireplace, which may be made of fire-brick masonry or ornamental metal, and is intended to reflect heat out into the room.


chimney back

**chimney bar (turning bar)** A lintel bar of iron or steel that bridges the fireplace opening. It is supported by the side masonry, and in turn supports the masonry above the opening.

**chimney block** Solid concrete blocks cast as segments of a circle for laying up or building round flues.

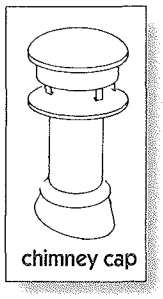
**chimney board** A board or screen used to cover or block the opening of a fireplace when it is not being used.

**chimney bond** A pattern of stretcher bond used in laying up the internal brickwork in masonry chimneys.

**chimney breast (chimney piece)** That part of the front of a fireplace that projects out into the room.

**chimney can (chimney pot)** A cylindrical extension placed on top of a chimney to improve the draft. It can be masonry or metal.

**chimney cap (bonnet, chimney head)** **1.** The slab or masonry top piece on a chimney. **2.** A metal top piece designed to minimize rainfall down the flue while improving the draft.


chimney cap

**chimney cheek** The masonry on either side of a fireplace opening that supports the mantel and the upper chimney construction.

**chimney connector** The smokepipe or metal breeching that connects the top of a stove, furnace, water heater, or boiler to a chimney flue.

**chimney corner (inglenook, roofed ingle)** A small area or alcove beside a fireplace, frequently with built-in benches.

**chimney cowl** An elaborate chimney pot for improving drafts.

**chimney crane** A swinging iron arm attached to the inside of a fireplace to support cooking pots over the fire.

**chimney cricket (saddle)** A small false roof built behind a chimney on the main roof to divert rainwater away from the chimney.

**chimney crook (chimney hook)** An extension bar that hangs on the chimney crane and supports cooking pots, letting smaller pots hang lower and closer to the fire. It can usually be adjusted for height.

**chimney effect (flue effect, stack effect)** The process by which air, when heated, becomes less dense and rises. The rising gases in a chimney create a draft that draws in cooler gases or air from below. Stairwells, elevator shafts, and chases in a building often draw in cold air from lower floors or outside through this same process.

**chimney flue** The vertical passageway in a chimney through which the hot gases flow. A chimney may contain one or several flues. Flues are typically lined with fired clay pipes to resist corrosion and facilitate cleaning.

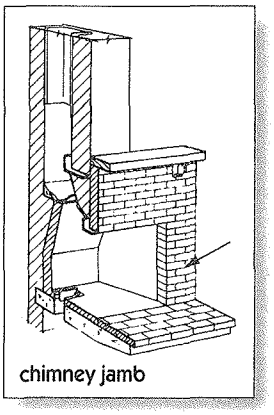
**chimney gutter** The flashing placed around a chimney for waterproofing the roof penetration.

**chimney head** *See* **chimney cap.**

**chimney hood** A covering top or cap that blocks rain from entering the flue.

**chimney hook** *See* **chimney crook.**

**chimney jamb** The vertical sides of a fireplace opening.


chimney jamb

**chimney lining** The noncombustible, heat-resisting material that lines the flue inside the chimney. Typically, the lining consists of round or rectangular fired clay material.

**chimney piece** Ornamentation around a fireplace, such as a mantelpiece. *See also* **chimney breast.**

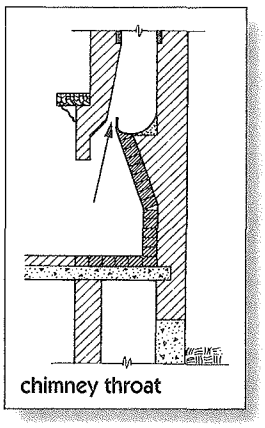
**chimney pot (chimney can)** A metal, masonry, or ceramic extension placed on top of a chimney to improve draft, appearance, or to block rain.

**chimney shaft** The segment of a chimney that projects above the roof.

**chimney stack (chimney stalk)** A very large and tall chimney used by utilities, commercial and industrial installations, and large apartment houses. There may be several flues in a single chimney stack.

**chimney stalk** *See* **chimney stack.**

**chimney throat (chimney waist)** **1.** The narrowest part of a flue. **2.** The area above a fireplace and below the smoke shelf, where the damper is usually located.




**chimney waist** *See* **chimney throat.**

**chimney wing** The sides of a fireplace chimney above the opening that close into the throat of the damper opening.

**china sanitary ware** Water closets, lavatories, or other items made of vitrified china with a glazed finish.

**China white (Chinese white)** A white paint pigment containing white lead.

**china wood oil** A drying oil used in paints and varnishes.

**chinbeak molding** A molding that features a concave section intersecting with a convex section, creating a beak.

**Chinese blue** A blue paint pigment that is created from a cyanogen compound of iron.

**Chinese lacquer (Japanese lacquer, lacquer)** A natural varnish, originating in China or Japan, and extracted from the sap of a sumac tree. This lacquer forms a high-quality surface.

**Chinese white** A dense white pigment of zinc oxide. *See also* **China white.**

**chink** **1.** A small, elongated cleft, rent, or fissure, such as the openings between logs in a log cabin wall. **2.** To install insulation around gaps in exterior walls and door and window frames.

**chinking** Any material used to fill in voids, such as those in stone walls or between the timbers of a log cabin.

**chip** **1.** A small piece of semiconducting substrate material, such as silicon, on which miniaturized electronic circuitry (LSI or VLSI circuits) is fabricated. **2.** A small fragment of metal, wood, stone, or marble that has been chopped, cut, or broken from its parent piece.

**chip ax** A hand tool used for chipping and shaping wood or stone.

**chipboard** A flat panel manufactured to various thicknesses by bonding flakes of wood with a binder. Chipboard is an economical, strong material used for sheathing, subflooring, and cabinetry.

**chip carving** Ornamental work created by cutting away chips of material in various patterns.

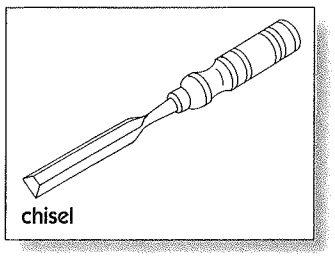
**chip cracks (eggshelling)** Similar to alligatoring or checking except that the edges of the cracks are raised up from the base surface.

**chipped grain** On a wood surface, the depressions or voids occurring where the wood has been torn out as the result of dull planing or machining against the direction of growth.

**chipper** **1.** A small pneumatic or electric reciprocating tool for cutting or breaking concrete. **2.** Gasoline- or diesel-powered machine featuring a system of blades used to shred or chip logs or brush.

**chipping** The removal of weld spatter, rust, or old paint from ironwork using a hammer and cold chisel.

**chisel** A metal tool with a cutting edge at one end, used in dressing, shaping, or working wood, stone, or metal. A chisel is usually tapped with a hammer or mallet.




**chisel bar** A heavy metal bar with a sharp edge at one end.

**chisel knife** A sharp, narrow, square-edged knife used to remove paint or wallpaper.

**chloracne** A skin rash caused by exposure to chlorine. Characterized by small pimples and inflammation of skin pores.

**chlorinated paraffin wax** A thick, viscous material used in flame-retardant paints.

**chlorinated rubber** A rubber-based product used in paints, plastics, and adhesives.

**chlorinated solvent** A material that dissolves greases and oils. Contains one or more chlorine atoms in its chemical structure.

**chlorine** A highly corrosive elemental gas.

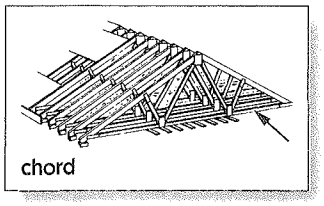
**chlorofluorocarbons (CFCs)** Compounds consisting of chlorine, fluorine, and carbon atoms that are degraded only by the sun's radiation in the stratosphere, where released chlorine may contribute to ozone depletion. They can persist in the troposphere for 100 years or longer.

**chock** A wedge-shaped block used to prevent the movement of a wheeled vehicle or other object. Chocks are usually used in pairs.

**chopping block** *See* **butcher block.**

# C

**chord** **1.** The top or bottom members of a truss (typically horizontal), as distinguished from the web members. **2.** A straight line between two points on a curve.


chord

CHRIS *See* **Chemical Hazard Response Information System.**

**chrismatory** A font in a church that contains a basin of consecrated oil for baptism, confirmation, ordination, etc.

**chromacity** A measure of the color quality of a light, as defined by its dominant wavelength and purity.

**chromate** A greenish-yellow primer applied to steel members to inhibit corrosion. Chromate is a salt of chromic acid, frequently referred to as lead or zinc chromate.

**chromated copper arsenate (CCA)** A highly-toxic chemical made up of chromium, copper, and arsenic. The EPA has classified CCA as a restricted use product for certified pesticide applicators only. Pressure-treated wood, formerly treated with CCA, now uses a different, less toxic process for residential applications.

**chrome green** A green pigment made from a blend of chromate salts and used to color paint. The pigment has rust-inhibiting properties.

**chrome steel** Carbon steel to which chromium has been added (in proportions of 0.5% to 2.0%) to increase the steel's hardness and yield strength.

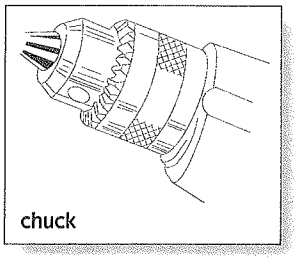
**chrome yellow (Leipzig yellow)** A yellow pigment made from lead chromate and used to color paint. The pigment also has rust-inhibiting properties.

**chromium** A grayish-white metallic element added to steel to enhance its strength and hardness. It is also used as a plating medium because of the rust-resisting surface that results. Chromium plating produces a highly polished finish.

**chromium plating** The application, by electroplating, of a thin coat of chromium to provide a hard, protective wearing surface or a surface that can take a decorative high polish.

**chronic toxic chemical** A substance that causes adverse health effects that may be delayed in their appearance, but usually cause permanent damage.

**chuck** An adjustable device with teeth that holds a cutting or drill bit in place.


chuck

**churn molding** A molding with a repeating wavy or chevron pattern.

**chute** An inclined plane or trough for sliding various items or bulk materials to a lower level, with the help of gravity.

**cima** *See* **cyma.**

**cimbia** A decorative band or fillet encircling the shaft of a column.

**cinder block (clinker block)** A masonry block made of crushed cinders and Portland cement. This type of block is lighter and has a higher insulating value than concrete. Because moisture causes deterioration of cinder block, it is used primarily for interior rather than exterior walls.

**cinder concrete** A lightweight concrete that uses cinders for coarse aggregate.

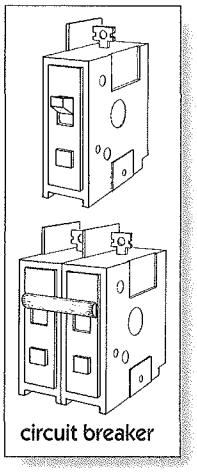
**cinders** **1.** A partly burned combustible material. **2.** Slag from a metal furnace. **3.** Ashes, especially from the burning of soft coal. **4.** A form of volcanic lava.

**circle trowel** A trowel with a curved blade used for plastering a curved surface.

**circline lamp** A fluorescent lamp with a circular tube.

**circuit** **1.** A closed path followed by an electric current. **2.** A piping loop for a liquid or gas. *See also* **channel (5.)**.

**circuit breaker (automatic circuit breaker)** An electrical device for discontinuing current flow during an abnormal condition. Unlike a fuse, a circuit breaker becomes reusable by resetting a switch.


circuit breaker

**circuit vent** A vent designed to prevent pressure build-up or to eliminate air in a closed-circuit system, as in a heating system or a solar heat-exchanger system.

**circular arch** An arch whose inner surface, and occasionally a portion of its outer surface, describe a circle.

**circular cutting and waste** The cutting of material such as flooring, roofing, or decking to create a curved surface or to go around a curved intersection. Also, a measure of the resulting waste material.

**circular face** A surface that, in plan view, is the outside or convex side of a circle.

**circular mil** An electrical term for the cross-sectional area of a wire. A conductor with a diameter of one mil (0.001") has a cross-sectional area of one circular mil.

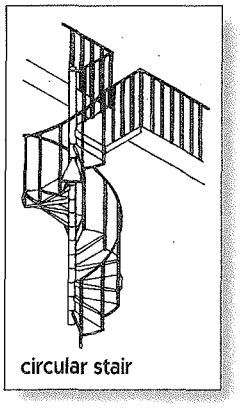
**circular mil-foot** A unit of measure for an electrical conductor that is one circular mil in diameter and 1' long.

**circular plane** A carpenter's wood-planing tool that has a curved baseplate for finishing curved surfaces.

**circular saw** A circular steel blade fitted with cutting teeth and mounted on an arbor.

**circular spike** A metal timber connector with teeth set in a ring. The teeth grip the wood as a central axial bolt is tightened.

**circular stair (spiral stair)** A cylindrical stairway in which the staircase is built in the shape of a corkscrew.


circular stair

**circular sunk face** A surface that, in plan view, is the inside or concave side of a circle; the opposite of a circular face.

**circular work** *See* **compass work.**

**circulating head (circulating pressure)** The pump-induced pressure in a piping system, such as one for hydronic heat, chilled water, or domestic hot water.

**circulation** **1.** The flow of a liquid or a gas within a closed series of pipes. **2.** The flow of air (fresh, heated, or cooled) in a building. **3.** The flow of people through a building. **4.** Any pipe forming a part of a liquid or gas circuit.

**circumference** The measure of the perimeter of a circle.

**cissing (sissing, random surface cracks)** A mild form of alligatoring.

**cistern** A catch basin on a roof or an enlargement at the end of a gutter for catching and storing rainwater.

**city plan** A large-scale map of a city showing the streets, important buildings, parks, and other features.

**city planning (town planning, community planning)** The conscious control of growth or change in a city, town, or community, taking into account aesthetics, industry, utilities, transportation, and many other factors that affect the quality of life.

**civic center** In an urban area, a group of government or public service buildings, which may include a city hall, a library, a museum, an art center, a parking garage, a court house, etc.

**civil drawings** The group of different types of site drawings, such as utility, grading and drainage, site improvements, and landscaping plans. Civil drawings encompass all work other than the structure itself.

**civil engineer** An engineer specializing in the design of public works, such as roads, buildings, dams, bridges, and other structures, as well as water distribution, drainage, and sanitary sewer systems.

**Civil Rights Act** Legislation enacted by Congress in 1964 prohibiting any act that discriminates against an individual for any reason, but particularly because of sex, race, age, ethnic origin, or religion.

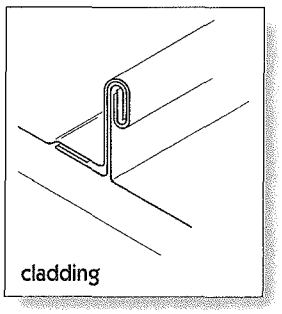
**C-label** A door certified by Underwriters' Laboratories as meeting their class C level requirements.

**clack valve** *See* **check valve.**

**clad alloy** A metal to which a molecular-bonded surface coat has been applied to provide an improved wearing surface, a better appearance, or corrosion protection. *See also* **cladding.**

**clad brazing sheet** A sheet of metal that has brazing filler material prebonded to one or both sides. Intended for use in a brazing operation.

**cladding** A covering or sheathing applied to provide desirable surface properties, such as durability, weathering, and corrosion or impact resistance. *See also* **clad alloy.**


cladding

**claim** **1.** A contractor's request for additional compensation or an extension of time pursuant to the contract terms. **2.** A request to be paid for the cost of damages when an insured loss occurs.

**claims examiner** Relative to insurance claims, the supervisor who oversees the paperwork submitted by the field adjuster.

**clairecolle** *See* **clearcole.**

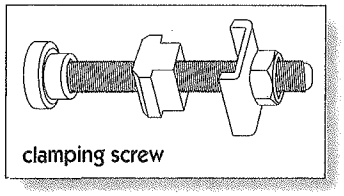
**clamp** A mechanical device used to hold items together or firmly in place while other operations are being performed. The clamping force may be applied by screws, wedges, cams, or a pneumatic/hydraulic piston.

**clamp brick** A brick that was retained in a clamp while being fired in a kiln.

**clamping plate** A metal splice plate that is bolted across a joint in a wooden frame to increase its strength.

# C

**clamping screw** A screw used with wood or metal jaws to provide a clamping force for temporary or permanent fastening.

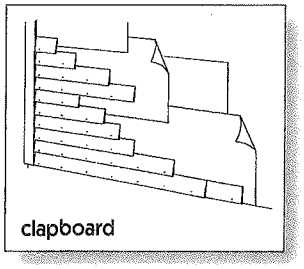

clamping screw

**clamping time** The amount of time a bonded joint must remain immobile in a clamp in order for the glue to set.

**clamp nail** A mechanical fastener designed to bridge a joint and pull the two pieces tightly together as it is driven in place.

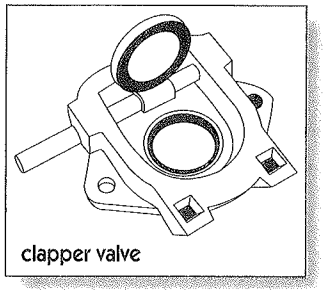
**clamshell** **1.** A bucket used on a derrick or crane for handling loose granular material. The bucket's two halves are hinged at the top, thus resembling a clamshell. **2.** A wood molding with a cross section that resembles a clamshell.

**clapboard (bevel siding, lap siding)** A wood siding used as exterior covering in frame construction. It is applied horizontally, overlapped with the grain running lengthwise. The thickest section of the board is on the bottom.


clapboard

**clapboard gauge (siding gauge)** A spacing tool used to maintain a uniform overlap when applying clapboards.

**clapper valve** A swing check valve that permits fluid flow in one direction only.


clapper valve

**clarification drawing** An illustration provided by an architect or engineer to explain in more detail some area or item on the contract documents, or as a part of a job change order or modification.

**clarifier** A tank or other device used to remove suspended solids from a liquid.

**Clarke beam** A composite beam consisting of planks bolted with their flat sides together and then strengthened with a board nailed across the joint.

**clasp nail** *See* **cut nail.**

**class** **1.** A group of items ranked together on the basis of common characteristics or requirements. **2.** A division grouping or distinction based on grade or quality. **3.** The opening into which a door or window will be fitted.

**Class I – IV asbestos work** *See* **asbestos work.**

**Class Ia flammable liquid** A liquid having a flash point below 73°F (22.8°C) and a boiling point below 100°F (37.8°C).

**Class Ib flammable liquid** A liquid having a flash point below 73°F (22.8°C) and a boiling point at or above 100°F (37.8°C).

**Class Ic flammable liquid** A liquid having a flash point at or above 73°F (22.8°C) and below 100°F (37.8°C).

**Class II combustible liquid** A liquid having a flash point at or above 100°F (37.8°C).

**Class IIIa combustible liquid** A liquid having a flash point at or above 140°F (60°C) and below 200°F (93.4°C).

**Class IIIb combustible liquid** A liquid having a flash point at or above 200°F (93.4°C).

**Class A, B, C, D, E** Fire-resistance ratings applied to building components such as doors or windows. Class A is an Underwriters' Laboratories classification for a component having a 3-hour fire endurance rating; Class B, a 1 or 1-1/2-hour rating; Class C, a 3/4-hour rating; Class D, a 1-1/2-hour rating; and Class E, a 3/4-hour rating.

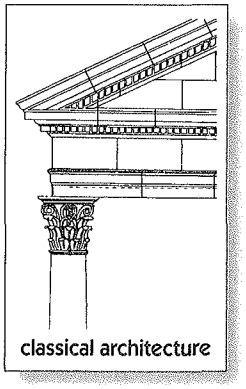
**Class A fire** A fire involving ordinary combustibles, such as wood, paper, some plastics and textiles.

**Class B fire** A fire involving oil, gas, paint, or other flammable liquids.

**Class C fire** A fire involving live electrical equipment that requires the use of electrically nonconductive extinguishing agents.

**Class D fire** A fire involving combustible metals such as magnesium, titanium, and sodium that require an extinguishing medium that does not react with the burning metal.

**classical architecture** Characteristic of or pertaining to the styles, types, and modes of structural construction and decoration practiced by the Greeks and Romans.


classical architecture

**classicism** An architectural style derived from the basic principles and design of Greco-Roman or Italian Renaissance buildings.

**classroom window (awning window)** A wide window, the upper portion of which is a fixed light, while the lower portion has two or more tilt-in panels positioned side by side.

**clause** A subdivision of a paragraph or subparagraph within a legal document such as a contract. A clause is usually numbered or lettered for easy reference.

**clavel (clavis)** A voussoir or keystone of an arch.

**clavis** *See* **clavel.**

**claw bar** A steel bar that is straight at one end and bent at the other. The straight end has a chisel point, while the bent end has a notch for pulling out nails. A claw bar is used for general demolition work.

**claw chisel** A hand tool with a notched edge for cutting stone.

**claw hammer** A hammer with a hardened face on one end of the head for driving nails, and curved, forked tines on the other end for pulling out nails.

**claw hatchet** A hatchet on which one end of the head is cleft.

**claw plate** A round timber connector that has raised prongs to bite into the wood.

**clay** A fine-grained material, consisting mainly of hydrated silicates of aluminum, that is soft and cohesive when moist, but becomes hard when baked or fired. Clay is used to make bricks, tiles, pipe, earthenware, etc.

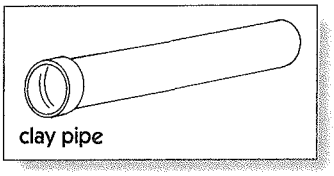
**clay binder** A material, consisting of fine clay particles, that has good holding or fixing properties in a soil mass.

**clay cable cover** A fired-clay half pipe that is placed over underground electric cables as a protective cover.

**clay content** In any mixture of soil or earth, the percentage of clay by weight.

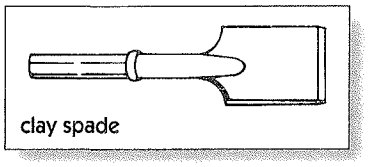
**clay-mortar mix** A mixture consisting of pulverized clay that is added to masonry mortar to act as a plasticizer.

**clay pipe** Pipe made of earthenware and glazed to eliminate porosity. Clay pipe is used for drainage systems and sanitary sewers.

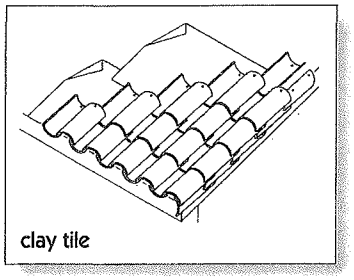

clay pipe

**clay puddle** A mixture of clay and water used to prevent or retard the passage of water.

**clay spade** A wide, flat, chisel-like cutting tool used in a pneumatic hammer to cut into tightly compacted materials like clays.


clay spade

**clay tile** A fired earthenware tile used on roofs. Called *quarry tile* when used for flooring.


clay tile

**Clayton Act** Legislation enacted by Congress in 1914 to lessen the negative effects of the Sherman Anti-Trust Act by allowing labor to organize for purposes of negotiating with a single employer.

**clean aggregate** Sand or gravel aggregate that is free of clay, dirt, or organic material.

**clean back** The end of a bondstone that shows in masonry work.

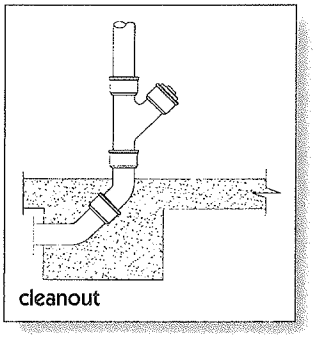
**clean closure** A land cover cap used to cover a site where environmental remediation has occurred.

**clean energy** Energy obtained from a renewable source that produces zero or low emissions and has minimal environmental impact.

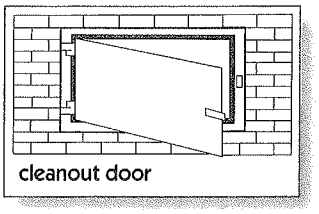
**cleaning eye** An access plug in a cleanout pipe fitting, used for inspection and cleaning purposes.

**cleaning sash** A window sash that is normally inoperable, but may be opened with a special tool.

**cleanout** **1.** A pipe fitting with a removable threaded plug that permits access for inspection and cleaning of the run. **2.** A door in the base of a chimney that permits access for cleaning. **3.** A small door in a ventilation duct to permit access for removal of grease, dust, and dirt blockages.


cleanout

**cleanout door** The door in a cleanout frame. *See also* **cleanout.**


cleanout door

**clean power** Power that is relatively free of electrical noise and harmonic distortion.

# C

**clean room** A special-purpose room that meets requirements for the absence of lint, dust, or other particulate matter. In a clean room, the filter systems are high efficiency and the air exchange is one-directional laminar flow.

**clean timber** Wood that is free of knots, splits, blemishes, or other defects. Also referred to as *clear lumber, clear stuff, clear timber, clears, free stuff.*

**clear** The distance between any two points without interruptions, obstructions, or discontinuations, as in a clear span. *See also* **clearance.**

**clearage** *See* **clearance.**

**clearance (clearage)** **1.** The distance by which one item is separated, or clear, from another; the empty space between them. **2.** An intentional gap left to allow for minor dimensional variations of a component or a part.

**clearcole (clairecolle)** **1.** A primer and sealer composed of water, glue, and a whitening pigment. **2.** A clear coating used in the application of gold leaf.

**clear glaze** A transparent glaze for ceramic applications.

**clearing** The removal of trees, vegetation, or other obstructions from an area of land. Also referred to as clearing and grubbing.

**clearing arm** A branch on a pipe to provide access for cleaning.

**clear lumber** *See* **clean timber.**

**clears** *See* **clean timber.**

**clear span** The distance between the inside surfaces of the two supports of a structural member. *See also* **clear.**

**clearstory (clerestory)** That part of a church or building that rises above the roofs of the other parts of the building, with windows for admitting light to the central interior area.

**clear stuff** *See* **clean timber.**

**clear timber** *See* **clean timber.**

**cleat** A small block of wood nailed to the surface of a wood member to stop or support another member.

**cleat wiring** Electrical wiring that is exposed and supported on standoff insulators.

**cleavage** A natural parting or splitting plane found in slate, mica, and some types of wood.

**cleavage plane** In crystalline material, the plane along which splitting can easily be performed.

**cleft timber** A wooden beam that has been split to the desired size or shape.

**clench** *See* **clinch.**

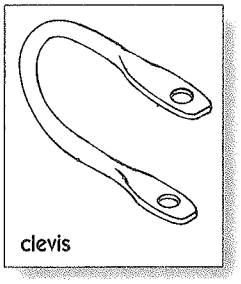
**clench bolt (clinch bolt)** A bolt designed to have one end bent over to retain it in place.

**clench nail (clinch nail)** A nail made to have the protruding point bent over after being driven.

**clerestory** *See* **clearstory.**

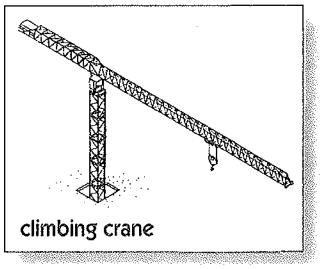
**clerk of the works** A representative of the architect or owner who oversees construction, handles administrative matters, and ensures that construction is in accordance with the contract documents.

**clevis** A U-shaped bar of metal with holes drilled through the ends to receive a pin or bolt. A type of shackle.

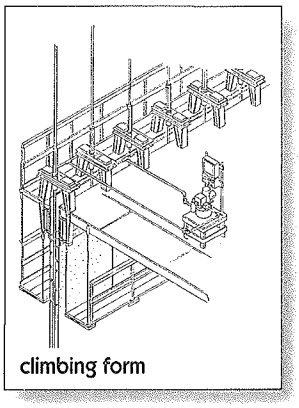

clevis

**client** **1.** Party to a contract who commissions the work. On capital projects, may also be referred to as the "owner". **2.** Customer, principal, owner, promoter, buyer, or end-user of the product or service created by the project.*

**climbing crane** A hoisting device with a vertical portion that is attached to the structure of a building so that as the construction is built higher and higher, the crane rises along with it.


climbing crane

**climbing form** Vertical concrete formwork that is successively raised after each pour has hardened. The formwork is anchored to the concrete below. *See also* **slipform.**


climbing form

**clinch (clench)** To secure a nail in place by bending the protruding point at a right angle.

**clinch bolt** *See* **clench bolt.**

**clinch nail** *See* **clench nail.**

**clink** **1.** The sealed edge between sheets of metal roofing. **2.** A pointed steel bar used to break up concrete.

**clinker** A vitrified residue of burnt coal sometimes used as the aggregate in cinder block. *See also* **cement clinker.**

**clinker block** *See* **cinder block.**

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**clinker brick** A hard brick that is frequently formed with a distorted shape and is used for paving.

**clinometer** An instrument for measuring angles of elevation or inclination.

**clip** **1.** To cut off, as with shears. **2.** A short piece of brick that has been cut. **3.** A small metal fastening device.

**clip angle (lug angle)** A small piece of angle iron attached to a structural member to accept or retain some structural load.

**clip bond** A style of decorative masonry for walls in which the corners of stretchers are cut, forming a V-notch to receive the corner of a diagonal header.

**clip joint** A thicker-than-usual mortar joint used to raise the height of a masonry course.

**clipped gable** A gable roof with a shortened ridge pole creating a short hip roof at the gable.

**clipped header (false header)** In masonry, a half-brick placed in a wall to look like a header.

**clipped lintel** A lintel connected to another structural member to help carry the load.

**cloak rail** A board attached to a wall and containing pegs or hooks for hanging clothes.

**cloakroom** *See* **coatroom.**

**cloister** **1.** A monastic establishment such as a monastery or convent. **2.** A covered passageway on the side of an open courtyard, usually having one side walled and the other an open arcade or colonnade.

**cloistered arch (cloistered vault)** A structure whose sides have the appearance of four quarter rounds fitted together so that the corner joints appear as an "X" when viewed from above.

**cloistered vault** *See* **cloistered arch.**

**cloister garth** An open courtyard surrounded by a cloister.

**cloistral** Of or pertaining to a cloister.

**clone** The reproduction of plant varieties by vegetative means, such as cuttings.

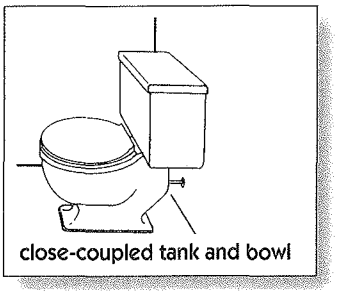
**close** **1.** An enclosed place, such as the area around a cathedral. **2.** A passage from a street to a court and the houses facing it. **3.** The common stairway of an apartment building.

**close-boarded (close-sheeted)** **1.** Sheathing with boards fitted tight against one another. **2.** Privacy fencing in which adjacent boards are fitted tight against one another.

**close-contact glue** A glue that requires a tight contact between the surfaces that are to be bonded.

**close couple** Opposite rafters fastened at the peak and strengthened by a horizontal tie partway down their lengths.

**close-coupled tank and bowl** A toilet in which the bowl and water tank are manufactured separately and then bolted tightly together with only a gasket at the joint.



close-coupled tank and bowl

**close-cut** The trimming of a roof covering (shingle, tile, or slate) where adjacent surfaces of a hip or valley meet.

**closed bidding** *See* **closed competitive selection.**

**closed-cell** A type of foamed material in which each cell is totally enclosed and separate so that the bulk of the material will not soak up liquid like a sponge. Closed-cell material is characteristic of certain types or insulation board and flexible glazing gaskets.

**closed-cell foam** *See* **closed-cell.**

**closed-circuit grouting** A system of injection that fills all voids to be grouted at each hole and returns excess grout to the grouting apparatus.

**closed-circuit television** A television circuit with no broadcasting facilities and a limited number of reception stations. Transmission is typically between two points. Can be integrated into a building automation system and used for building security purposes.

**closed competitive selection (closed bidding)** A process of competitive bidding whereby the private owner limits the list of bidders to persons he has selected and invited to bid. *See also* **closed list of bidders.**

**closed cornice** A cornice that projects only slightly beyond a vertical wall so that there is no soffit. The overhang is filled by a crown molding.

**closed eaves** Projecting roof rafters that are boxed in.

**closed list of bidders** A list of those contractors who have been approved by the architect and owner as the only ones from whom bid prices will be accepted. *See also* **closed competitive selection.**

**closed loop control** An instrument that measures the changes in a controlled variable (temperature, pressure) and actuates the control device (valve, damper) to bring about a change.

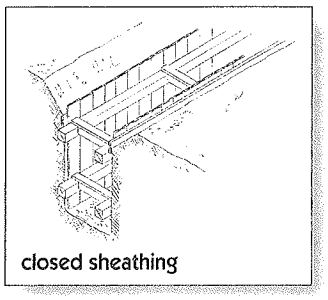
**closed loop system** In Building Automation Systems, the arrangement of heating, ventilating, and air-conditioning components so that each component affects and can respond to the other, allowing system feedback.

**closed newel** The continuous central or inside wall of a circular staircase.

**closed shaft** A vertical opening in a building that is covered over or roofed at the top.

# C

**closed sheathing (closed sheeting)** A continuous framework with boards or planks placed side by side to support or retain the sides of an excavation.


closed sheathing

**closed sheeting** *See* **closed sheathing.**

**closed shelving** Shelving that can be concealed by closing a door or panel.

**closed shop** A term applied to a trade or skill that requires membership in a particular union to the exclusion of nonunion members.

**closed specifications** Specifications that require certain trade name products or proprietary processes. Provisions for alternatives are not included. *See also* **base bid specifications.**

**closed stair (closed stair string, closed string)** A stairway with covered strings on both sides so that the ends of the treads and risers are not visible. *See also* **box stair** *and* **close string.**

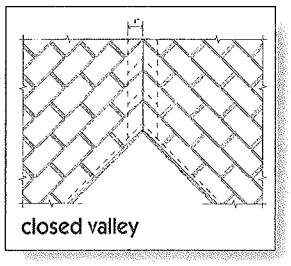
**closed stair string** *See* **closed stair.**

**closed string** *See* **closed stair.**

**closed stringer** *See* **close string.**

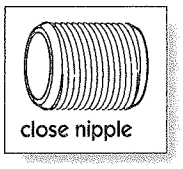
**closed system** Any heating or cooling system in which the circulating medium is not expended, but is recirculated through the system.

**closed valley** A roof covering in a roof valley laid so that the flashing is not visible.


closed valley

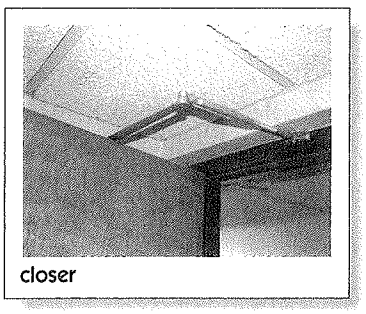
**close-grained** Wood in which the annual growth rings are close together, thus indicating slow growth.

**close nipple** A short piece of pipe that is threaded from both ends, leaving no smooth outside surface.


close nipple

**closeout** The completion of project work. The phase at the end of a project life cycle just before the operation begins.*

**closer** **1.** A mechanism for automatically closing a door. **2.** The final masonry unit (brick, stone, or block) that completes a horizontal course. The unit may be whole or trimmed to size.


closer

**closer mold** A wooden guide or jig for cutting closer bricks. *See also* **closer (2.).**

**closer reinforcement** A metal plate attached to a door and/or a frame to reinforce the area where a door closer is installed.

**closer reinforcing sleeve** A plate used to reinforce the corner joints of a metal door frame.

**close-sheeted** *See* **close-boarded.**

**close string (close stringer, closed stringer, curb string, housed string)** A stair string that has concealed tread and riser supports on its inside surface. The top and bottom edges of the string are straight and parallel. *See also* **closed stair.**

**close stringer** *See* **close string.**

**close studding** A method of construction in which studs are spaced close together and the intervening spaces are filled with plaster.

**closet** **1.** A small room or recess for storing utensils or clothing. **2.** A water closet.

**closet bend** The 90° soil pipe fitting installed beneath a toilet.

**closet bolt** A special bolt for securing a floor-mounted toilet to the floor and soil pipe flange.

**closet lining** Thin cedar boards with tongue-and-groove or lap edges, used to cover the inner surface of a closet in order to repel moths.

**close tolerance** A term describing smaller allowable dimension deviation than would normally be allowed.

**closet pole (closet rod)** A strong rod mounted horizontally in a closet to support coat hangers.

**closet rod** *See* **closet pole.**

**closet screw** A screw used to hold a toilet floor flange to the floor.

**closet stop valve** The valve underneath a tank-type water closet. The valve is used to shut the water off so that repairs can be made to the flushing mechanism inside the tank.

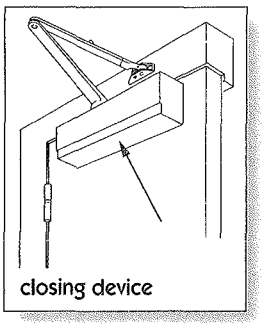
**close-up casement hinge** A casement window support hinge with its pivot point placed so that when the window is open, there is a minimum space between the sash and the frame.

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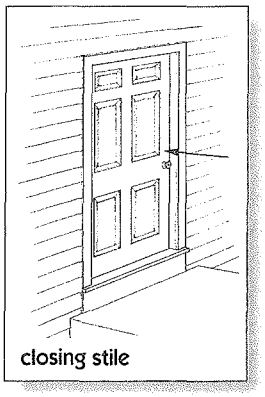
**closing** The completion of a transaction, most often the sale or purchase of real estate.

**closing costs** The costs associated with the sale/purchase of real estate property, such as legal fees, recording fees, and title search and insurance, but not including the cost of the property itself.

**closing device (automatic closing device, self-closing device)** **1.** A mechanism that closes a door automatically and slowly after it has been opened. **2.** A mechanism, usually fused, that releases and closes a fire door, damper, or shutter in the event of a fire.


closing device

**closing stile** The vertical side of a door or casement sash that seats against the jamb or frame when the door or window is closed.


closing stile

**closure bar** A flat metal bar that is attached to a stair string next to a wall. The bar bridges or covers the opening between the string and the wall.

**closure strip** In metal building systems, a resilient strip used to cover openings between metal panels and flashing.

**clothes chute (linen chute)** A vertical shaft commonly used in hospitals to drop dirty clothes and linens from one floor to another.

**cloudiness** A haziness or lack of transparency in a protective film such as in a varnish or urethane.

**clout** **1.** A metal sheathing or protection plate on a moving wood member to protect it from wear. **2.** A type of nail.

**clout nail** A nail with a large, flat head, a round shank, and a long, flattened point used on sheet metal and dry wallboard.

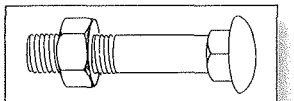
**clustered column** Two or more columns, joined together at the top and/or bottom, which share the structural load equally.

**clustered pier** A pier consisting of several shafts grouped together as a single unit, frequently surrounding a heavier central member.

**cluster housing** A planned residential development with dwelling units built close to one another and common open space for use by all residents.

**clutch** A friction or hydraulic coupling between a power source and a drive train.

**coach bolt** A bolt with a smooth, circular head. Rotation of the bolt in its hole during tightening is prevented by the square shoulder or neck under the head.


coach bolt

**coach house (carriage house)** A garage-like structure for the protection and storage of carriages.

**coach screw** A screw with a square head and a coarse pitched thread. *See also* **lag bolt.**

**coak** **1.** A projection from the end of a piece of wood and used as a tenon for inserting into a mating hole in another piece to form a joint. **2.** A wooden pin used to hold beams together.

**coal-tar pitch (tar)** A black bituminous material made from the distillation of coal and used as a waterproofing material on built-up roofing and around elements that protrude through a roof.

**coaming** A raised frame or curb around a roof hatchway or skylight to prevent water from flowing in.

**coarse aggregate** Aggregate that will not pass through a 1/4" sieve screen.

**coarse filter** A prefilter used in air-conditioning systems to remove large particles such as dust and lint. This type of filter is usually reusable after being vacuumed or washed.

**coarse-grained** **1.** A term used to describe wood in which the annual growth rings are widely separated, thus indicating fast growth. *See also* **coarse-textured.** **2.** The "pebbly" effect that sometimes occurs on a photographic enlargement.

**coarse stuff** A thick plaster intended for use as a base coat. Usually contains lime, sand, putty, and a fibrous material.

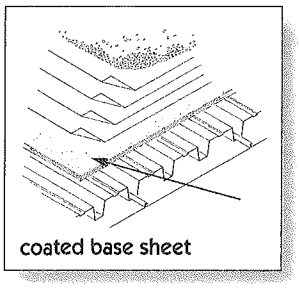
**coarse-textured (coarse-grained)** A term referring to a porous, open-grained wood that usually requires priming and filling to produce a smooth surface.

**coat** A single covering layer of any type of material, such as paint, plaster, stain, or surface sealant.

**coated base felt** *See* **coated base sheet.**

# C

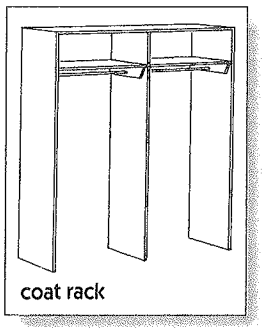
**coated base sheet (coated base felt)** The underlying sheet of asphalt-impregnated felt used in built-up roofing.




**coated glass** Insulating glass that has been treated to help retain building heat. Coated glass also blocks ultraviolet and infrared light.

**coated nail** A nail with a coating on it. The coating may be cement, copper, zinc, or enamel.

**coat rack** A piece of furniture that supports several coats (with or without hangers) and that may include a stand for umbrellas and a tray for galoshes.




**coatroom (cloakroom)** **1.** A room for checking or storing outer garments, such as coats and hats, and usually located near the main entrance of a building.

**coaxial cable** A cable consisting of a tube of conducting material surrounding a central conductor. The tube is separated from contact with the cable by insulation. Coaxial cable is used to transmit telephone, telegraph, television, and computer signals.

**cob** A lump or piece of anything, such as coal, ore, or stone.

**cobble** *See* **cobblestone.**

**cobblestone (cobble)** **1.** A stone, usually between 6" and 10" in diameter, used for paving roads and constructing foundations and walls. **2.** A rough-cut, rectangular-shaped stone used for paving.

**cob wall** A wall formed of cob material, e.g., a mixture of clay, straw, and gravel.

**cobwebbing** In painting, the expulsion of fibrous strands of dried or partially dried paint from a spray gun.

**cochlea** **1.** A spiral staircase. **2.** The enclosure or tower for a spiral staircase.

**cochleated** Shaped like a spiral-shelled snail.

**cock** **1.** A valve having a hole in a tapered plug. The plug is rotated to provide a passageway for fluid. **2.** Any device that controls the flow of liquid or gas through a pipe. *See also* **sill cock** *and* **bibcock.**

**cock bead** A bead that projects higher than the adjacent surface.

**cocking (cogging)** The fitting together of notched timbers, beams, or pieces of wood to form a joint.

**cocking piece** A board attached to rafters at the eaves of a roof to give a slight upward tilt in order to break the straight roof line.

**cockle stair** A circular or spiral staircase.

**cockloft** An upper attic or loft.

**cockscomb** A piece of metal with a serrated edge used to scratch plaster and create a rough gripping surface for the next coat.

**cockspur fastener** A casement window catch.

**coctile** Building units made in an oven, such as brick or porcelain.

**co-cumbustion** The simultaneous combustion of two or more fuel types to produce useful energy.

**code** The legal requirements of local and other governing bodies concerning construction and occupancy. The enactment and enforcement of codes is intended to safeguard the public's health, safety, and welfare.

**Code of Federal Regulations** A uniform system of listing all the regulations promulgated by any federal agency.

**code official** The designated authority who is responsible for enforcing building codes in a given jurisdiction.

**code of practice** A publication of an agreement by any trade or group of manufacturers of similar products, that lists minimum quality standards for material, workmanship, or conduct to be followed by group members.

**code review drawings** Drawings that portray compliance to applicable codes and standards that can be developed by or through the contractor and are supplementary to a written scope of work (also called incidental drawings).

**coefficient of conductivity** The measure of the rate at which a material will conduct thermal energy, or heat.

**coefficient of discharge** The measure of how efficiently a passage will allow air or water to flow through it.

**coefficient of expansion** For building materials, the increase in dimension per unit of length caused by a rise in temperature of one degree Fahrenheit, expressed in decimal form.

**coefficient of friction** A ratio of the force causing an object to slide to the total force perpendicular to the sliding plane. The ratio is a measure of the resistance to sliding.

**coefficient of heat transmission** *See* **coefficient of thermal transmission.**

**coefficient of performance** **1.** In a heat pump, the ratio of heat produced to energy expended. **2.** In a refrigeration system, the ratio of heat removed to energy expended.

**coefficient of runoff** The measure of gross storm water in a drainage system that

is lost to evaporation, infiltration, and runoff.

**coefficient of static friction** The coefficient of friction required to make an object start sliding.

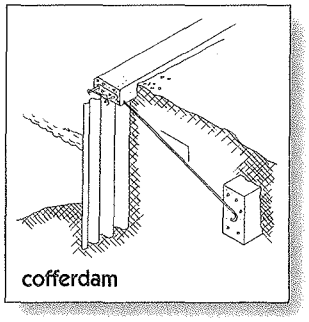
**coefficient of subgrade reaction** The ratio of load per unit area on soil to the corresponding deformation.

**coefficient of thermal expansion** *See* **coefficient of thermal transmission.**

**coefficient of thermal transmission (coefficient of thermal expansion)** The amount of heat passing through a partition per unit of area per degree difference in air temperature between the two sides of the partition. For example: Btu per square foot per hour per degree Fahrenheit.

**coffer (lacunar)** **1.** An ornamental recessed panel in the ceiling of a vault or dome. **2.** A cofferdam; a caisson.

**cofferdam** A watertight enclosure used for foundation construction in waterfront areas. Water is pumped out of the cofferdam allowing free access to the work area.




**coffering** A ceiling with ornamental recessed panels.

**cog** **1.** In a cogged joint, the portion of wood left where a beam has been notched. **2.** A nib on roofing tiles.

**cogeneration** The simultaneous production of power and another form of useful thermal energy in a single process. A common example is the use of combustion or co-combustion processes to produce both electricity and steam or hot water.

**cogged joint** A joining of two pieces of wood, each of which has been notched to fit into the other.

**cogging (cocking)** The assembly of two pieces of wood that have been notched or cogged.

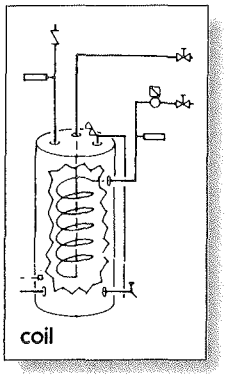
**cohesion** **1.** In soils, the sticking together of particles. **2.** In adhesives or sealants, the ability to stick together without cracking.

**cohesionless soil** A sod, such as clean sand, with no cohesive properties.

**cohesive failure** The internal shearing of a joint sealant that is weaker cohesively than the adhesion bond to the adjacent joint surfaces. The possible causes for failure include insufficient curing, excessive joint movement, improper joint dimensions, or improper selection of the sealant itself.

**cohesive soil** Soil that tends to hold together in a comparatively stable clump or mass, such as clay.

**coil** A term applied to a heat exchanger that uses connected pipes or tubing in rows, layers, or windings, as in steam heating, water heating, and refrigeration condensers and evaporators.




**coiled expansion loop** A gradual bend, loop, or coil of pipe or tube intended to absorb expansion and contraction caused by temperature changes. By flexing like a spring, undesirable stresses on the piping system are relieved or minimized.

**coinsurance penalty** The penalty against a policyholder for not carrying enough insurance on his or her property. In these cases, the full cost of the claim will not be paid by the insurance company. Repair contractors should be aware that the policyholder will have to pay a substantial part of the repair bill.

**cold-air return** In a heating system, the return air duct that transports cool air back into the system to be heated.

**cold bending (cold gagging)** The bending of any material without the application of heat to soften it. Some ductile materials can be bent in this manner without fracturing.

**cold-cathode lamp** An electric-discharge lamp that operates with low current, high voltage, and low temperature. The color of the light depends on the vapor used in the lamp.

**cold cellar** An underground storage area where fruit and vegetables are stored during the winter. The constant ground temperature keeps the contents from freezing and retards rotting.

**cold check** Fine cracks that appear in some wood finishes, such as paint and varnish, after being subjected to alternating warm and cold temperatures.

**cold chisel** A steel chisel with a tempered edge for cutting cold steel.

**cold cutter** A cold chisel with an offset handle like a hammer for holding it during striking with a maul.

**cold deck (cold duct)** In an HVAC system, the source of cold air for cooling interior zones.

**cold-drawn** A process in which metal is formed in shape and size by being pulled through dies while cold. This type of metal forming has an effect on final surface finish and hardness and is often used in the manufacture of wire, tubing, and rods.

# C

**cold-driven rivet** A rivet that is driven and formed without being preheated.

**cold-finished bar** A metal bar that has been drawn or rolled to its final dimensions while cold. The process of cold finishing produces a hard, smooth, surface finish.

**cold-finished steel** Any steel shape that is rolled, drawn, or forged to its final shape and size when cold. The resulting finish is hard and smooth.

**cold flow** The continuing permanent change in slope of a structural system under constant load.

**cold gagging** *See* **cold bending.**

**cold glue** A glue that flows and bonds without being heated.

**cold joint** The joint between two consecutive pours of concrete if the time elapsed between the first and second pours is such that the first pour has started to set.

**cold-laid mixture** Any mixture that may spread at ambient temperatures without being preheated.

**cold mix (cold patch)** An asphaltic concrete made with slow-curing asphalts and used primarily as a temporary patching material when hot mix plants are closed. Cold mix is used to repair potholes, but is less durable than hot mix.

**cold molding** **1.** Material that is shaped at ambient temperature and hardened by baking. **2.** The material that is used in the cold-molding process.

**cold patch** *See* **cold mix.**

**cold pie** Mortar left over after laying a masonry unit.

**cold-process roofing** Built-up roofing consisting of layers of asphalt-impregnated felts that are bonded and sealed with a cold application of asphalt-based roof cement.

**cold riveting** Riveting done without preheating the rivets.

**cold-rolled** Descriptive of a metal shape that has been formed by rolling at room temperature, thus giving a dense, smooth, surface finish and high tensile strength.

**cold room** A walk-in refrigerator for storage of perishable materials.

**cold saw** A saw for cutting metal at room temperature. A cold saw may be either circular or reciprocating.

**cold set** A hardened hand tool used to flatten sheet metal seams.

**cold-setting adhesive** A glue that sets at ambient room temperature.

**cold solder** A soft-metal, air-hardening material used for bonding two metals at ambient temperatures. Cold solder, unlike a true solder, does not require a hot bond.

**cold-solder joint** An electrical wiring joint in which the metals to be joined have not been heated enough for the solder to bond.

**cold-start lamp** A fluorescent lamp that is started with high voltage without having to preheat the electrodes.

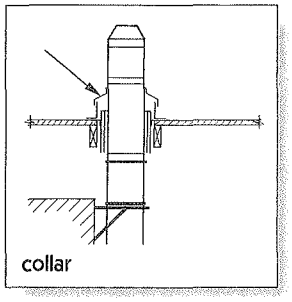
**cold strength** The compressive or flexural strength of refractory concrete prior to firing.

**cold-water paint** Paint in which the pigment and binder are mixed in cold water.

**cold welding** The process of fusing together two pieces of metal that have had their common faces well cleaned and are then held in contact under high pressure. No heat is applied in cold welding.

**cold-worked steel** Steel that has been rolled, drawn, or formed to achieve permanent deformation at room temperature.

**collar** **1.** A flashing for a metal vent or chimney where it passes through a roof. **2.** A trim piece to cover the hole where a vent goes through a wall or ceiling. **3.** A metal band that encircles a metal or wooden shaft.




**collar beam** The horizontal board that joins the approximate midpoints of two opposite rafters in order to increase rigidity.

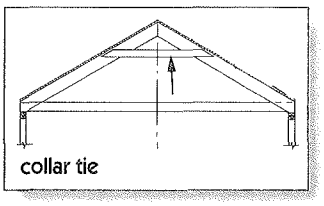
**collar beam roof (collar roof)** A roof with rafters connected by collar beams.

**collaring** The pointing of masonry or tile joints under overhangs.

**collar joint** The joint between the collar beam and roof rafters.

**collar roof** *See* **collar beam roof.**

**collar tie** A horizontal tie connecting pairs of opposite rafters near the ridge of the roof.




**collected plants** Plantings that have been gathered from locations other than nursery stock.

**collective bargaining** The formal negotiation between an employer and union representatives with regard to wages or other employment considerations.

**collimator** A surveyor's tool used to align lines along a parallel plane.

**colloid** Any substance divided into fine particles that range in diameter from 0.2 to 0.005 microns. When the substance is mixed in a liquid, it remains in suspension.

**colloidal concrete** Concrete that is a mix of aggregate and colloidal grout.

**colloidal grout** A mortar mix grout whose solid particles are in a fixed suspension.

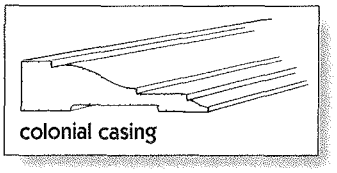
**colloidal mixer** A mixing machine for making colloidal grout.

**collusion** A secret agreement or action of a fraudulent, illegal, or deceitful nature.

**colombage** Timber construction using half timbers, that is, members measuring not less than 5" x 10" in cross section.

**colonial architecture** **1.** An architectural style from a mother country that has been incorporated into the buildings of settlements or colonies in distant locations. **2.** 18th-century English Georgian architecture as reproduced in the original colonies of the United States.

**colonial casing** A style of door and window trim molding.


colonial casing

**colonial panel door** A type of door with recessed panels.

**colonial revival** An architectural style popular in the United States during the end of the 19th century. The style copied designs and details from 18th-century English Georgian colonist buildings.

**colonial siding** Exterior siding material consisting of wide, square-edged boards applied as clapboards.

**colonial window** A window with numerous small rectangular panes or divided lites, such as 12- or 16-lite.

**colonnade** A row of evenly spaced columns that usually support one side or end of a roof.

**color chart** A standardized card or folder showing a display of colors or finishes.

**colored aggregate** Aggregate material that has been selected for use because of its natural color.

**colored cement** Cement that contains a colored pigment.

**colored concrete** Concrete mixed with colored cement or to which pigment has been added during mixing.

**colored finishes** A finish obtained by adding pigment or colored aggregate to plaster for a final coat so that the color goes through the full depth of the coat.

**colorimetric test** A diagnostic test undertaken to determine the amount of inorganic matter in a substance, such as in a concrete aggregate.

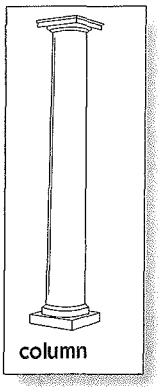
**color pigment** Any substance that can be mixed with a suitable liquid (vehicle), to color paints or stains.

**color rendering index (CRI)** A measure of the quality of a light, where the ability of the light to render an object's true color(s) is compared to that of a reference light. Under a lamp with a low CRI rating, colors will appear unnatural.

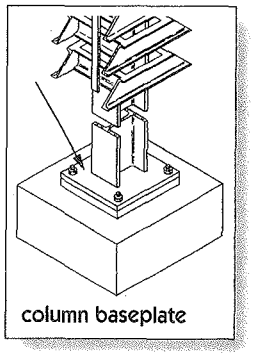
**color retention** The capability of a surface finish to maintain its original shade and intensity over a period of time and/or exposure to sunlight or weather.

**color temperature** The actual degree measurement, in Kelvin, of the color of a light source.

**column** A long, relatively slender, supporting pillar. A column is usually loaded axially in compression.

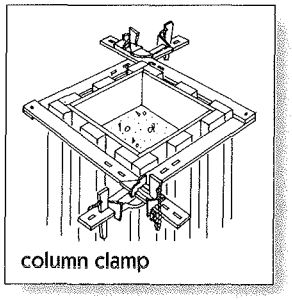

column

**column baseplate** A bearing plate beneath a column that distributes the load coming down through the column over a wider area.


column baseplate

**column capital (column head)** The enlarged cross-sectional area at the top of a column.

**column clamp** A latching device for holding the sections of a concrete column form together while the concrete is being placed.


column clamp

**column footing** The foundation under a column that spreads the load out to an area large enough so that the bearing capacity of the soil is not exceeded and differential settling does not occur.

**column head** *See* **column capital.**

**column schedule** A production plan outlining the construction of columns in a structure. Provides column sizes, elevations (top and bottom), and type and size of reinforcement required.

# C

**column ties** Steel reinforcement surrounding the vertical reinforcement in a concrete column to align the bars and provide additional strength. May be rectangular or ring-shaped.

**comb** **1.** A tool used to produce a rough surface or pattern in plaster or concrete. **2.** A comb board.

**comb board** A board with notches on its upper edge, used to cover the joint at the ridge of a pitched roof.

**comb cut** A vertical cut similar to the cut on the end of a rafter where it is joined to a ridgeboard.

**combed** Descriptive of a surface that has been raked with a comb to produce a rough or patterned finish.

**combed-finish tile** Tile with a serrated rear face to provide a stronger grip with the bonding mastic.

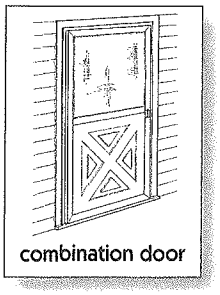
**combed joint** A joint made by fitting together the ends of two pieces of wood that have been cut with a deep V-pattern, thus giving the joint a zigzag appearance.

**comb-grained** A term used to describe a piece of wood that has been sawn so that the growth rings are at a 45° angle to the wide face viewed from the end.

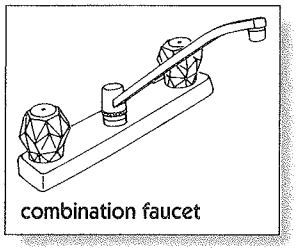
**combination blade** A circular saw blade suitable for both rip and cross cuts.

**combination column** A column of structural steel encased in concrete and designed so that each material carries a portion of the total load.

**combination door** An exterior door that has interchangeable panels of glazing and screening—one for summer and the other for winter use.


combination door

**combination faucet** A faucet that is connected to both hot- and cold-water supply pipes so that the water it dispenses can be of the desired temperature.


combination faucet

**combination fixture** **1.** A combination kitchen and laundry sink in a single unit, with both deep and shallow bowls side by side. **2.** An institutional or prison fixture that combines the functions of a sink and toilet into a single fixture.

**combination plane** A carpenter's or joiner's hand tool that has interchangeable blades or guides so that it can be used for various shaping operations.

**combination pliers** Any of several styles of pliers that can be used for cutting, swaging, or hammering, as well as for gripping.

**combination square** A carpenter's hand tool with a head that slides along a metal rule and may be locked at any location. The head has 90° and 45° angle surfaces, a bubble level, and a scribe pin.

**combination waste and vent system** A plumbing system with an oversized waste pipe that also serves as a vent pipe.

**combination window** A window with replaceable screen and glass inserts for summer and winter use.

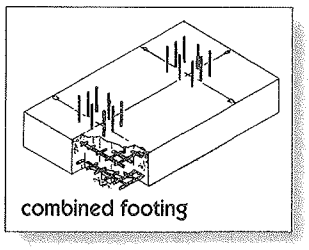
**combination wrench** A wrench with open-end jaws on one end and closed-end jaws on the other.

**combined aggregate** A mixture of both fine and coarse aggregate used in concrete.

**combined-aggregate grading** The proportions of fine and coarse aggregate in a mix design.

**combined building sewer** A sewer system that handles both sewage and storm water.

**combined footing** A footing that receives loading from more than one column or load-supporting element.


combined footing

**combined frame** A doorway with a fixed panel of glass on either or both sides of the door.

**combined load** The total of all the loads (live, dead, wind, snow, etc.) on a structure.

**combined sewer** A sewer that receives both storm water and sewage.

**combined stresses** A condition of stress loading that cannot be represented by a single resultant stress.

**combing** **1.** The act of dressing a stone surface. **2.** The use of a serrated comb or brush to create a surface pattern or roughness in paint, plaster, or concrete. **3.** Those shingles on a roof that project above the ridge line. **4.** The top ridge on a roof.

**combplate** The fixed floor plate at either end of an escalator or moving walkway that has fingers that project into the serrations of the moving segments to prevent an object from wedging into the seam.

**combustible** Descriptive of a substance that will burn in the air, pressure, and temperature conditions of a burning building.

**combustion** A rapid chemical process, such as oxidation, that produces significant thermal energy (heat), and usually light as well.

**combustion air** Fresh, outside air brought in via ductwork to the furnace and/or hot water heater.

**combustion chamber** The section within a woodstove, boiler, or furnace where the burn takes place, typically lined with firebrick or insulation.

**combustion efficiency** A measurement of output versus energy consumed for boilers and hot water heaters.

**come-along** A portable ratcheting winch consisting of a fastening device on one end and a hook attached to a cable at the other end. Operating a lever turns a drum, which tightens up the cable and exerts a pulling force on the hook.

**comfort chart** A chart showing the limits of human comfort for various combinations of temperature, relative humidity, and circulating air velocity.

**comfort station** A building or area with toilet and sink fixtures available for public use.

**comfort zone** The range of effective temperatures over which a majority of adults will feel comfortable.

**commercial bronze** A corrosion-resistant weatherstripping material made from an alloy of copper and zinc.

**commercial projected window** A type of steel window used in commercial and industrial applications where decorative trims and moldings are not used. A projected window has one or more panels that rotate either inward or outward on a horizontal axis.

**commercial tolerances** Allowable variations in the dimensions of items mass-produced for the commercial market.

**comminution** To reduce to minute particles, as in the grinding of coal or the screening of sewage.

**commissioning** The process of ensuring that the complex array of equipment that provides lighting, heating, cooling, ventilation and other amenities in facilities works together effectively and efficiently. Commissioning typically begins during the facility's conceptual design phase and ideally continues throughout the life of the facility.

**commissioning agent** A member of the project team who ensures the proper installation and operation of technical building systems. Normally, the commissioning agent is hired directly by the owner and works independently of both the designer and contractor.

**commitments** The sum of all financial obligations made, including incurred costs and expenditures as well as obligations which will not be performed until later.*

**committed cost** A cost which has not yet been paid, but an agreement, such as a purchase order or contract, has been made that the cost will be incurred.*

**Committee for Industrial Organizations (CIO)** A labor union organized in 1935 for the purpose of representing industrial workers. The CIO was created as a result of a dispute with the American Federation of Labor (AFL). John L. Lewis, president of United Mine Workers and a member of the CIO, was instrumental in merging the AFL and CIO in 1955.

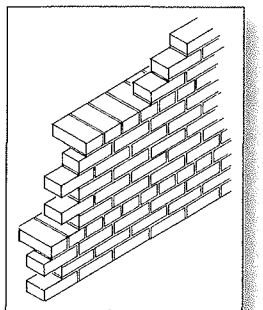
**commode step** On a staircase, the bottom step or steps that curve out around the newel post and are wider than the other steps.

**common area** An area in or adjacent to a building or group of buildings for the use of tenants, such as a courtyard, entry area, lounge, or recreation area.

**common area maintenance (CAM) charge** A provision in a commercial lease that requires the tenant to pay a proportionate share of the common area operation costs.

**common ashlar** A rough-dressed block of stonemasonry.

**common bond (American bond)** A brick masonry wall pattern in which a header course of brick is laid after every five or six stretcher courses.


common bond

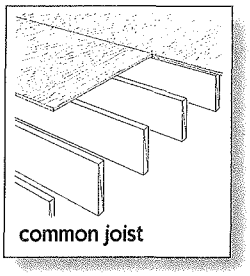
**common brass** A copper-zinc alloy of which 30% to 40% is zinc. It is relatively inexpensive, very ductile, and readily worked.

**common brick** Brick not selected for color or texture, but instead used as filler or backing. Though usually not less durable nor of lower quality than face brick, common brick typically costs less. Greater dimensional variations are also permitted. *See also* **building brick**.

**common dovetail (box dovetail, through dovetail)** A corner joint of interlacing wedge-shaped fingers of wood. The ends of each finger show through at the edge.

**common ground** A strip of wood recessed in a masonry or concrete wall to provide a surface to which something else can be nailed.

**common joist (bridging joist)** One of a series of parallel beams laid on edge to support a floor or ceiling.


common joist

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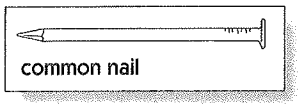
# C

**common lap** In roofing, an offset of one-half a shingle width for alternate rows of shingles.

**common lime** Hydrated lime or quick lime used in plaster or mortar.

**common lumber** Lumber with a number of knots, splits, blemishes, or other defects.

**common nail** A general-purpose, headed nail with a diamond-shaped point used where appearance is not important, as in framing.


common nail

**common rafter (intermediate rafter, spar)** A wood framing member that reaches from the rafter plate at the eaves to the ridge board.

**common vent (dual vent)** A plumbing vent that connects at the junction of two fixture drains and serves as a vent for both fixtures.

**common wall** **1.** A wall built on the boundary between separate lots of land so that it does not belong completely to either owner. **2.** A party wall between dwellings in a condominium or row house.

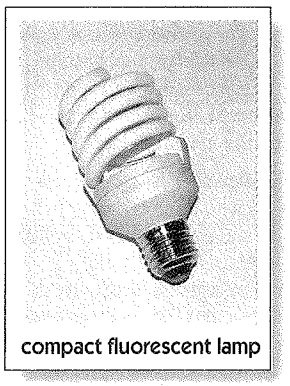
**communicating frame** A frame for two side-by-side, single-swing doors that open in opposite directions.

**community antenna television (CATV)** A single source of television signals transmitted to multiple receivers. Used in buildings that have television cables. Can be integrated in the building's communications system.

**community planning** *See* **city planning.**

**compacted volume** The volume of any mass of material after it has been compressed, particularly soil in an embankment or fill area.

**compact fluorescent lamp (CFL)** Efficient light bulbs that use far less energy than standard, incandescent bulbs. CFLs typically provide 8,000 hours of usage, compared to less than 2,000 for incandescent bulbs.


compact fluorescent lamp

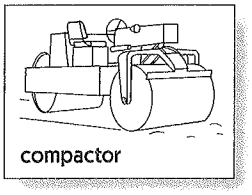
**compacting factor** The ratio of the weight of concrete that has been gravity-filled in a cylinder to the weight of compacted concrete in a similar cylinder.

**compaction** **1.** The compression of any material into a smaller volume; for example, waste compaction. In specifying compaction of embankment or fill, a percent compaction at optimum moisture content is often used. Another method is to specify the equipment, height of lift, and number of passes. **2.** The elimination of voids in construction materials, as in concrete, plaster, or soil, by vibration, tamping, rolling, or some other method or combination of methods.

**compaction tests** Tests employed to determine the density of a soil.

**compaction pile** A pile driven into the ground to compact soil and increase its bearing capacity.

**compactor** A machine that compresses or compacts materials by using hydraulic force, weight, or vibration.


compactor

**companion flange** A flat, plate-like pipe connection device that is drilled and machined to match another flange on a pipe or fitting.

**company** Term used primarily to refer to a business first party, the purpose of which is to supply a product or service. In a capital project, typically refers to the contractor who is performing services for an owner or client.*

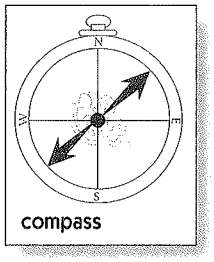
**comparative market approach** A real estate appraisal method basing its value estimate on the recent sale of comparable properties.

**compartment** One of the parts, divisions, or sections into which an enclosed space is divided.

**compartmentation** The containment of smoke within a building by using a system of barriers and compartments.

**compartment ceiling** A ceiling that has been divided into decorative panels, usually surrounded by moldings.

**compass** **1.** An instrument for locating the magnetic north pole of the earth. **2.** A mechanical drawing device used to draw circles.



compass

**compass brick** A curved brick used in circular patterns or to form an arch.

**compass-headed arch** A semicircular arch.

**compass plane** A carpenter's plane with a curved baseplate and/or blade for finishing curved wood pieces.

**compass rafter** A rafter with one or both sides curved.

**compass roof** A roof built out of curved rafters.

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**compass saw (keyhole saw)** A small tapering handsaw used to cut rounded shapes or circles.

**compass survey** A surveyor's traverse using bearings determined by a compass, as opposed to bearings determined by recording the angles turned by the instrument.

**compass window** A window that projects outward from the face of a wall. Similar to a *bow window*.

**compass work (circular work)** Carpentry or joinery based on a circular or curved motif.

**compatibility agent** A substance that, when added to another substance, improves the stability and even distribution of that substance. For example, compatibility agents allow the simultaneous application of a pesticide and fertilizer, or two or more pesticides.

**compatible wastes** Wastes that, when mixed together, will not cause an adverse chemical reaction.

**compensation** **1.** The amount paid for goods, labor, or services provided. **2.** An amount paid to settle a claim for damages.

**compensatory damages** An award for damages intended to compensate the plaintiff by granting a monetary amount equal to the loss or injury suffered.

**competence** Standup capability time of a vertical, excavated rock or earthen face.

**completed operations** An insurance term referring to coverage for personal injuries or damage to property that occurs after construction has been completed. At least one of the following conditions must be met: all activities governed by the contract are finished; all activities at one project site are finished; or that part of the project that precipitated the claim is in use by the owner. This insurance does not cover the actual finished project itself.

**complete fusion** In welding, a total merging of the welded surfaces, including all of the weld filler material.

**completion bond (construction bond, contract bond)** The guarantee by a bonding company that a contract will be completed and will be clear of all liens and encumbrances.

**completion date** The date certified by the architect when the work in a building, or a designated portion thereof, is sufficiently complete, in accordance with the contract documents, so that the owner can occupy the work or a designated portion thereof for the use for which it is intended.

**completion list (punch list)** The final list of items of work to be completed or corrected by the contractor.

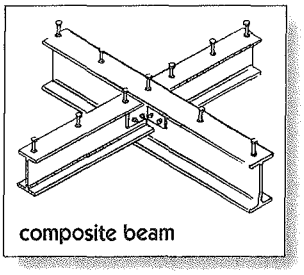
**completion schedule** The time period stated in the contract within which the contractor is obligated to complete the construction project.

**complimentary bid** A bid that is intentionally high. May be illegal if collusion is intended.

**compo** A slang term referring to any type of composition material.

**composite arch** An arch formed from three or four centers of curvature.

**composite beam** A beam combining different materials to work as a single unit, such as structural steel and concrete or cast-in-place and precast concrete.

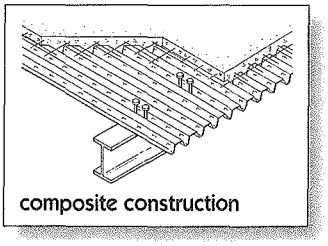


composite beam

**composite board** *See* **composition board.**

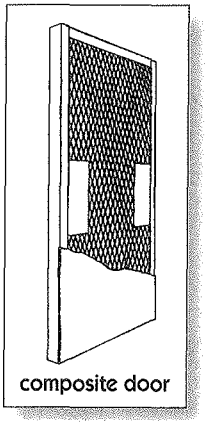
**composite column** A column designed to combine two different materials or two different grades of material to form a structural member. A structural steel shape may be filled with concrete, or a structural steel member for reinforcing may be encased in concrete.

**composite construction** A building constructed of various building materials, or by using more than one construction method, such as a structural steel frame with a precast roof, or a masonry structure with a laminated wood beam roof.



composite construction

**composite door** A door with a wooden or metal shell over a lightweight core. The core is usually made of foam or a material that is shaped like a honeycomb cell.



composite door

**composite fire door** A door made of metal or chemically treated wood surrounding a core material. The door is rated as resistant to fire for some specified period of time.

**composite girder** A girder assembled from component parts of similar or different materials; for example, a plate girder or a bar joist with wooden flanges.

# C

**composite joint** **1.** A joint that is secured by using more than one method, such as riveting and welding. **2.** In plumbing, a general reference to joining bell-and-spigot pipe with packing materials such as rope and rosin, or cement and hemp.

**composite panel** *See* **composition board.**

**composite pile** A pile consisting of more than one member or material, but designed to act as one unit.

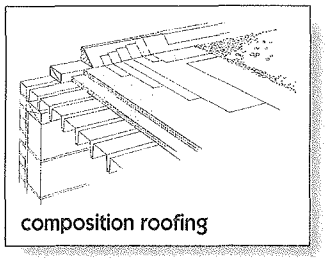
**composite truss** A load-supporting framework of several members. Those members in compression are made of wood; the tension members are usually made of steel.

**composite wall** A wall composed of multiple vertical layers of masonry, each one unit thick, in which one layer is different from the others in type or grade of stone/brick or mortar used.

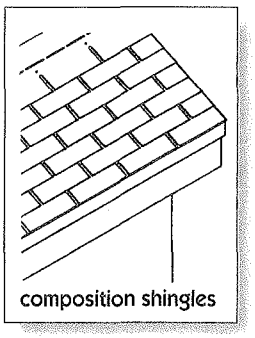
**composition board (composite board)** A manufactured board consisting of any of several materials, usually pressed together with a binder. Composition board is frequently used as sheathing, wall board, or as an insulation or acoustical barrier.

**composition joint** A bell and spigot pipe joint that is sealed with a combination of materials, such as oakum and rosin or cement.

**composition roofing (built-up roofing)** A roof consisting of several layers, thicknesses, or pieces.


composition roofing

**composition shingles (asphalt shingles)** Shingles made from felt impregnated and covered with asphalt, and then coated on the exposed side with colored granules.


composition shingles

**compost** A mixture of organic materials that have decomposed in a humus or earthen material. Used as a lightener and fertilizer when added to soil.

**composting toilet** A toilet that requires little or no water and composts waste into fertilizer.

**compound action snips** A hand tool similar to tin snips used to cut sheet metal.

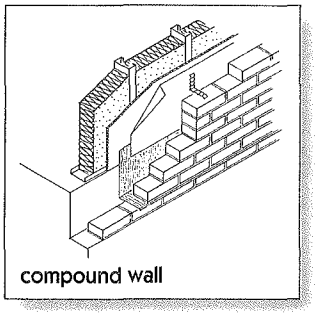
**compound arch** A built-up arch, or one having the appearance of several concentric arches.

**compound beam (built-up beam)** A beam consisting of smaller components that have been assembled and fastened together to function as a single unit.

**compound pier (compound pillar)** A column usually consisting of one central shaft surrounded by secondary shafts, or by two or more equal shafts working in conjunction with one another.

**compound pillar** *See* **compound pier.**

**compound wall** A wall constructed of more than one material.


compound wall

**compreg** *See* **compregnated wood.**

**compregnated wood (compressed wood, densified impregnated wood, resin-treated wood)** Wood that has been impregnated with a resin under pressure and then cured. This process improves the strength and rot resistance of the wood.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** A federal law defining the government actions in the event of an uncontrolled release of hazardous materials into the environment.

**comprehensive general liability insurance** A type of insurance that provides blanket coverage for all types of liability with the exception of those specifically excluded. It covers contractual liability as well as unforeseen future hazards, and may also include automobile coverage. Completed operations liability, more extensive contractual coverage, and product liability insurance can be added to this type of policy.

**comprehensive services** Those services provided by an engineer or architect that encompass both the usual duties, and other professional services, such as project analysis and management, land use and feasibility studies, and financial and other consulting services.

**compressed cork** Cork that has been ground up and then pressed with a binder into a desired shape or sheet. Compressed cork is used as a vibration or sound absorber, as a wall covering, and for many other commercial and industrial applications.

**compressed fiberboard** Wood fiber that has been compressed into sheets and is commonly used as a paneling material.

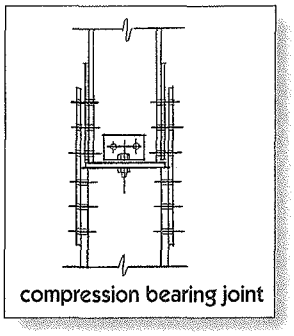
**compressed straw slab** A board manufactured from straw compressed with a binder and cured.

**compressed wood (compregnated wood, densified impregnated wood, resin-treated wood)** Wood that has been impregnated with resin or other materials and then compressed under high pressure to increase its strength, density, and rot resistance.

**compressibility** The ease with which a fluid is reduced in volume by the application of pressure.

**compression** Structurally, it is the force that pushes together or crushes, as opposed to tension, which is the force that pulls apart.

**compression bearing joint** A joint consisting of a structural member in compression, pressing or bearing against another member also in compression.



compression bearing joint

**compression chiller** A system in which water is cooled by liquid refrigerant that vaporizes at a low pressure and proceeds into a compressor. The compressor increases the gas pressure so that it may be condensed in the condenser.

**compression faucet** A faucet that controls flow by compressing a washer against a valve seat. Compression faucets usually have two handles and a single spout.

**compression flange** The upper flange of a beam. If loaded as a simple span, the top flange will be in compression, and the bottom flange will be in tension.

**compression joint** **1.** A bell and spigot joint that becomes watertight when the spigot is pressed into a compression gasket in the bell. **2.** Any joint that is engineered to employ pressure as a seal.

**compression molding** A method of molding plastic in which the plastic material is injected into a metal mold under heat and pressure.

**compression, schedule** When an excessive amount of non-critical tasks are delayed until they become critical tasks and create chaos near the end of a schedule or phase.

**compression set** **1.** The permanent shortened or flattened condition of any material that has been compressed beyond its yield point, and thus cannot return to its original size and shape. **2.** The permanent imprint in a compression gasket.

**compression tank** In a hot water heating system, a tank that absorbs the water pressure exerted.

**compression test** **1.** A test of any material by compression to determine its useful strength characteristics. The test is most often performed in accordance with standards published by the American Society for Testing and Materials, or some other professional or industrial organization. **2.** A determination of the compression developed in each cylinder of an internal combustion engine.

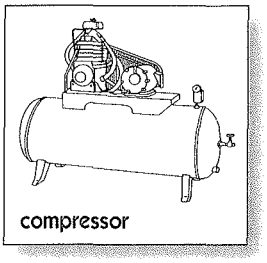
**compression valve** A valve that controls flow by compressing a washer against a valve seat.

**compression web** A framing truss component that connects the bottom and top chords to provide downward support.

**compressive strength** The resistance capacity of any material, but especially structural members, to crushing force. Compressive strength is usually expressed as the maximum number of pounds per square inch that can be resisted without failure.

**compressive stress** The resistance of a material to an external pushing or shortening force.

**compressor** **1.** A machine that compresses air or gases. **2.** In refrigeration/air conditioning, a machine that compresses a refrigerant gas, which then goes to an evaporator. **3.** A truck- or trailer-mounted apparatus, usually diesel-driven, that generates compressed air for demolition hammers, sandblasting and similar needs on a construction site.



compressor

**computation** Same as calculation, but more formal.

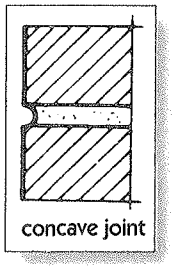
**computer-aided design (computer-aided design and drafting)** The use of computer technology to analyze, design or model a building or system. Allows for greater efficiency and consistency, faster reproduction, and easier alteration than traditional methods.

**computer-aided facilities management (CAFM)** *See* **computerized maintenance management software.**

**computerized maintenance management software (CMMS)** The use of computer technology to schedule plant and equipment maintenance, track assets, and efficiently carry out overall facility management. The purpose of CMMS is to simplify the planning and administrative functions of maintenance, purchasing, and inventory management.

# C

**concave joint** A masonry joint formed by a curved pointing tool and used particularly on exterior masonry walls.




**concealed hinge** A hinge mortised into both the jamb and edge of a door so that it is hidden when the door is closed.

**concealed location** As defined for the purpose of building codes, any area of a building that cannot be reached without doing permanent damage to other building components.

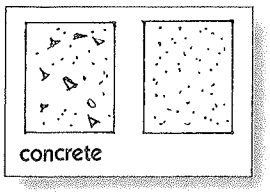
**concentric load** *See* **centric load.**

**concentric tendon** One of several steel cables or rods that run through the center of gravity of a prestressed concrete member, thus placing it in compression.

**concept documents** A series of drawings and other definitive documents that illustrate a design professional's concept for a project.

**concourse** An open area for the circulation of large crowds within a building, as in an airport terminal or shopping mall.

**concrete** A composite material consisting of sand, coarse aggregate (gravel, stone, or slag), cement, and water. When mixed and allowed to harden, it forms a stone-like material.

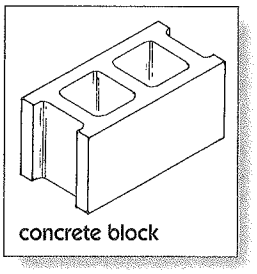



**concrete admixture** A special substance or chemical added to a concrete mix. Typically, an admixture is used to control setting, entrain air, impart color, control workability, or to waterproof.

**concrete aggregate** Granular mineral material that is mixed with cement and water to form concrete.

**concrete, air-entrained** Concrete containing minute air bubbles that improve its workability and frost resistance.

**concrete block** A masonry building unit of concrete that has been cast into a standard shape, size, and style.




**concrete board** A concrete and fiberglass panel typically used as a tile backing material.

**concrete bond (bond plaster)** A thin gypsum plaster coat applied to a concrete face as a base for subsequent coats of plaster.

**concrete collar (doughnut)** A ring of reinforced concrete cast around an existing column and used to jack up the column.

**concrete, confined** Reinforced concrete with restraints implemented that are perpendicular to the applied strength.

**concrete containment structure** A structure made of reinforced concrete to safely contain hazardous materials.

**concrete contraction** The shrinkage of concrete that occurs as it cures and dries.

**concrete curing compound** A chemical applied to the surface of fresh concrete to minimize the loss of moisture during the first stages of setting and hardening.

**concrete, cyclopean** A mass concrete placement into which large stones weighing 100 pounds or more are placed.

**concrete cylinder test** A compression test for concrete strength. Wet samples of concrete are carefully placed in specially made containers 6" in diameter and 12" high. The cylinders are sent to a laboratory where a compression test is performed. This is done by putting the concrete in a hydraulic machine that measures the pressure(s) needed to crush it. Cylinder tests are usually performed for each pour on a project that requires concrete strength control.

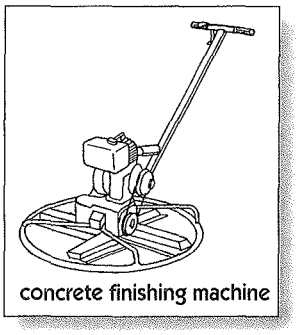
**concrete, derated** Concrete that has had a gas-forming chemical added to it so that when it sets it contains many air holes and is lightweight. *See also* **concrete, foamed.**

**concrete, dry-packed** Concrete with only a small amount of moisture, so that it must be rammed in place in order to be compacted.

**concrete, fibrous** Concrete into which fibrous material, such as glass fibers, has been mixed to increase tensile strength while reducing weight. *See also* **fibrous concrete.**

**concrete finish** The smoothness, texture, or hardness of a concrete surface. Floors are trowelled with steel blades to compress the surface into a dense protective coat. Walls that are exposed to the weather are often ground with a carborundum stone or wheel, with cement then added to fill the small voids. A smooth surface is desired so that water cannot enter the small holes, freeze, and deteriorate the surface.

**concrete finishing machine** **1.** A portable machine with large paddles like fan blades used to float and finish concrete floors and slabs. **2.** A large power-driven machine mounted on wheels that ride on steel pavement forms. Used to finish concrete pavements.

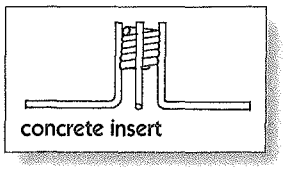

concrete finishing machine

**concrete floor hardener** An additive used to impart extra wear and chip resistance to concrete floors. The additive may be placed in the mix before the floor is cast, or it may be applied to the surface in liquid or granular form.

**concrete, foamed** Concrete to which a chemical foaming agent has been added. The result is a light, porous material, full of air holes, with low strength and good thermal properties. *See also* **foamed concrete.**

**concrete gun** A hand-controlled tool at the end of a hose for injecting or spraying concrete by pneumatic pressure.

**concrete insert** A device, such as a pipe sleeve, a threaded bolt, or a nailing block, that is attached to a concrete form before placing concrete. When the concrete forms are removed, the insert remains embedded in the concrete.


concrete insert

**concrete, in-situ (cast-in-place)** Concrete cast in its final location in the finished structure. *See also* **cast-in-place concrete** *and* **in-situ concrete.**

**concrete masonry** **1.** Concrete blocks laid with mortar or grout in a manner similar to bricks. **2.** Concrete that may be poured in place or as special tilt-up building walls.

**concrete mixer (cement mixer)** A machine that mixes cement, aggregate, and water to make concrete. The components are loaded into a rotating drum.

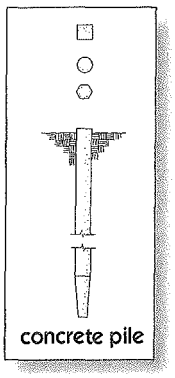
**concrete nail** A steel nail that has been hardened and fitted with a diamond point so that it can be driven into concrete without bending.

**concrete, normal weight** Concrete made with the standard mix of component materials and weighing approximately 148 lbs. per cu. ft. *See also* **normal weight concrete.**

**concrete paint** *See* **cement paint.**

**concrete paver** **1.** A machine used to pave roads with concrete. A paver is equipped with a loading skip, a rotating drum, and a discharge boom. **2.** A precast paving block used in landscaping for walks and patios.

**concrete pile** A slender, precast concrete-reinforced member that is embedded in the soil by driving, jetting, or insertion into a predrilled hole. May or may not be prestressed.


concrete pile

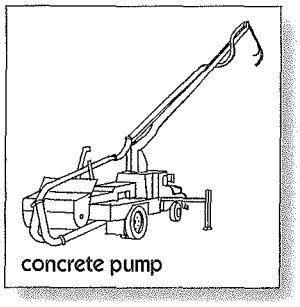
**concrete planer** A machine with cutters or grinders used to level and refinish old concrete pavement.

**concrete plank** A hollow-core or solid, flat beam used for floor or roof decking. Concrete planks are usually precast and prestressed.

**concrete, preplaced-aggregate** Coarse aggregate placed in a form, with Portland cement grout injected later. *See also* **preplaced-aggregate concrete.**

**concrete, prestressed** Concrete members with internal tendons that have been tensioned to put a compressive load on the members. When a load is applied to a prestressed member, compression is decreased where tension would normally occur. *See also* **prestressed concrete.**

**concrete pump** A pump that forces premixed concrete through a hose to a desired location.

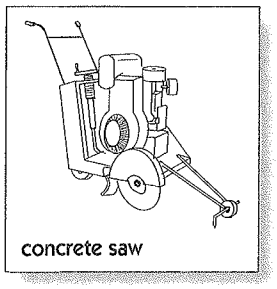

concrete pump

**concrete, ready-mixed (transit-mixed)** Concrete delivered to a site, mixed and ready for placement. *See also* **ready-mixed concrete** *and* **transit-mixed concrete.**

**concrete reinforcement** Metal bars, rods, or wires placed within formwork before concrete is added. The concrete and the reinforcement are designed to act as a single unit in resisting forces.

# C

**concrete saw** A power saw used, for example, to cut concrete in order to remove damaged sections of pavement or to groove the surface to create a control joint.


concrete saw

**concrete slump test** A test to determine the plasticity of concrete. A sample of wet concrete is placed in a cone-shaped container 12" high. The cone is removed by slowly pulling it upward. If the concrete flattens out into a pile only 4" high, it is said to have an 8" slump. This test is done on the job site. If more water is added to the concrete mix, the strength of the concrete decreases and the slump increases.

**concurrent delay** The occurrence of more than one delay in the same period of time.

**concurrent insurance** Insurance under two or more policies that are exactly alike in their terms and conditions, even though they might be different in the dollar amounts of coverage or the dates the policies begin. (Nonconcurrent insurance differs in the terms and conditions as well.) This condition can complicate the collection process for contractors.

**condemnation** **1.** A declaration by the appropriate local governing authority that a structure is no longer fit or safe to use. **2.** The seizure of private property by a governmental authority in order to use that property for some public purpose, as in the exercise of eminent domain.

**condensation** The conversion of moisture in the air to water, as in the formation of water droplets on the outside of cold pipes.

**condenser** The heat exchanger in a refrigeration system that removes heat from the high pressure refrigerant gas and transforms it into a cool liquid.

**condensing unit** In a refrigeration system, the mechanism that pumps vaporized refrigerant from the evaporator, compresses and liquifies it, and returns it to the refrigerant control. Includes the compressor, condenser, condenser fan motor, and controls.

**condex** A form of for-sale residential property ownership set up similar to a condominium but without the association and fees. Most often used for conversions of two family houses to for-sale units.

**conditioned air** Building air whose temperature and relative humidity is controlled.

**conditions of the contract** A document detailing the rights, responsibilities, and relationships of the parties to the contract for construction.

**condominium** A legal system by which individual units of real property, such as apartments, stores, or offices, may be owned separately. Each unit owner obtains all the rights incidental to ownership of real property, and shares with the other owners rights to the common areas in the building, facilities, or land of the condominium.

**conduction** *See* **thermal conduction.**

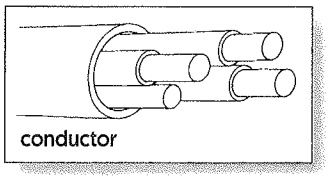
**conductive flooring** Flooring designed to prevent electrostatic buildup and sparking. Typical uses include floors in computer areas and hospital operating rooms.

**conductive mortar** A tile mortar to which electric-conductive material has been added.

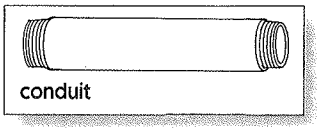
**conductive rubber** An abrasion-resistant, highly conductive rubber with great anti-static properties. Used in switches, keypads, and telecommunications assemblies.

**conductivity** The rate at which heat is transmitted through a material.

**conductor** **1.** Any substance that can serve as a medium for transmitting light, heat, or sound. **2.** In electricity, a wire or cable that can carry an electric current. **3.** A pipe that leads rainwater to a drain.


conductor

**conduit (cable conduit)** **1.** A pipe, tube, or channel used to direct the flow of a fluid. **2.** A pipe or tube used to enclose electric wires to protect them from damage.


conduit

**conduit body** The portion of a conduit or tubing system that makes the interior of the system accessible at a junction or terminal point.

**cone crusher** An aggregate crusher that employs the action of a revolving cone on an eccentric bearing, inside a concave bowl with crusher plates.

**cone of depression** The area surrounding and impacted by an extraction well. Groundwater flow, volume and pressure are all affected.

**cone of recharge** The area surrounding and impacted by an injection well. Injected water flow, volume and pressure are all affected.

**confidence level** The probability **1.** That results will be equal to or more favorable than the amount estimated or quoted; or **2.** That the decision made will achieve the desired results; or **3.** That the stated conclusion is

true. Note: Confidence level may also be expressed as "equal to or less favorable". If that is the case, it should be so noted. Without such a note, the definition shown is assumed.*

**confidentiality agreement** A legal document that allows the release of trade secret information to physicians and others who may need this information to protect workers from danger or to treat an exposed worker.

**configurated glass (figured glass)** Glass that has a surface pattern impressed into it during manufacture to diffuse light or to obscure vision (for example, the glazing found on bathroom windows).

**conglomerate** A rock deposit consisting of stones of varying sizes naturally cemented together as a natural concretion.

**conifer** Any of an order of mostly evergreen trees and shrubs, including those with true cones, such as pines, and those with arillate fruit, such as yews.

**connected load** The total load, as measured in watts, that is connected to an electric supply system if all lights and equipment are turned on.

**connector** A device that will hold two or more electrical wires in close contact and can be quickly and easily removed.

**consequential damages** Losses that do not flow directly from the actions of the defendant, but rather are the result of special or remote circumstances relating to those actions.

**conservation** In the context of historic buildings, efforts to bring old building finishes and features to a condition as close as possible to their original state when new. Conservation also involves planning and carrying out maintenance practices that will ensure the best appearance and condition of the building and its features for as long as possible.

**conservation easement** An easement restricting a land owner to land uses that are compatible with long-term conservation and environmental values.

**conservator** A qualified consultant who practices conservation.

**consideration** The price, motive, or benefit that induces parties to form a contract. A contract is not legally enforceable without consideration.

**consistency** A reference to the relative mobility or plasticity of freshly mixed concrete or mortar, as measured by a slump test for concrete, and by a flow test for mortar and grout.

**consistometer** A device for measuring the firmness or consistency of concrete, mortar, grout, plaster, etc.

**console** **1.** A control station with switches and gauges to govern the operation of mechanical, electrical, or electromechanical equipment. **2.** An ornamental bracket-like member used to support a cornice.

**consolidated formation** Soil strata that may have been subjected to glacial or other consolidating loads in the geological past.

**consolidation** **1.** Compaction of freshly poured concrete by tamping, rodding, or vibrating to eliminate voids and to ensure total envelopment of aggregate and reinforcement. **2.** Compaction of soil in an embankment to achieve a higher bearing strength.

**constant-voltage transformer** A transformer designed to minimize or eliminate the variations in standard line voltage and to produce an unchanging voltage, as required by computers and some instrumentation.

**constant volume reheat** An HVAC system in which the volume of the supply air is unchanged, while the supply air temperature is raised as the local zone cooling load decreases.

**constant-wattage ballast** An efficient lamp ballast that provides high power factor by minimizing the effects of voltage variations.

**constructability** The input of construction knowledge and expertise throughout the planning, design, procurement, and field operations to improve the means and methods of improving the design intent.

**constructability review** The practice of peer reviewing the plans and specifications prior to issuing for bid with the intent of correcting errors, omissions, inconsistencies, or discrepancies.

**construction administrator** One who oversees the fulfillment of the responsibilities of all parties to the contract for construction, for the primary benefit of the owner. In the typical project, construction administration is usually provided by the design professional. However, the owner may employ a separate professional entity for this purpose.

**Construction Advisory Committee** A special committee established by Congress to advise the Secretary of Labor on matters affecting the health and safety of construction workers.

**construction bond** *See* **completion bond.**

**construction change** A change allowed to the contractor for the consequences of an owner failing to perform certain obligations in a contract, where such failure causes extra cost and schedule for the contractor. Examples include over-inspection by the owner, the owner's failure to grant legitimate schedule extensions, or the owner's failure to coordinate other contractors and subcontractors on the job site.

**construction change directive (CCD)** An alternate mechanism for directing the contractor to perform additional work to the contract when time and/or cost of the work is not in agreement between the owner and contractor performing the work.

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# C

**construction cost** The sum of all costs, direct and indirect, inherent in converting a design plan for material and equipment into a project ready for start-up, but not necessarily in production operation; the sum of field labor, supervision, administration, tools, field office expense, materials, equipment, and subcontracts.*

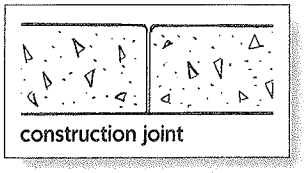
**construction documents** The written specifications and drawings that provide the requirements of a construction project.

**construction draw** The periodic advances on a construction loan based on completed work.

**construction drawings** The portion of the contract documents that gives a graphic representation of the work to be done in the construction of a project.

**construction-grade lumber** Good quality lumber that is generally free of defects.

**construction joint** The interface or meeting surface between two successive pours of concrete.


construction joint

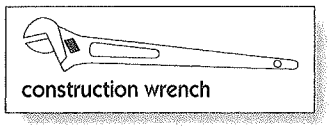
**construction management** **1.** Project management as applied to construction. **2.** A professional service that applies to effective management techniques to the planning, design, and construction of a project from inception to completion for the purpose of controlling time, cost, and quality, as defined by the Construction Management Association of America (CMAA).*

**construction manager** One who directs the process of construction, either as the agent of the owner, as the agent of the contractor, or as one who, for a fee, directs and coordinates construction activity carried out under separate or multiple prime contracts.

**construction manager-at-risk (CMAR)** A project-specific delivery method that is suited for medium to large capital or renovation projects. CMAR provides technical assistance to the designer during the design phase, has a cost-capping feature, and allows construction to start before design documents are 100% complete. The CMAR contracts directly with subcontractors, fabricators, and material suppliers.

**construction progress** Construction progress is monitored and reported as percent complete. Actual work units completed are measured against the planned work units for each applicable account in the bill of materials or quantities. Usually reported against individual accounts by area and total project.*

**construction wrench** A wrench with a handle and jaw at one end for holding or turning fasteners, pipes and fittings. The other end is pointed and is used to align mating holes in steel construction.


construction wrench

**constructive acceleration** A requirement that the contractor complete his work earlier than the contract time, including time extensions to which he is entitled because of excusable delays.

**constructive change** A change to a contract resulting from conduct by the owner that has the effect of requiring the contractor to perform work different from that presented in the contract.

**constructive delay** An act or omission by the owner or its agent, which in fact delays completion of the work.*

**constructive eviction** An unlawful act by a landlord that makes a rented property uninhabitable.

**constructor** One who is in the business of managing the construction process. A contractor is a constructor who is acting under the terms of a contract for construction.

**consultant** A person (or organization) with an area of expertise or professional training who contracts to perform a service.

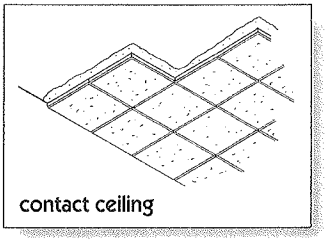
**consulting engineer** A licensed engineer, employed to perform specific engineering tasks.

**consumables** Supplies and materials used up during construction. Includes utilities, fuels and lubricants, welding supplies, worker's supplies, medical supplies, etc.*

**Consumer Products Safety Act** A federal law passed in 1972 that establishes standards of safety for consumer products.

**contact adhesive (dry-bond adhesive)** A bonding agent that is applied to two surfaces and allowed to dry before being pressed together.

**contact ceiling** A ceiling that is attached directly to the construction above, with no intermediate furring strips.


contact ceiling

**contact pressure** The pressure or force that a footing and the structure it supports exerts on the soil below.

**contact splice** A connection between concrete reinforcing bars where the bars are lapped and in direct contact with each other.

**containment berm** A physical barrier used to keep liquids from running outside of a protected area.

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**containment box** A temporary container for hazardous liquid spills.

**contemporaneous documentation** Actual project invoices, plans, and specifications, used to document the outlay of capital by a particular taxpayer for a particular construction project. Generally considered the best supporting documentation for a quality cost segregation study.

**contiguous** Adjacent and touching properties.

**continental seating** Seats placed in an auditorium in continuous rows having no aisles or crossovers. Access is from either a wall aisle or though the doors in the side walls.

**contingency** An amount included in the construction budget to cover the cost of unforeseen factors related to construction.

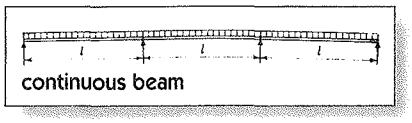
**contingency allowance** A specified sum included in the contract sum to be used at the owner's discretion, and with his approval, to pay for any element or service that was unforeseen or that is desirable but not specifically required of the contractor by the construction documents.

**contingent agreement** An agreement in which a part of an individual's compensation is payable only if a particular condition is met, such as the securing of financial backing. This type of agreement is usually between an architect and an owner who may be seeking to raise funds through passage of a tax referendum, selling bonds, or some other means.

**contingent closure** A land-cover cap used to cover a hazardous waste site before environmental remediation of the soil.

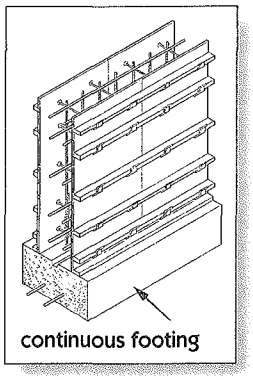
**continuing education** A term applied to a regimen of attendance and application of special study toward a specific subject matter. Continuing education may be pursued through accredited professional seminars, college curriculum, and other forms of organized study that promote knowledge of the "state of the art" of professional endeavors.

**continuous beam** A beam supported at three or more points, and thus having two or more spans.




**continuous flow plant** An asphaltic concrete mixing plant that mixes liquid asphalt and aggregate in a continuous flow, as opposed to a batch mixer.

**continuous footing** A concrete footing supporting a wall or two or more columns. The footing may vary in depth and width.




**continuous girder** A girder supported at three or more points.

**continuous header** Wood frame construction in which the top plate is replaced by a double member, such as a 2" x 8" on edge, that acts as a lintel over all wall openings.

**continuous hinge (piano hinge)** A hinge that extends the full length of the moving part to which it is attached.

**continuous load** A load in which the maximum current is expected to continue for at least three hours.

**continuous load path** The interconnection of all wood framing elements of the lateral and vertical force resisting systems, which transfers lateral and vertical forces to the foundation.

**continuous rating** The constant load that a device can carry at rated primary voltage and frequency without damaging or adversely affecting it.

**continuously reinforced pavement** A longitudinally reinforced concrete pavement with no intermediate transverse expansion or contraction joints.

**continuous span** A rigid span extending over three or more supports so that bending movements are transmitted from one segment to the next.

**continuous vent** A vertical plumbing vent that is a continuation of the drain to which it connects.

**continuous waste and vent** A single pipe, the upper portion of which is a vent, while the lower portion functions as a waste drain.

**contour line** A line on a map or drawing indicating a horizontal plane of constant elevation. All points on a contour line are at the same elevation.

**contract** An agreement between two parties to perform work or provide goods, including an agreement or order for the procurement of supplies or services.

**contract bond** *See* **completion bond.**

**contract change** An authorized modification to terms of a contract. May involve, but is not limited to **1.** A change in the volume or conditions of the work involved, **2.** The number of units to be produced; **3.** The quality of the work or units, **4.** The time for delivery, and/or **5.** The consequent cost involved.*

**contract completion date** The date established in the contract for completion of all or specified portions of the work. This date may be expressed as a calendar date or as a number of days after the date for commencement of the contract time is issued.*

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# C

**contract dates** The start, intermediate, or final dates specified in the contract that impact the project schedule.*

**Contract Disputes Act of 1978** A federal law providing for methods of prosecuting contract claims against the federal government.

**contract documents** All the written and graphic documents concerning execution of a particular construction contract. These include the agreement between the owner and contractor, all conditions of the contract including general and supplementary conditions, the specifications and drawings, any changes to the specifications and drawings, any changes to the original contract, and any other items specifically itemized as being part of the contract documents.

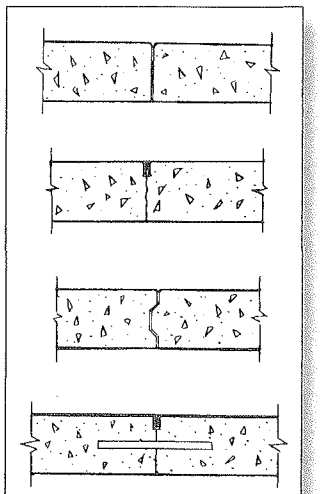
**contract for construction** An agreement between owner and contractor whereby the contractor agrees to construct the owner's project in accordance with the contract documents, within a specified amount of time, and for consideration to be paid by the owner as mutually agreed.

**contract for deed** An agreement in which the seller will deliver the title to the purchaser after all payments have been made.

**contracting officer** The representative of a government agency with authority to bind the government in contract matters.

**contracting officer's decision** The contracting officer's final ruling regarding a properly submitted claim.

**contraction joint (control joint)** A formed, sawed, or tooled groove in a concrete structure. The purpose of the joint is to create a weakened plane and to regulate the location of cracking resulting from the dimensional change of different parts of the structure.



contraction joints

**contract modification** Any unilateral or bilateral written alteration of the contract in accordance with the governing regulations and contract clauses.

**contractor** A constructor who is a party to the contract for construction, pledged to the owner to perform the work of construction in accordance with the contract documents.

**contractor's option** As laid out in the contract documents, the ability of the contractor to select predetermined materials, methods, or systems, at his or her option, with no change in the contract sum.

**contractor's qualification statement** A statement of the contractor's qualifications, experience, financial condition, business history, and staff composition. This statement, together with listed business and professional references, provides evidence of the contractor's competence to perform the work and assume the responsibilities required by the contract documents.

**contract price** The monies payable by the owner to the contractor under the contract documents as stated in the agreement.*

**contract sum** An amount representing the total consideration in money to be paid the contractor for services performed under the contract for construction.

**contract type** The specific pricing arrangements employed for the performance of work under contracts. These arrangements include firm fixed-price, fixed-price incentive, cost-plus-fixed fee, cost-plus-incentive fee, and several others.

**contraflexure point** *See* **point of inflection.**

**contributory negligence** A term used to describe legal responsibility for an error or fault by one or more parties who have allegedly contributed in whole or in part to a loss or damage suffered by another party as a result of a specific occurrence.

**control factor** The ratio of the minimum to the average compressive strength of a material.

**control joint** Grooves manually made on concrete flooring to help control where the concrete should crack.

**controlled fill** A backfilling or embankment operation in which the moisture content, depth of lift, and compaction equipment are closely regulated by specification and inspection.

**controlled-flow roof drainage** A system of roof drainage that significantly slows the rate at which rainwater drains.

**controlled low-strength material (CLSM)** A building material, often used in beddings, encasements, and as flowable backfill, that results in a compressive strength of no more than 1200 pounds per square inch.

**controller** An electrical, electronic, pneumatic, or mechanical device designed to regulate an operation or function.

**control station** In surveying, a point whose location serves as a reference for other surveying operations.

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**convection** The movement of a gas or liquid upward as it is heated and downward as it is cooled. The movement is caused by a change in density.

**conversion** **1.** The change in use of a building, as from a warehouse to residential units, that may require changes in the mechanical, electrical, and structural systems. **2.** The sawing or milling of lumber into smaller units.

**conversion factor** Any factor used to change from one unit of measurement to another. For example, yards are converted to feet by multiplying by three.

**converter** A device that changes electrical energy from one form to another, as in converting alternating current to direct current.

**conveyance** An instrument or deed by which a title of property is transferred.

**conveyors** Frame-mounted continuous belts that move aggregate, earth, or concrete.

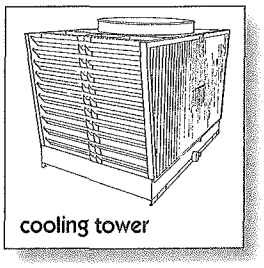
**cookie cutter housing** Informal term that refers to mass produced subdivision housing, where each unit appears nearly identical from the exterior.

**coolant** A fluid used to transfer heat from a heat source to a heat exchanger, where the heat is removed and the coolant is usually recycled.

**cooling load** The amount of air conditioning that would be required to keep a building at a specified temperature during summer months (usually 78°F), regardless of variations in outside temperature.

**cooling plant** The machinery that produces chilled water or cool refrigerant gas, such as the condenser, cooling tower, and condenser water pumps for watershed plants; air-cooled condensers for air-cooled systems; and chilled water pumps and expansion tanks for chilled water systems.

**cooling tower** An outdoor structure, frequently placed on a roof, over which warm water is circulated for cooling by evaporation and exposure to the air. A *natural draft cooling tower* is one in which the airflow through the tower is due to its natural chimney effect. A *mechanical draft tower* employs fans to force or induce a draft.


cooling tower

**cool roof** A roof made of materials (typically light in color) that have a high thermal emittance and solar reflectance. Cool roofs can substantially reduce a building's cooling load.

**co-op** *See* **cooperative.**

**cooperative (co-op)** A type of participant ownership in a building or complex. Actual ownership is by a nonprofit corporation. Individuals are part owners of the corporation and pay monthly fees for use or occupancy of part of the building.

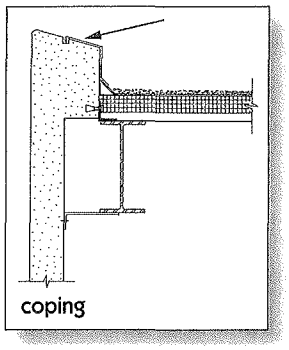
**coopered joint** A joint made on a curved surface similar to the joints made between the staves of a barrel.

**coordinator** The device on a pair of double doors that permits the doors to close in the correct sequence. If the door with the overlapping astragal closed first, the other door would strike the astragal and not close properly.

**cope** **1.** To cut the end of a molding to match the contour of the adjacent piece. **2.** To cut structural steel beams so that they fit tightly together.

**coped joint (scribed joint)** The intersection of two pieces of molding, where one is cut to fit the contour of the other.

**coping** The protective top member of any vertical construction such as a wall or chimney. A coping may be masonry, metal, or wood, and is usually sloped or beveled to shed water in such a way that it does not run down the vertical face of the wall. Copings often project out from a wall with a drip groove on the underside.

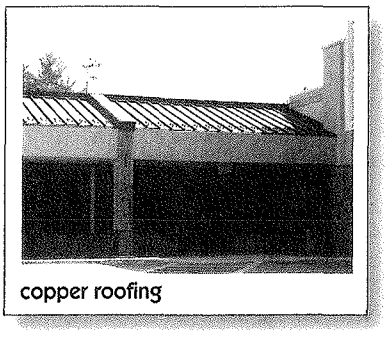

coping

**coping saw** A light hand saw with a narrow blade mounted in a U-shaped frame with a handle. A coping saw is used to cut curves in wood. The blade may be rotated to keep the frame away from the work.

**copper** A pure metal that is ductile, malleable, nonmagnetic, and high in electrical and thermal conductivity. Used for roofing in many historic buildings, copper is also a primary material in piping and electrical wiring.

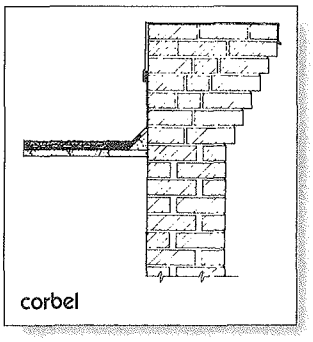
**copper fitting** In piping, an elbow, tee, reducer, or other fitting made of wrought copper, cast brass, or bronze.

**copper roofing** A roof covering made of copper sheets joined by weatherproof seams.


copper roofing

# C

**corbel** A course or unit of masonry that projects beyond the course below. A corbel may be used entirely for decoration or for a ledge to support a load from above.




**corded door** A suspended door or divider made of plastic, vinyl, or wooden slats interconnected with cord or tapes. When opened, the door slides in tracks folding back flat in accordion pleats.

**core** **1.** The interior structure of a hollow-core door. **2.** A cylindrical sample of concrete or rock extracted by a core drill. **3.** The void in a concrete masonry unit. **4.** The center layer of a sheet of plywood. **5.** The vertical stack of service areas in a multistory building. **6.** The central part of an electrical winding. **7.** Metal support for a handrail. **8.** The rubble filling in a thick masonry wall. **9.** The center material between facing papers in gypsum wallboard.

**coreboard (battenboard)** A manufactured board with a wood fiber or wood chip center and bonded veneer faces on both sides.

**cored beam** **1.** A precast concrete beam with longitudinal holes through it. **2.** A beam that has had core samples removed for testing.

**core drill** **1.** A drill used to remove a core of rock or earth material for analysis. **2.** The drilling of a hole through a concrete floor, wall, or ceiling for running pipe or conduit.

**core frame** *See* **buck frame.**

**core gap** An open joint extending through, or partly through, a plywood panel, that occurs when core veneers are not tightly butted. When center veneers are involved, the condition is referred to as a *center gap*.

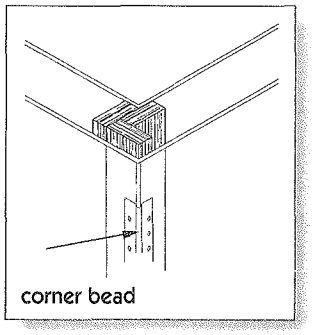
**core test** A compression test on a sample of hardened concrete cut out with a core drill.

**coring** The core drilling of a sample of rock, soil, or concrete to obtain a test sample.

**corkboard** Compressed and baked granulated cork used in flooring and sound conditioning and as a vibration absorber.

**cork tile** Tile made from cork particles bound and pressed into sheets and covered with a protective wearing finish.

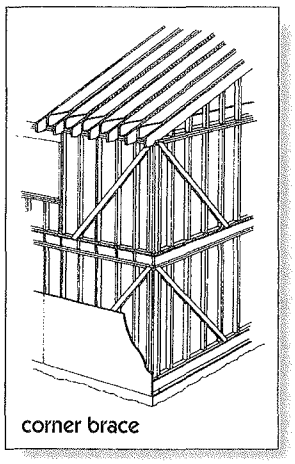
**corner bead** An L-shaped, light gauge metal strip used to finish drywall and plaster wall angles and corners.




**corner bead clincher** A hand tool used to set corner beads in place on walls without nails or screws.

**corner board** The vertical boards that are butted together to form the outside corner of a wood-frame building. The siding or shingles butt up against it.

**corner brace** The diagonal braces let into the studs of wood frame structures for reinforcement.




**corner bracket** A fitting attached to a door frame at the upper hinge corner, used for mounting an exposed overhead door closer.

**corner finisher** A hand tool used to smooth and feather joint compound evenly over wallboard corner joints.

**corner influence** The increases in value of a commercial lot due to its location at a corner or intersection.

**Cornerite®** In plaster walls, strips of metal mesh bent at right angles and embedded in corners of ceilings and walls to prevent the plaster from cracking.

**corner post (angle post, corner stud)** **1.** A glazing mullion in the corner of a structure that retains glazing in both walls. **2.** A vertical member located at the corner of a timber structure.

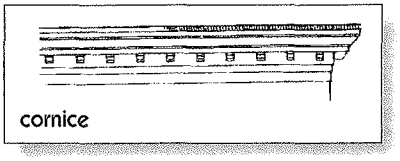
**corner reinforcement** **1.** The reinforcement in the upper corners of a metal door frame. **2.** The metal angle strip used at the corners of plaster or gypsum board construction. **3.** The bent reinforcing rods embedded at the corners of a cast-in-place concrete wall.

**corner return block** A concrete masonry block with solid faces on its sides and on one end. Used at the end of a run of blocks.

**corner stud** *See* **corner post.**

**corner window** Two windows that meet at a corner edge of a structure.

**cornice** **1.** An ornamental molding of wood or plaster that encircles a room just below the ceiling. **2.** An ornamental topping that crowns a structure. **3.** An exterior ornamental trim at the meeting of the roof and wall. This type of cornice usually includes a bed molding, a soffit, a fascia, and a crown molding.


cornice

**cornice lighting** Accent lighting that is positioned high on a wall behind a shield and distributes light along the wall.

**corporation** An association of individuals established under certain legal requirements. A corporation exists independently of its members, and has powers and liabilities distinct and apart from its members.

**corridor** A long, interior passageway, usually with doors opening to rooms, apartments, or offices and leading to an exit.

**corrosion** The oxidation or eating away of a metal or other material by exposure to chemical or electrochemical action such as rust.

**corrosion inhibitor** A protective layer or coating of material, paint, or other surface finish applied to prevent oxidation of, or chemical attack on, the base material.

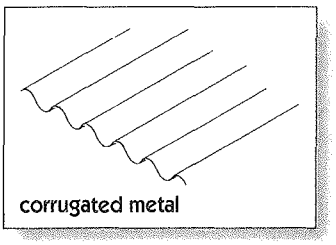
**corrosion resistant** Material that withstands deterioration from surrounding elements, oxidation, and chemical reactions.

**corrosive** Descriptive of a substance that causes corrosion.

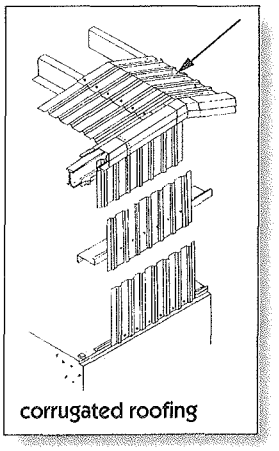
**corrugated aluminum** Sheet aluminum that has been rolled into a parallel wave pattern to impart stiffness.

**corrugated fastener** A small, wavy, steel fastener with one edge sharpened. The fastener is driven into two pieces of wood, bridging the joint in order to hold them together.

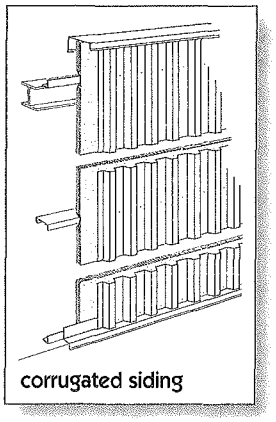
**corrugated metal** Sheet metal that has been rolled into a parallel wave pattern for stiffness and rigidity.


corrugated metal

**corrugated roofing** Corrugated metal or fiberglass mounted on rafters as sheet roofing.


corrugated roofing

**corrugated siding** Siding made of sheet metal or asbestos-cement composition board and used for siding on factories and other nondecorative buildings. By corrugating the material, the structural strength is increased.


corrugated siding

**Cor-Ten A steel** A type of weathering steel composed of 0.2%–0.5% copper and phosphorus.

**cost** The total expenditure in dollars approved after the completion of a project.

**cost analysis** A historical and/or predictive method of ascertaining for what purpose expenditures on a project were made and utilizing this information to project the cost of a project as well as costs of future projects. The analysis may also include application of escalation, cost differentials between various localities, types of buildings, types of projects, and time of year.*

**cost breakdown** *See* **schedule of values.**

**cost engineer** An engineer whose judgment and experience are utilized in the application of scientific principles and techniques to problems of estimation; cost control; business planning and management science; profitability analysis; project management; and planning and scheduling.*

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# C

**cost estimate** A prediction of quantities, cost, and/or price of resources required by the scope of an asset investment option, activity, or project. As a prediction, an estimate must address risks and uncertainties. Estimates are used primarily as inputs for budgeting, cost or value analysis decision making in business, asset and project planning, or for project cost and schedule control processes. Cost estimates are determined using experience and calculating and forecasting the future cost of resources, methods, and management within a scheduled time frame.*

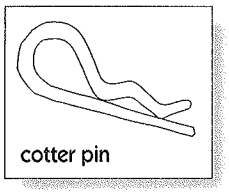
**cost-plus-fee agreement** An agreement between an owner and the contractor or a design professional that provides for payment of all costs associated with completion of their duties. This includes direct and indirect costs as well as a fee for services, which may be a fixed amount or a percentage of costs.

**cost plus fee with guaranteed maximum price (CPF-GMP)** A delivery method similar to CPF, except that it has a cost-capping feature that reduces the owner's risk. CPF-GMP is more popular than CPF for projects of higher value.

**cost-reimbursement contract** A type of contract in which the pricing arrangement involves the payment of allowable costs incurred by the contractor during performance.

**cost segregation** A process of identifying assets within a larger construction project and using cost estimating techniques that allocate costs to individual items of property, which can then be classified for depreciation purposes (e.g., land improvements, buildings, equipment, furniture and fixtures, etc.). The underlying incentive for building owners is the significant acceleration of tax benefits (depreciation deductions) resulting in improved current after-tax cash flow.

**cotter pin** A split metal pin that, when pushed through a hole in a shaft or a bolt (and having the ends bent), prevents parts or nuts from vibrating loose.


cotter pin

**cotton mats** Water-retaining quilts used in the curing of concrete. *See also* **curing blanket.**

**counter** **1.** A person or device that keeps a tally of the occurrences of some event, such as the number of loads of fill. **2.** A long, flat surface over which sales are transacted at a store or business. **3.** A flat work surface in a kitchen.

**counterbalanced window** A double- hung window in which a system of weights and pulleys balances the weight of the sash, thus making it relatively easy to open and close.

**counterbatten** A strip of wood attached to the backs of boards to stiffen them.

**counterbrace** A diagonal brace that balances the force from another brace as part of a web network in a truss.

**counterflashing** A thin strip of metal frequently inserted into masonry construction and bent down over other flashing to prevent water from running down the masonry and behind the upturned edge of the base flashing.

**counterfort** In masonry construction, a pier, buttress, or pilaster on the inner side of a wall to resist thrust.

**counterlathing** *See* **cross-furring.**

**counteroffer** An offeree's response to an offer that neither accepts as offered nor rejects completely, but proposes modifications to the original offer.

**countersink** **1.** A conical depression cut to receive the head of a flat-head bolt or screw for driving it flush with the surrounding surface. **2.** A bit used to cut a conical depression.

**countersunk bolt** A flat-head bolt that tapers to the shank diameter so that it can be driven flush with the top of a countersunk hole.

**countersunk rivet** A rivet used in countersunk holes.

**countertop** The level surface material covering cabinetry, such as in a kitchen or bath.

**counterweight** A weight that balances another weight; for example, a sash weight that balances a window sash, or a large weight that balances a lift bridge.

**counterweight system** A permanent system of weights mounted, for example, on a theatre stage to balance curtains, scenery, or lighting equipment.

**couple** Two equal, opposite, and parallel forces that tend to produce rotation. The movement equals the product of one force times the perpendicular distance between the two.

**coupled roof** *See* **couple roof.**

**coupled window** A pair of independent windows separated by a mullion.

**coupler** A metal clamp-like device used to join and extend tubular frames and braces in barricades or scaffolding.

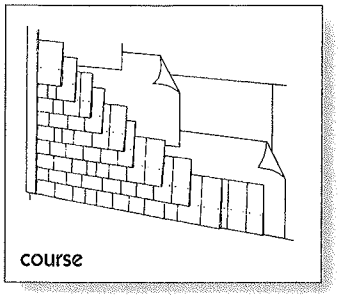
**couple roof (coupled roof)** A narrow-span, double-pitched roof in which opposite rafters are not tied together, thus leaving the outward forces to be resisted by the walls.

**coupling** A fitting for joining two pieces of pipe.

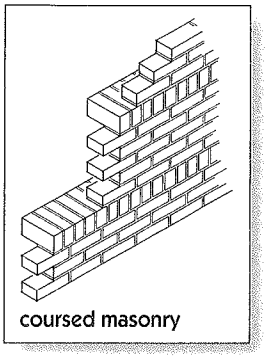
**coupling pin** In modular scaffolding erection, a pin used to connect scaffolding sections or lifts vertically.

**course** **1.** A horizontal layer of bricks or blocks in a masonry wall. **2.** A row or layer of any type of building material, such as siding, shingles, etc.

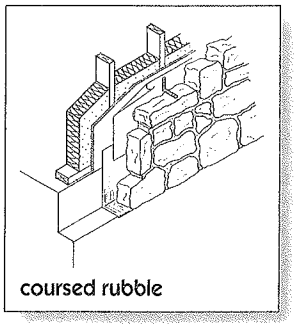
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course

**coursed masonry** Any masonry units laid in regular courses, as opposed to rough or random rubble.


coursed masonry

**coursed rubble** Masonry construction consisting of roughly dressed stones of mixed sizes and shapes, with small stones used to fill irregular voids.


coursed rubble

**coursing joint** **1.** The horizontal mortar joint between two courses of masonry. **2.** In an arch, the arched joint between two curving courses.

**court** An open, unobstructed space surrounded on at least three sides by walls or buildings.

**court deed** A deed executed by a court official conveying title to a property purchaser following judicial foreclosure, often called a Sheriff's Deed.

**cove** A concave-shaped surface where a ceiling and wall meet.

**coved vault** An enclosure whose sides are like four quarter cylinders intersecting so that the joints look like an "X" in plane view.

**cove lighting** Indirect lighting in which the fixtures are behind a molding or valance, and thus out of sight.

**cove molding** A triangular-shaped piece of molding with one concave face used to cover interior angles, such as that between the ceiling and a wall.

**covenant** A term used to describe one or more specific points of agreement that may be set forth in a contract.

**cover** **1.** That which envelops or hides, such as a protecting cover of paint. **2.** That part of a tile or shingle that is overlapped by the next course. **3.** The minimum thickness of concrete between the reinforcing steel and the outer surface of the concrete.

**coverage** **1.** The nominal square feet of area that a can of stain or paint can be expected to cover. **2.** The amount of surface that may be covered by a unit, such as a bundle, square, or ton of building material. **3.** An insurance policy, or the dollar protection that policy provides. The amount of protection depends on many factors, including the type of insurance, amount of insurance purchased, policy limits, and exclusions. **4.** Dependable estimates or firm bids for portions of a construction project.

**coverstone** A flat stone laid on a steel beam or girder to act as the foundation for the masonry above.

**coving** **1.** Concave molding such as that used at the intersection of a wall and the ceiling. **2.** The outward curve of an exterior wall to meet the eaves. **3.** The curving sides of a fireplace that narrows at the back.

**cowl** **1.** An elaborate chimney pot for improving drafts. **2.** A covering over vent pipes to block rain and snow.

**crack-control reinforcement** The use of steel reinforcing rods in concrete and masonry to minimize crack size and occurrence.

**cracking load** The load that imposes a tensile stress in concrete in excess of its tensile strength, causing it to crack.

**cradle** **1.** A scaffold that is suspended outside the roof or top of a structure. **2.** A U-shaped support for pipe or conduit.

**cradle-to-grave analysis** A methodology used to determine the energy, environmental and waste implications of a product, material or system. Analysis begins at the point of raw material extraction and includes refinement or fabrication, transportation, use, and eventual reuse or disposal.

**cradling** The framework on a vaulted ceiling that supports lath and plaster.

**craft** Synonymous with trade, but implies a trade requiring above-average skill.

**cramp** **1.** A device for supporting a frame in place during construction. **2.** A U-shaped metal bar used to lock adjacent blocks of masonry together, as in a parapet wall.

**crandall** A hand tool used for dressing stone. Consists of several sharp, pointed bars fixed to the end of a handle in a hammerlike configuration.

**crane** A machine for raising, shifting, or lowering heavy weights, commonly by means of a projecting swinging arm.

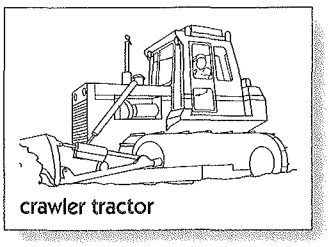
**craneway** Steel or concrete column and beam supports and rails on which a crane travels.

**crank** A twist or bend in a reinforcing bar.

**cratering** The process of exposing multiple layers of old paint for exploration by hand or under a microscope.

# C

**crawler tractor** A powered earthmoving vehicle that moves on continuous, segmented, cleated treads or tracks. The tracks provide low ground-bearing pressure and a high level of mobility and power.


crawler tractor

**crawling** A defect in the application of paint whereby the paint film raises, separates, or breaks apart. Usually caused by painting over a slippery or glassy surface, or from applying heavy or elastic coatings over a hard or brittle surface.

**crawl space** **1.** In a building or portion of a building without a basement, the accessible space between the surface of the ground and the bottom of the first floor joists, with less-than-normal headroom. **2.** Any interior space of limited height designed to permit access to components such as ductwork, wiring, and pipe fittings.

**crawl space vents** A system of openings in a crawl space to allow for an air exchange that will reduce moisture and harmful gas buildup.

**crazing** A series of hairline cracks on a surface such as concrete, paint, or ceramic glaze. *See also* **checking**.

**creasing** One or more courses of masonry units laid on the top of a wall, chimney, or other vertical surface and overhanging the course below so that water will drip off and not run down the wall below. Coping is placed above the creasing if it is used.

**creep** **1.** The slow but continual permanent deformation of a material under sustained stress. **2.** The very slow movement of rock or soil under pressure. **3.** Gradual deformation of a roofing membrane due to thermal stress.

**creep strength** The maximum stress that can be applied to a material at a certain temperature without causing more than a specified percentage increase in dimension in a given time.

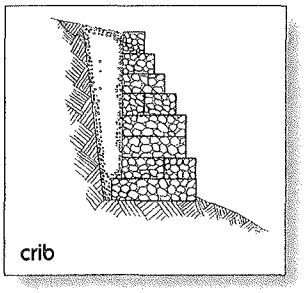
**cremone bolt (cremorne bolt)** A bolt system for windows and doors that features a long sliding rod that is engaged by the turn of a handle. Commonly used with French doors.

**creosote** An oily liquid obtained from tar and used to prevent wood from decaying. Creosote is used extensively for preserving railroad ties, wood piles, posts, and wood foundations.

**crescent truss** A truss in which the upper and lower chords are curved in the same direction, but with different radii of curvature, so that they meet at the ends, thus giving the assembly a crescent-shaped appearance.

**crew tasks** Tasks done by the crew that combine the performance of different individuals, versus a single individual. Each crew member performs a specific function to complete the overall task.

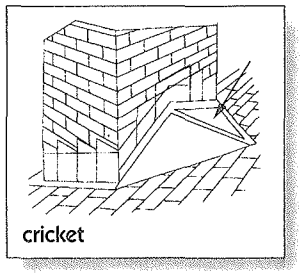
**crib** **1.** A boxed-in area, the sides of which may be an open lattice, often filled with stone, and used as a retaining wall or support for construction above. **2.** A retaining framework lining in a shaft or tunnel.


crib

**cribbing** A system of open boxes built with heavy timbers and filled with rocks or pervious fill. Used as a retaining wall.

**cribwork** An open construction of beams, at the face of an embankment, the alternate layers of which project to provide lateral stability, prevent erosion, and resist thrust or overturning.

**cricket** A secondary roof built on top of an existing roof designed to divert water drainage away from vertical protrusions.


cricket

**crimp** A sharp bend in a metal sheet, as in the joint in metal roofing.

**crimped wire** Wire that has been deformed or bent to improve its bonding effectiveness when used to reinforce concrete.

**cripple** **1.** In construction framing, members that are less than full length; for example, studs above a door or below a window. **2.** In roofing, a bracket secured at the ridge of a pitched roof to carry the scaffold for roofers.

**cripple jack rafter** A short supporting beam that extends from a valley rafter to a hip rafter.

**cripple wall** Above-grade wall framing that extends from the foundation top to the first story's floor framing.

**crisis management plan** The preparation and documentation of methods to respond to events that could disrupt a business or mission. The purpose of a crisis management plan is to prepare individuals within an organization to cope with a calamitous event. Also referred to as *Contingency Response Plan* or *Emergency Response Plan*.

**critical angle** The maximum angle or rise of a stair or ramp before it becomes unsafe for public use. For stairs the angle is 50°; for ramps, it is 20°.

**critical delay** An event that results in the overall project completion occurring later than originally planned.

**critical load** The load at which a member of structure is likely to fail.

**critical path** A term used to describe the order of events (each of a particular duration) that results in the least amount of time required to complete a project.

**critical path method (CPM)** A system of construction management that involves the complete planning and scheduling of a project, and the development of an arrow diagram showing each activity, its appropriate place in the timetable, and its importance relative to other tasks, and the complete project.

**critical task** A task or activity that lies on the critical path of the schedule, which if delayed will delay the completion of the project.

**crocus cloth** A fine abrasive used as a polishing medium for metal surfaces.

**crook** The warp in a board or a natural curve created by tension within the fibers of the piece.

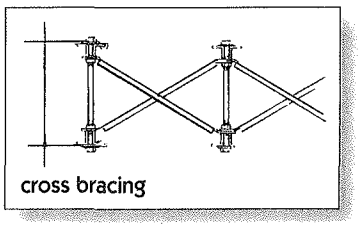
**crossband (crossbanding)** **1.** Any ornamental strip or band whose grain pattern is perpendicular to the main surface. **2.** In plywood, a layer whose grain direction is perpendicular to the surface veneer.

**crossbanding** *See* **crossband.**

**cross bar** In a grating or grill, one of the bars perpendicular to the primary bar.

**cross beam (brow post)** **1.** A large beam that spans two walls or sides of a structure, frequently holding them together. **2.** A brace between opposite whalings or sheeting in an excavation. **3.** In bridge construction, a beam that spans the trusses and supports the stringers or deck.

**cross bracing (cross bridging)** Diagonal braces placed in pairs that cross each other.

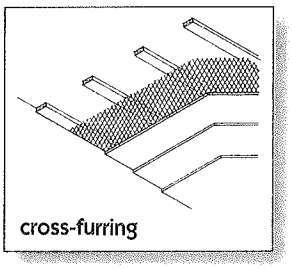

cross bracing

**cross connection** **1.** A piping connection between two otherwise separate piping systems, one of which contains potable water, and the other water of unknown or questionable safety. **2.** In a fire protection system, a connection from a siamese fitting to a standpipe or sprinkler system.

**crosscut** Cutting wood at a right angle to the grain.

**crosscut saw** A saw with its teeth filed and set to cut across the grain of a piece of wood.

**cross-furring (brandering, counterlathing)** Strips or slats attached to the lower edge of joists to which plastering lathing is nailed.


cross-furring

**cross-garnet hinge (T-hinge)** A hinge that is shaped like the letter T, with the head attached to the door frame and the long part fastened to the door.

**cross-laminated** Laminated wood members in which the grain of some layers is at a right angle to the grain of other layers.

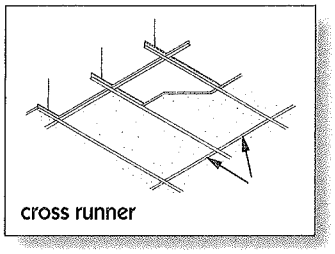
**crosslap joint** A wood joint in which two pieces are each cut to half their thickness at the overlap, so that the total thickness of the system does not change.

**cross lighting** Illumination from two sources on opposite sides of a subject.

**crossover** **1.** In an auditorium, a walkway that is parallel to the stage and connects with the aisles. **2.** A pipe fitting used to bypass a section of pipe. **3.** A connection between two piping systems.

**cross peen hammer** A hammer with one face flat and the other a wedge. Used to break or work hard surfaces.

**cross runner** In a suspended or T-bar ceiling, one of a series of short pieces that span between the long runners.


cross runner

**cross section** A diagram or illustration showing the internal construction of a part or assembly if the front portion were removed.

**cross tee** A short metal T-shaped beam designed to bridge the space between main beams in suspended ceilings.

**cross tongue** A piece of wood, usually plywood, glued at a joint between two wood members for reinforcement.

**cross ventilation** The circulation or flow of air through openings, such as doors, windows, or grilles, that are on opposite sides of a room.

**cross welt (transverse seam)** On sheet metal roofing, a seam or joint that runs parallel to the ridge or across the flow of storm water down the roof.

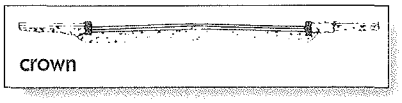
**crotch** The area of a tree where the branches meet the trunk.

**crotch veneer** A veneer with an unusual grain milled from the crotch of a tree.

# C

**crow bar** A steel bar with one end flattened for use as a lever and the other curved and clawed for pulling nails.

**crown** **1.** An ornamental architectural topping. **2.** The central top section of an arch or vault. **3.** The high point in the center of a road that causes water to flow to the edges. **4.** The top of a tree or flowering plant. **5.** In plumbing, the section of a trap that changes direction from vertical to horizontal. **6.** The convex curvature or camber in a beam.


crown

**crown course** **1.** The top row of a roofing material. **2.** The row that actually covers the ridge.

**crown rafter** The central common rafter in a hip roof.

**crown saw** A saw with a hollow rotating cylinder that has teeth around the edge for drilling round holes in wood.

**crushed gravel** Gravel that has been crushed and screened so that substantially one face of each particle is a fractured face.

**crushed stone** Stone crushed and screened so that substantially all faces result from fracturing.

**crusher (breaker)** A machine for reducing gravel, rocks, boulders, or blasted rock to smaller sizes.

**crusher-run aggregate** Aggregate that has been ground in a crusher, but has not been sorted for particle size.

**crushing strength** The greatest compressive load a material can withstand without fracturing.

**crush plate** A replaceable strip of wood attached to the edge of a concrete form to take the abuse of stripping or prying operations.

**crystallization** As applied to absorption chillers, the precipitation of salt crystals from the absorbent. This causes a slush-like mixture that plugs fluid passages within the chiller and renders it inoperable.

**crystallized finish** A random pattern of wrinkles in the finish of paint or varnish.

**cube strength** An analytical strength test of Portland cement in which a standard-size concrete cube is loaded to failure.

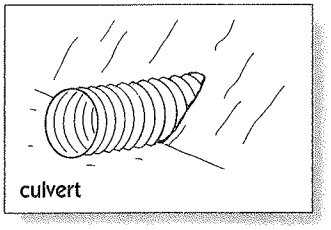
**cubicle** *See* **carrel.**

**cul-de-sac** A dead-end street that ends in an enlarged turn-around area.

**cull** Building materials, especially bricks, that are discarded because of defects.

**cullet** Raw glass or pieces of broken glass from a cut or a cooled melt.

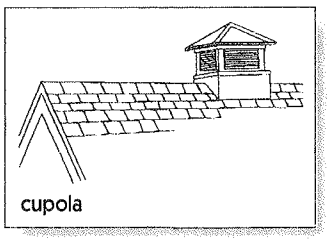
**culvert** A transverse drain under a roadway, canal, or embankment other than a bridge. Most culverts are fabricated with materials such as corrugated metal and precast concrete pipe.


culvert

**cumulative batching** The weighing of a batch of material by adding the components successively to the same container and balancing the scale at each new total weight.

**cup joint** A straight joint used in copper tubing. A swaging tool is driven into one of the ends to be joined, enlarging it so that it will fit over the other tube for a soldered connection.

**cupola** A dome-like structure, often ornamental, located on the top of a building at the ridge of a roof.


cupola

**cupping** A distortion of a board, usually caused by exposure to moisture, where the width of the board curves upward at one or both ends.

**curb appeal** The visual appeal of a home when viewed from the street, often considered critical in attracting buyers.

**curb cock (curb stop)** A control valve that is placed in the water supply pipe that runs from a water main in a street to a building.

**curb form** **1.** A form used with a curb machine for extruding concrete curbs to produce a desired shape and finish on the curb. **2.** A reusable metal form for cast-in-place concrete curbs.

**curb level** The elevation of the curb grade in front of a building, as measured at the center of its street frontage.

**curb machine** A self-propelled, hand-operated machine for extruding bituminous or concrete curbs.

**curb plate** **1.** The wall plate at the top of a circular or elliptical structure. **2.** The plate on which the upper rafters of a curb roof rest.

**curb roof (gambrel roof, mansard roof)** A roof with the slope divided into two pitches on each side.

**curb stop** *See* **curb cock.**

**curb string** *See* **close string.**

**cure** **1.** A change in the physical and/or chemical properties of an adhesive or sealant when mixed with a catalyst or subjected to heat or pressure. **2.** To maintain the proper moisture and temperature after placing or finishing concrete to assure proper hydration and hardening.

**curing blanket** A layer of straw, burlap, sawdust, or other suitable material placed over fresh concrete and moistened to help maintain humidity and temperature for proper hydration. *See also* **cotton mats.**

**curing membrane** Any of several kinds of sheet material or spray-on coatings used to temporarily retard the evaporation of water from the exposed surface of fresh concrete, thus ensuring a proper cure.

**curling** A change in the shape of wood, such as straightness or flatness, due to drying or temperature differences.

**current** The movement of electrons through a conductor. Measured in amperes.

**current assets** Cash and other assets that will be consumed or converted into cash within one year.

**current-carrying capacity (ampacity)** The maximum rated current, measured in amperes, that an electrical device is allowed to carry. Exceeding this limit could lead to early failure of the device or create a fire hazard.

**current density** The current flowing to or from a unit area of an electrode surface.

**current liabilities** Liabilities to be paid within one year.

**current-limiting fuse** A fuse that acts as a protective device by interrupting currents in its current-limiting range and guarding against overcurrents in an electrical system.

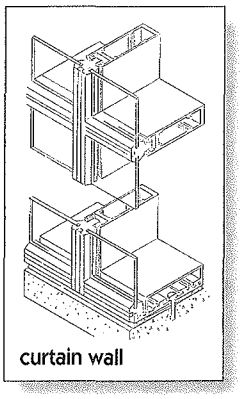
**current transformer** A transformer generally used to convert a current supplied at one current rate to another current rate.

**curtain board (draft curtain)** A heavy fireproof fabric hung from a roof or ceiling to isolate a hazardous area and act as a shield against the spread of a fire by containing heat and smoke for direct venting.

**curtained doorway** A doorway consisting of two overlapping sheets of plastic over a door frame, each attached to the frame at the top and down one side. Allows worker entry into and from an area while minimizing the air movement between rooms.

**curtain grouting** The injection of grout into the ground in a broad line to act as a barrier to subsurface water flow.

**curtain wall** The exterior closure or skin of a building. A curtain wall is nonbearing and is not supported by beams or girders.



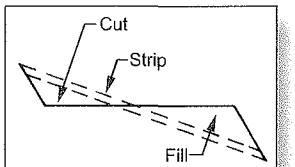
curtain wall

**cushion** **1.** Wood placed so as to absorb a force by acting as a buffer or by transmitting it over a larger area. **2.** A stone placed to accept and spread out a vertical load. **3.** An isolating pad against shock and vibration for glass, machinery, equipment, etc.

**cut** **1.** Material excavated from a construction site. **2.** A term for the area after the excavated material has been removed. **3.** The depth of material to be removed, as in a 5' cut. **4.** To reduce a cost item.

**cut-and-cover** An operation for the laying of pipe or conduit, or for constructing a tunnel, in which a trench is dug, the pipe, conduit, or tunnel liner is placed, and the trench is covered by the excavated material.

**cut and fill** An operation commonly used in road building and other rock and earthmoving operations in which the material excavated and removed from one location is used as fill material at another location.



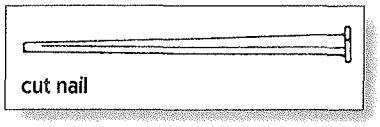

cut and fill

**cutaway drawing** A drawing of an area or object that shows what would be seen if a slice could be made into the area or object and a piece removed. *See also* **cross section.**

**cutback asphalt** A bituminous roof coating or cement that has been thinned with a solvent so that it may be applied without heat to roofs or other areas that need sealing or cementing. Also used for dampproofing concrete and masonry.

**cutches** Molds into which annealed metal is poured to form interleaves.

**cut nail (clasp nail)** A hard, wedge-shaped nail used for nailing hardwoods such as oak flooring.



cut nail

**cutoff** **1.** A wall or barrier placed to minimize underground water percolation or flow. A cutoff is often used at the inlet and outlet of culverts. **2.** The design elevation at which the tops of driven piles are cut.

**cutout** **1.** A mechanical or electrical device used to stop a machine when its safe limits have been exceeded. **2.** An opening in a wall or surface for access or other purposes. **3.** A piece stamped out of sheet metal or other sheet material.

**cutout box** A metal box used in electrical wiring to house circuit breakers, fuses, or a disconnect switch.

# C

**cutting in** A painting technique used to paint around the edges of an object or area, such as trim or a light fixture.

**cuttings** Chips and dust removed from a drilled blast hole.

**cybertecture** A term coined as the result of development of the "smart" house, which is wired to integrate power and telecommunications into one computer-directed system. Refers to the combination of cybernetic computer control and architectural design.

**cycle** The flow of alternating current as it travels in one direction, then reverses itself and travels in the opposite direction. A 60-cycle circuit completes 60 cycles per second.

**cycle time** The time required to complete a repetitive operation such as a batch mix or the refill of a toilet tank after flushing.

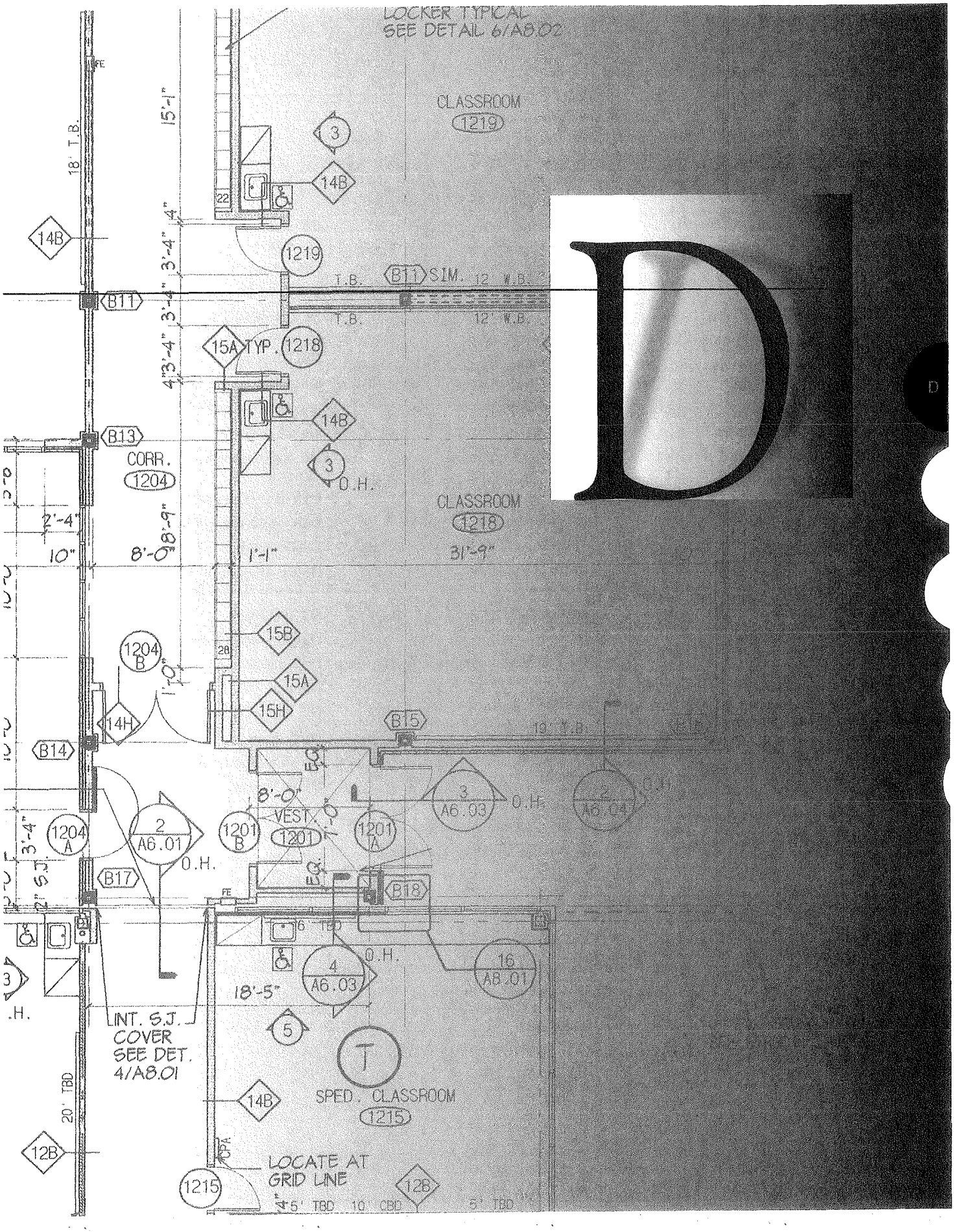
**cyclopean concrete** *See* **concrete, cyclopean.**

**cylinder lock** A lock in which the keyhole and tumbler mechanism are contained in a cylinder or escutcheon separate from the lock case.

**cylinder unloaders** Automatic devices used to hold open the reciprocating compressor valves of a number of cylinders in order to reduce compressor pumping capacity when not being used to full capacity.

**cyma (cima)** A molding with an S-curve section.

**cypress** A wood of average strength and very good decay resistance and durability.


LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
CLASSROOM
1218
CORR.
1204
SPED. CLASSROOM
1215
VEST.
1201
T.B.
12' W.B.
SIM.
O.H.
LINT. S.J.
COVER
SEE DET.
4/A8.01
LOCATE AT
GRID LINE
18' T.B.
15'-1"
3'-4"
4'-3"
8'-0"
8'-9"
31'-9"
18'-5"
20' TBD
5' TBD
10' CBD
D

# D Abbreviations

*The abbreviations listed below are commonly used in the construction industry.*

**d** degree, density, penny (nail size)

**D** deep, depth, diameter, dimensional, discharge

**DA** discharge air

**D/A** digital-to-analog

**DACS** digital alarm communicator system

**DAD** double acting door

**D&CM** dressed and center matched

**D&M** dressed and matched

**D&MB** dressed and matched beaded

**D&SM** dressed and standard matched

**D1S** dressed one side

**D2S** dressed two sides

**D2S&CM** dressed two sides and center matched

**D2S&SM** dressed two sides and standard matched

**D4S** dressed four sides

**db** decibel

**DBA** a unit of sound level (as from the A-scale of a sound-level meter), doing business as

**DB Clg** double-headed ceiling

**DBG** distance between guides

**Dbl** double

**DBOM** design, build, operate, maintain

**DBT** dry-bulb temperature

**DC** direct current, distribution center

**DCC** Digital Command Control

**DCV** demand-controlled ventilation

**DD** design development, device description

**DDC** direct digital controller

**DE** digitally enhanced

**DEC** decimal

**DEG** degree, degrees

**DEL** delineation

**Demo** demolition

**Demob** demobilization

**DEPT** department

**DER** distributed energy resources

**DET** detached, detail, double end trimmed

**DF** damage free, direction finder, drainage free, drinking fountain, Douglas Fir

**dfl** Douglas Fir-Larch

**dflct** deflection

**dfu** drainage fixture unit

**DGI** daylight, disability, or discomfort glare index

**DH** double-hung

**DHW** domestic hot water, double-hung window

**DIA** diameter

**Diag** diagonal

**DIM** dimension

**DIN** Dutch industry normal (German industry standard)

**Dis, Disch** discharge

**Distrib** distribution

**DIV** division

**Dk** deck

**dkg** decking

**DL** dead load, deadlight, diesel

**DM** demand management, document management

**DN** down

**Do** ditto

**DOC** delivery order contract

**DOE** U.S. Department of Energy

**DOE-2** software used to predict the use and cost of energy for different types of buildings

**DOT** Department of Transportation

**DOZ** dozen

**Dp** depth

**DP** degree of polymerization, dew point, double-pitched, differential pressure

**DPC** dampproof course

**DPST** double pole, single throw

**Dr, DR** dining room, drain, dressing room, driver

**DRG** drawing

**drink** drinking

**drn** drain, drainage

**drwl** drywall

**DS** double strength, downspout, drop siding

**DSA** double strength A grade

**DSB** double strength B grade

**DSGN** design

**DSIRE** Database of State Incentives for Renewables and Efficiency

**DT** drum trap

**DT&G** double tongue and groove

**DTS** digital theater system

**Dty** duty

**DU** disposal unit

**DUP** duplicate

**DV** displacement ventilation

**DVTL** dovetail

**dwg, DWG** drawing

**DWV** drain waste vent

**DX** deluxe white, direct expansion

**DXF** AutoCAD Drawing Interchange Format or Drawing Exchange Format

**dyn** dyne

**dabber** A soft, round-tipped brush for applying varnish or for polishing and finishing gilding.

**dabbing (daubing)** Dressing a stone face with a sharp tool to give it a pitted appearance.

**dado** **1.** The flat-bottomed groove cut into one board (usually across the grain) to receive the end of another. If the groove is cut at the edge of a board, it is called a *rabbet*. **2.** An ornamental paneling above the baseboard of a room finish. **3.** Part of a column between the base and the cap or cornice.

**dado cap** A cornice or chair rail along the highest part of a framed dado.

**dado head** A power saw blade designed specifically to produce dados or flat-bottomed grooves.

**dado joint** A joint created by fitting the end of one piece of wood at a right angle into a groove cut across the width of another, to a depth of half its thickness.

**dado rail** *See* **chair rail.**

**daily allocable overhead** The amount of main office overhead per day that is allocated to a delay as calculated using the Eichleay formula.

**daily report log** A daily report or historical record of the day-to-day events on a construction site, recording weather, temperature, personnel, subcontractors, accidents, visitors, and specific progress. Many states consider this a legal record.

**dais** A raised platform at one end of a hall, usually reserved for officers, dignitaries, or speakers.

**dalle-de-ver stained glass** Glass that uses cement or epoxy to hold separate pieces together instead of the traditional lead or zinc cames. Translated, the term means "faceted stained glass."

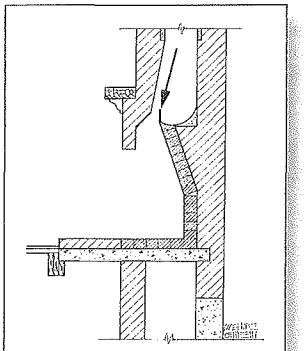
**dam** The barrier built into the trapway of a toilet that controls the water level in the toilet bowl.

**damages** A measure of monetary compensation that a court or arbitrator awards to a plaintiff for loss or injury suffered by the plaintiff's person, property, or other legally recognizable rights. *See also* **liquidated damages.**

**damp check** *See* **damp course.**

**damp course (damp check, dampproof course)** In masonry construction, an impervious course or any material that prevents moisture from passing through to the next course (usually a horizontal layer of material such as metal, tile, or dense limestone).

**damper** **1.** A blade or louver within an air duct, inlet, or outlet that can be adjusted to regulate the flow of air. **2.** A pivotal cast-iron plate positioned just below the smoke chamber of a fireplace to regulate drafts.

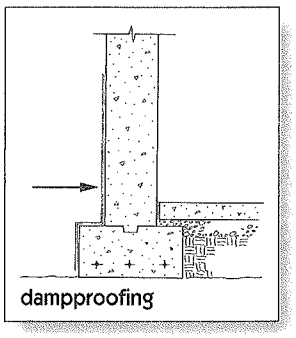

damper

**damping** **1.** The force that acts to reduce vibrations in the same way that friction acts to reduce ordinary motion. **2.** The gradual dissipation of energy over a period of time.

**damping material** Viscous material applied to the surface of a vibrating plate to subdue vibrations and noise.

**dampproof course** *See* **damp course.**

**dampproofing** An application of a water-resisting treatment or material to the surface of a concrete or masonry wall to prevent passage or absorption of water or moisture. Can also be accomplished by using an admixture in the concrete mix.


dampproofing

**dancers** *See* **stairs.**

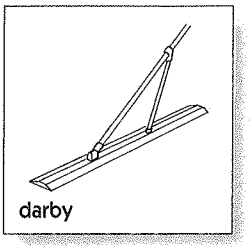
**dancing step** *See* **balanced step.**

**dancing winder** *See* **balanced step.**

**dao (paldao)** A moderately hard, heavy wood indigenous to the Philippines and New Guinea. The wood is variegated in color and used mostly for cabinets, plywood, and interior finishes.

**dap** A notch made in one timber to fit the end of another.

**darby (derby, derby float, derby slicker)** A hand float or trowel, about 4' long, used by concrete finishers and plasterers in preliminary floating and leveling operations. The float is usually made of wood or aluminum and has either one or two handles.


darby

# D

**dash-bond coat** A thick slurry of Portland cement, sand, and water applied to a concrete wall with a brush or whiskbroom to act as a bond for a subsequent plaster coat.

**database** Part of a computer's software program that contains files and lists of related information organized for quick access. In building automation systems, the database consists of digital and analog point names; descriptions such as temperature set points; and operating information such as programs and passwords.

**data center** A space that houses a facility's critical computer systems and has specialized protective features, such as backup power, fire suppression, HVAC, and communications.

**date of acceptance** Date on which the client agrees to final acceptance of the project. Commitments against the authorized funds usually cease at this time. *

**date of agreement** The date shown on the face of an agreement, or the date the agreement is signed (usually the date of the award).

**date of commencement of the work** The date established in the *notice to proceed* or, in the absence of such notice, the date of the agreement established by the parties for the work to begin.

**date of substantial completion** The date when work (or a portion of the work) is certified by the architect to be sufficiently complete as specified in the contract documents. The owner should be able to occupy the work fully or partially.

**datum** A base elevation to which other elevations are referred.

**datum line** An elevation reference line.

**daub** **1.** To rough-coat with plaster. **2.** To rough-coat a stone surface by striking it with a special hammer.

**daubing** *See* **dabbing.**

**Davis-Bacon Act** A federal labor law enacted in 1931 that requires laborers and mechanics (those who do physical work) on federally funded construction projects be paid no less than the local prevailing wages. The Davis-Bacon Act applies to all federally funded contracts over a specified value.

**day** In glazing, one division of a window, particularly in large church windows.

**day gate** In a bank, the metal grille door used when the main vault door is open.

**daylight compensation** An energy-saving lighting system controlled by a photocell that decreases lamp intensity as daylight increases.

**daylight factor** A component in calculating the amount of natural outdoor light entering a building.

**daylight glass** A blue-colored glass used with incandescent lamps to produce the optical characteristics of daylight.

**daylight glazing** Windows (or the part of windows) that are above eye-level, specified for efficient illumination of building interiors. Also known as *daylight windows*.

**daylight harvesting** Maximizing use of sunlight to illuminate interior building space. Photo sensors are used to measure natural light levels; artificial lighting can be adjusted accordingly.

**daylighting** Admitting natural light into a space, including distributing light at uniform levels, avoiding glare and reflections, and controlling artificial light to achieve energy and cost savings.

**daylight lamp** A lamp manufactured with daylight glass. The output is generally 35% less than that from an incandescent lamp.

**daylight sensor** A device that measures ambient light levels, used to help control lighting levels and conserve energy.

**daylight transmittance** The percentage of visible light that a glazing transmits.

**daylight width (sight size width)** The width of that portion of a window that admits light.

**db** *See* **decibel.**

**D-crack** *See* **D-line crack.**

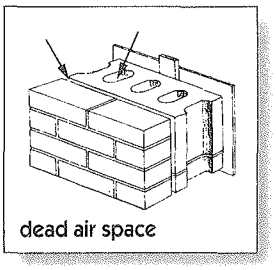
**D-cracking** The progressive formation of fine hairline cracks in concrete surfaces. In highway pavement these cracks run parallel to joints and edges and cut diagonally across corners. *See also* **D-line crack.**

**DDC** *See* **direct digital control.**

**deactivator** A tank containing iron filings, through which hot water is passed to be purged of its active oxygen and other corrosive elements.

**dead** Refers to a conductor that is not connected to an electrical source.

**dead air space** Unventilated air space between structural elements. The space is used for thermal and sound insulation.



dead air space

**deadband** In HVAC, a temperature range in which neither the heating nor cooling systems are activated.

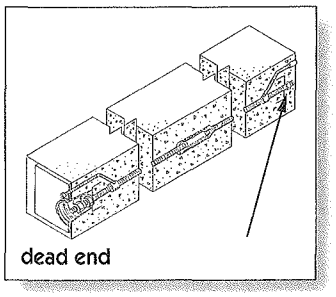
**dead band widening system** A control system for boilers and furnaces that allows for a wide system dead band, or time delay, from set point. Burners can be shut off and stay on for longer periods of time, with fewer cycles. Avoiding short boiler cycling increases the net system efficiency.

**dead bolt** The bolt on a type of door lock that must be operated positively in both directions by turning a key or a thumb bolt.

**dead-burnt gypsum (anhydrous calcium sulfate)** Gypsum from which all the water of crystallization has been removed.

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**dead end** **1.** In stressing a tendon, the end opposite the one to which stress is applied. **2.** In plumbing, a drain line or vent that has been purposely terminated by a cap, plug, or other fitting.


dead end

**dead-end anchorage** The anchorage for the stressing steel in a tendon opposite the jacking end.

**deadening** The use of insulating and dampening materials to restrict the passage of sound.

**dead-front** Refers to an electrical device in which the front part is insulated from voltage and can be touched without receiving an electric shock.

**dead knot** A knot in cut lumber that is no longer connected to the surrounding wood.

**deadlatch** *See* **night latch.**

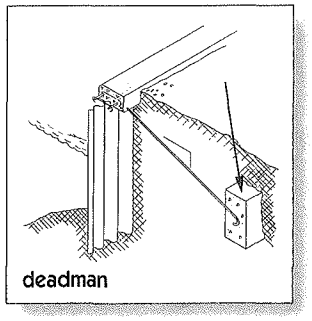
**dead level** **1.** The state of being absolutely level, with no pitch or slope. **2.** A grade of asphalt used on a level or nearly level roof.

**deadlight** A fixed window sash.

**dead load** A calculation of the weight of a building's structural components, fixtures, and permanently attached equipment (used in designing a building and its foundations).

**deadlock** A type of door lock employing a dead bolt.

**deadman** A heavy anchor, such as a concrete block or a log, usually buried underground and used for securing the end of a tie or guy. This device is frequently used with sheeting and retaining walls.


deadman

**dead parking** Long-term, unattended parking of vehicles.

**dead-piled** Freshly pressed plywood piled flat without spacers and weighted down while it attains normal temperature and moisture levels.

**dead room** A room designed to have high sound-absorption properties.

**dead sand** An unwashed, ungraded sand used for fill.

**dead shore** An upright timber used as a temporary support for the dead load of a building during structural alterations. This type of shore is commonly used in pairs to support a needle.

**dead-soft temper** A term describing the temper of sheet copper used for flashing.

**deadwood** Dead tree limbs or the timber cut from dead trees.

**deal** In the lumber industry, boards or planks usually more than 9" wide and 3" to 5" thick.

**debarment** The formal sanction by the government prohibiting a contractor from receiving contracts as a result of certain proscribed actions including crimes, fraud, etc.

**debt service** The periodic repayment of loans including interest and a portion of the principal.

**decal** A design that can be transferred from a special paper onto any of a number of different surfaces.

**decay** In wood, disintegration caused by the action of fungi.

**decayed knot** A knot that is softer than its surrounding wood.

**decay rate** **1.** The rate at which sound reverberations decrease in an enclosure, expressed in decibels per second. **2.** The rate at which vibrations in a mechanism decrease over a specific time period.

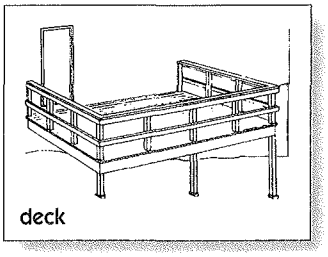
**deceleration** The opposite of acceleration. A direction, either expressed or implied, to slow down job progress.*

**decenter** To lower or remove shoring or centering.

**decibel** **1.** The standard unit of measurement for the loudness of sound. **2.** In closed-circuit television, a numerical unit used to express the difference in power levels, usually between acoustic or electric signals.

**deciduous** A term used to describe those trees that shed their leaves annually. Includes most hardwoods and some softwoods.

**deck** **1.** An uncovered wood platform usually attached to or on the roof of a structure. **2.** The flooring of a building. **3.** The structural system to which a roof covering is applied.

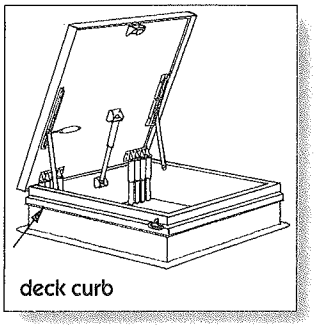

deck

**deck clip** **1.** The H-shaped accessory placed between plywood sheets used as roof decking to prevent uneven deflection. This allows a thinner sheet of plywood to be used with no blocking beneath the joints. **2.** A metal fastener used to attach roof deck units to the structural frame. **3.** An accessory made for attaching rigid insulation material to a roof deck.

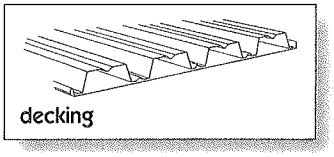
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# D

**deck curb** A curb around the edge of a roof deck or around roof-mounted equipment.


deck curb

**decking** **1.** Light-gauge, corrugated metal sheets used in constructing roofs or floors. **2.** Heavy planking used on roofs or floors. **3.** Another name for slab forms that are left in place to save stripping costs. **4.** The use of inert material to separate explosive charges.


decking

**deck-on-hip** A flat roof constructed over a hip roof.

**deck paint** A special hard-surface paint that is resistant to abrasive wear and used particularly on decks and porches.

**declining balance depreciation** A method of computing depreciation in which the annual charge is a fixed percentage of the depreciated book value at the beginning of the year to which the depreciation applies.*

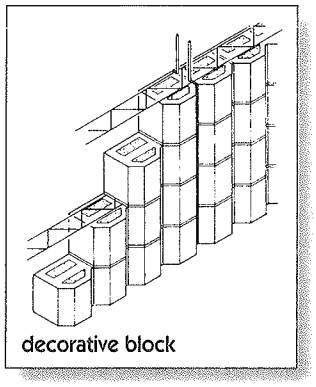
**decomposition** Separation of the scope of work and requirements into smaller, component packages, so that work effort can be more effectively monitored and controlled.*

**deconstruction** A green building strategy that involves reuse of construction materials salvaged from buildings that are being demolished or remodeled. New building designs may include plans for deconstruction and later reuse of materials.

**decontamination chamber** A series of rooms separated from one another and from work areas by airlocks. Prevents contamination of sensitive work areas and/or the spread of dangerous substances used in the work area. Commonly used in asbestos abatement.

**decor** A combination of materials and furnishings that creates a particular style of interior decorating.

**decorative block** A concrete masonry unit manufactured or treated to have a desired architectural effect. The particular effect may be in color, texture, or both.


decorative block

**decoupling** Separation of building elements to reduce or eliminate the transfer of sound, heat, or physical loads from one element to the other.

**dedicated street** A street whose ownership has been relinquished and which has been accepted by a governmental agency for public use and maintenance.

**deductible** The dollar amount that the policyholder agrees to pay in the event of a loss. The insurance company pays the amount over the deductible, up to the limit of the policy.

**deduction** The amount of money deducted from the contract sum by a change order.

**deductive alternate** An alternative bid that is lower than that bidder's base bid.

**deductive change** A change resulting in a reduction in the contract price.

**deed** **1.** A legal document giving an individual rights or ownership to a property. **2.** A document that forms part of a contract and which, when signed by both parties, legally commits the contractor to perform the work according to the contract documents, and commits the client to pay for the work.

**deed in lieu of foreclosure** Refers to a deed given by a defaulting property owner to a creditor so that the lender does not have to proceed with foreclosure. Following a deed in lieu, the creditor may not be able to sue for a deficiency judgment, and the debtor may preserve credit reputation.

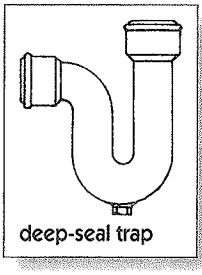
**deed restriction** A restriction on the use of a property as set forth in the deed.

**deep bead** *See* **draft bead.**

**deep cutting (deeping)** **1.** The resawing of timber parallel to its face. **2.** The cutting out of a structural member to a depth relatively far below its surface.

**deeping** *See* **deep cutting.**

**deep-seal trap (antisiphon trap)** A U-shaped plumbing trap having a seal of 4" or more.


deep-seal trap

**default** An omission of, or failure to perform, a contractual duty.

**defect** Any condition or characteristic that detracts from the appearance, strength, or durability of an object.

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**defect, latent** A defect in the work that cannot be observed by reasonable inspection.*

**defect, patent** A defect in the work that can be observed by reasonable inspection.*

**defective** Work that is unsatisfactory, faulty or deficient, or does not conform to the contract documents, or does not meet the requirements of any inspection, reference standard, tests or approval referred to in the contract documents.*

**defective specifications** Specifications and/or drawings that contain errors, omissions, and/or conflicts, which affect or prevent the contractor's performance of the work.*

**defective work (deficiencies)** Work that does not comply with the requirements of a contract.

**defendant** An individual against whom a claim or action is brought. *See also* **plaintiff**.

**defense** An explanation or reason why a person or entity should not be held legally responsible (liable) as a result of claims made against them by another party.

**deficiencies** *See* **defective work**.

**deflagration** The rapid combustion of a material.

**deflected tendons (draped tenon)** Tendons in a concrete member that have a curved trajectory with respect to the gravity axis of the member.

**deflection** **1.** The bending of a structural member as a result of its own weight or an applied load. **2.** The amount of displacement resulting from this bending.

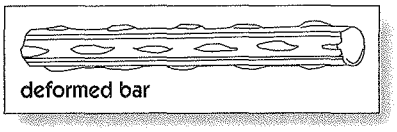
**deflection angle** In surveying, a horizontal angle as measured from the prolongation of the preceding transit line to the next line.

**deflection limitation** Maximum allowable deflection—dictated by the bending limit of the material under the required design load.

**deflectometer** An instrument for measuring the degree to which a transverse load causes a beam or other structure to bend.

**deformation** A change in the shape or form of a structural member that does not cause its failure or rupture.

**deformed bar (deformed reinforcing bar)** A reinforcing bar manufactured with surface deformations to provide bonding strength when embedded in concrete.



deformed bar

**deformed metal plate** A corrugated or otherwise horizontally deformed metal plate used at vertical joints to provide a mechanical interlock between sections.

**deformed reinforcement** In reinforced concrete, reinforcement comprising bars, rods, deformed wire, welded wire fabric, and welded deformed wire fabric. *See also* **deformed bar**.

**degradation** Deterioration of a painted surface by heat, light, moisture, or other elements.

**degree** 1/360th of the circumference of a circle or a round angle.

**degree-day** A unit of measure for heating-fuel consumption. The unit is used to specify the nominal heating load of a building in winter. One degree-day is equal to the number of degrees, during a 24-hour day, that the mean temperature is below 65°F, which is the *base temperature* in the United States.

**degree of compaction** The measure of density of a soil sample, estimated by using a standard formula.

**degree of density** A measure of compaction.

**degree of saturation** The ratio of the volume of water in a given soil mass to the volume of intergranular voids, expressed as a percentage.

**dehumidification** The removal of moisture from the ambient air by physical or chemical means.

**dehumidifier** A device for removing water vapor from the air.

**dehydration** The removal of water vapor from the air by means of absorption or adsorption.

**dehydrochlorination** A chemical reaction between direct sunlight and polyvinyl chloride (the binder in vinyl), causing the surface to become yellow and chalky.

**delamination** Separation of plies of materials, usually due to failure of the adhesive. May occur, for example, in veneers, roofing, and laminated wood beams.

**delay** An event or condition that results in work activity starting, or the project being completed, later than originally planned.

**delime** To remove the scale that builds up on the inside of hot water heaters and boilers.

**deliquescence** The absorption of moisture from the air by certain salts in plaster or brick, resulting in damp spots that appear darker than the surrounding material.

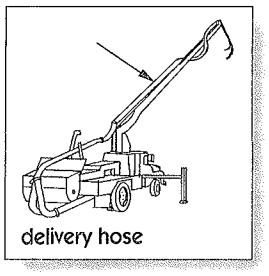
**deliverable** **1.** A report or product of one or more tasks that satisfy one or more objectives and must be delivered to satisfy contractual requirements. **2.** Another name for products, services, processes, or plans created as a result of doing a project. A project typically has interim as well as final deliverables.*

**delivery** Transfer or handover of a product from one party to another.*

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# D

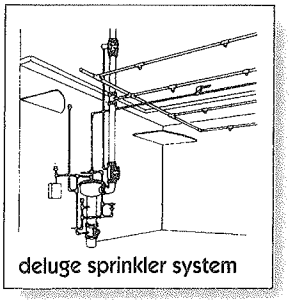
**delivery hose** The hose through which concrete, mortar, grout, or shotcrete is pumped.


delivery hose

**delivery order contract (DOC)** A comprehensive procurement system for organizations to obtain construction services that is designed to lessen construction response time, reduce in-house workload and enhance quality control.

**delta connection** A configuration in a three-phase electrical transformer where the three windings form a triangular shape like the Greek letter delta. *See also* **wye connection.**

**deluge sprinkler system** A dry-pipe sprinkler system particularly well-suited for areas that may experience temperatures below freezing. The system is actuated by a heat- or smoke-detection device, which then turns a valve to admit the water.


deluge sprinkler system

**demand** The electric load integrated over a specific interval of time, usually expressed in watts or kilowatts.

**demand-controlled ventilation** The adjustment of ventilation in response to actual occupancy and $CO_2$ readings.

**demand factor** In an electrical system, the ratio of the maximum demand to the connected load.

**demand-limiting** A feature that limits the amount of power that equipment (or a building) uses during peak conditions.

**demand load** The actual amount of electrical load on a circuit on any given time.

**demand management** Control of the load, or demand for electrical power, generally in keeping with utility rate fluctuations.

**demand mortgage loan** A mortgage loan that may be called at any time by the mortgagee.

**demand response** Power management equipment that reduces a facility's power consumption during peak demand periods.

**demarcation** In masonry, a fixed line for making a boundary limit.

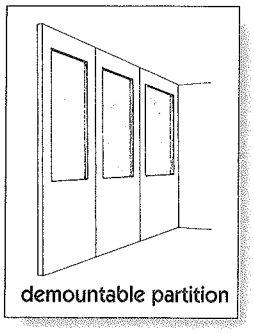
**demarcation point** The point at which the utility company wiring ends, and a building's wiring begins.

**demising partition** *See* **party wall.**

**demising wall** *See* **party wall.**

**demolition** The intentional destruction of all or part of a structure.

**demountable partition (relocatable partition)** A non-load-bearing wall made of prefabricated sections that can be readily disassembled and relocated. These partitions may be full height or partial height.


demountable partition

**demurrage** **1.** A late charge for detaining a cargo-carrying vehicle beyond the agreed-upon time for its return. **2.** A late charge for oxygen and acetylene cylinder rentals and electrical cable reels.

**den** A small room in a home for work or leisure.

**dense concrete** Concrete containing a minimum number of voids.

**dense-graded aggregate** Aggregate sized so as to contain a minimum of voids, and therefore to have the maximum weight when compacted.

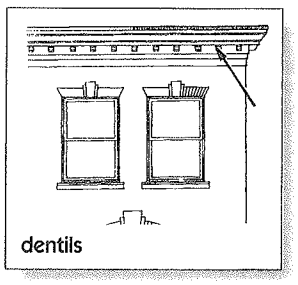
**densified impregnated wood (compregnated wood, compressed wood, resin-treated wood)** Laminated wood that has been impregnated with resins and compressed to greatly increase its density and strength.

**density** **1.** In urban planning, the number of people living within an acre (or sometimes a square mile) of land. **2.** The ratio of the mass of a specimen of a substance to the volume of the specimen; the mass per unit volume of a substance. **3.** The closeness of pile yarn; the amount of pile packed into a given area of carpet, usually measured in ounces per square yard. **4.** The number of lots or building units per acre of land as determined by the zoning bylaw having jurisdiction.

**density control** The testing of concrete used in a structure to maintain the specified density.

**dentil band** A wood molding installed to create the effect of a series of dentils.

**dentils** Square, toothlike blocks used as ornaments under a cornice.


dentils

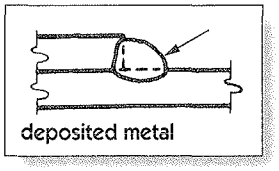
**Department of Health and Human Services** The federal agency responsible for establishing health and safety standards for the protection of persons.

**Department of Labor** The federal agency that oversees all laws associated with hiring, employing, and protecting workers.

**Department of Transportation (DOT)** The federal agency responsible for regulating the safe transportation of goods and materials within the United States.

**depolished glass** Glass whose surface has been diffused by sandblasting, etching, or some other surface treatment.

**deposited metal** The filler metal placed during welding.


deposited metal

**deposit for bidding documents** A deposit required from the bidder for each set of the plans, specifications, and other bidding documents for a contract. Normally the deposit is returned to the bidder upon return of the documents in good condition and within a specified time.

**deposition** A formal method of obtaining information relevant to a lawsuit by verbally asking an individual questions under oath prior to trial.

**depository** A location where bids are received by an awarding authority. *See also* **bank depository.**

**depot** **1.** A storehouse, warehouse, or transfer station. **2.** A railroad or bus station for ticketing, sheltering, transferring, and shipping passengers and freight.

**depreciation** The allocation of a part of the cost of a property, plant, or equipment item (that has a limited useful life) over its estimated useful life.

**depreciation factor** The ratio of initial illumination on an area to the present illumination of the same area, used in lighting calculations to account for depreciation of lamp intensity and reflective surfaces.

**depressed arch** An arch with a pitch less than that of an equilateral triangle.

**depreter** A form of stucco with rock dash finish, made by embedding aggregate in the plaster.

**depth gauge** An instrument for measuring or testing the depth of dados, grooves, drilled holes, and various other recessed portions of any structural work.

**derated concrete** *See* **concrete, derated.**

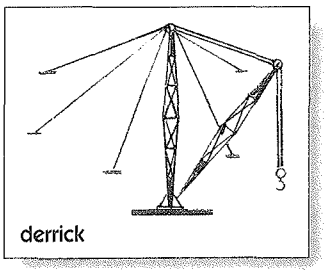
**derby** *See* **darby.**

**derby float** *See* **darby.**

**derby slicker** *See* **darby.**

**dermatitis** An inflammation of the skin.

**derrick** A device consisting of a vertical mast and a horizontal or sloping boom operated by cables attached to a separate engine or motor. The device is used for hoisting and moving heavy loads or objects.


derrick

**descriptive specification** A type of specification that provides a detailed description of the required properties of a product, material, or piece of equipment, and the workmanship required for its proper installation.

**desiccant** An absorbent material that removes water or vapors from another material or from the air. Used in the glazing and refrigeration industries.

**desiccate** To dry thoroughly or to make dry by removing the moisture content, as in the seasoning of timber by exposing it in an oven to a current of hot air.

**desiccator** An apparatus in which a substance is dried.

**design** **1.** To create a graphic representation of a structure. **2.** The graphic architectural concept of a structure. **3.** To make a preliminary sketch, drawing, or outline.

**design-bid-build (DBB)** A traditional method of construction project delivery involving the selection and award of professional design services followed by a separate process for construction services once the design documents are complete.*

**design/build (design-construct)** A method of construction in which the contractor provides both design and construction services to an owner.

**design charrette** A focused, team effort to complete an architectural design in a short period of time by addressing the project's goals, needs, and limitations to find creative, but realistic solutions.

**design-construct** *See* **design/build.**

**design contingency** An amount included in a construction budget to cover additional costs for possible design changes. The amount of contingency varies with the stages of design. As the design is finalized, the contingency should be reduced to near zero for most school projects.*

**design development** The process of reviewing and modifying construction drawings as a result of owner input, coordinating with other design disciplines, building code compliance and general fine-tuning.*

**design development phase** The second phase of a designer's basic services, which includes developing structural, mechanical, and electrical drawings, specifying materials, and estimating the probable cost of construction.

**design factor** *See* **design load (1.).**

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# D

**design for recycling** A design concept that seeks to remove hazardous and non-recyclable materials from the production process through careful planning and design.

**design load** **1.** In structural analysis, the total load on a structural system under the worst possible loading conditions. **2.** In air conditioning, the maximum heat load a system is designed to withstand.

**design pressure** The highest pressure expected during operation of a system, device, or piece of equipment.

**design professional** A term used generally to refer to architects; civil, structural, mechanical, electrical, plumbing, and heating, ventilating, and air-conditioning engineers; interior designers; landscape architects; and others whose services have either traditionally been considered "professional" activities, require state licensing or registration, or otherwise require the knowledge and application of design principles appropriate to the problem at hand.

**design review** A formal, documented, comprehensive and systematic examination of a design to evaluate design requirements and capability of the design to meet these requirements and to identify problems and propose solutions.*

**design specification** A type of specification that prescribes the materials and methods to be used for contract performance.

**design strength** **1.** The assumed value for the strength of concrete and yield stress of steel, used to develop the ultimate strength of a section. **2.** The load-bearing capacity of a structural member, determined by the allowable stresses assumed in the design.

**design to budget** A requirement in the contract between an owner and a design professional that requires the design professional to redesign the project at no additional cost to the owner if the contract price exceeds the owner's budget.

**design ultimate load (factored load)** The working load multiplied by the load factor.

**dessicate** To dry thoroughly or to make dry by removing the moisture content, as in the seasoning of timber by exposing it in an oven to a current of hot air.

**dessicator** An apparatus in which a substance is dried.

**destination elevators** A system that groups passengers in order to reduce individual elevators' travel time.

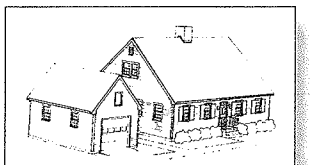
**desulfo gypsum (synthetic gypsum)** Calcium sulfate dehydrate gypsum produced as a by-product of scrubbing industrial smoke stacks to meet environmental clean air standards. Synthetic gypsum has environmental benefits since it uses a waste product in place of virgin materials.

**de-superheaters** Heat exchangers that remove only some of the sensible heat from the hot, high-pressure refrigerant gas.

**detachable bit** In rock drilling, the cutting bit that is screwed into the end of the drill. The bit contains holes for blowing out the rock dust.

**detached dwelling** A structure intended for habitation that is surrounded by open space.

**detached garage** A parking structure whose exterior walls are surrounded by open space.



detached garage

**detail** A large-scale architectural or engineering drawing indicating specific configurations and dimensions of construction elements. If the large-scale drawing differs from the general drawing, it is the architect's or engineer's intention that the large-scale drawing be used to clarify the general drawing.

**detailed engineering** The detailed design, drafting, engineering, and other related services necessary to purchase equipment and materials and construct a facility.*

**detailed estimate of construction cost** A forecast of the cost to construct a project, based on unit prices of materials, labor, and equipment, in contrast to a parameter estimate or square-foot estimate.

**detail(ed) schedule** A schedule used to communicate the day-to-day activities to working levels on the project. The intent of this schedule is to finalize remaining requirements for the total project.*

**detailer** A draftsman who prepares shop drawings and lists of materials.

**detector** *See* **sensor.**

**detention door** A special steel door with fixed lights and steel bars, used to restrict passage in prisons and mental institutions.

**detention window** A narrow, metal awning window manufactured especially for the security of prisons and mental institutions.

**detergent** A chemical compound that cleans surfaces and keeps foreign matter in solution or suspension.

**detergent oil** A heavy duty oil, commonly used in combustion engines, that contains a detergent additive.

**detonating cord** A flexible cord attached to a highly explosive core, used for setting off the explosive to which it is attached.

**detonator** Any of a number of devices, such as blasting caps, for detonating explosives.

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**detritus** Loose material formed from disintegrating rock.

**detritus tank** A settling tank in a sewage-treatment system for collecting sediment without interrupting the flow of sewage.

**detrusion** The shearing of wood fibers along the grain.

**developed area** An area or site on which improvements have been made.

**developed length** The length of a pipeline, including fittings, measured along its center line.

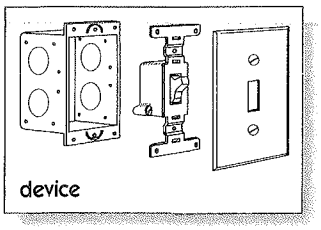
**developed surface** A curved or angular surface graphically represented as flattened out on a plane.

**development** A tract of land that has been subdivided for housing and/or commercial usage and includes streets and all necessary utilities.

**development bond stress** *See* **anchorage bond stress.**

**deviation costs** The sum of those costs, including consequential costs such as schedule impact associated with the rejection or rework of a product, process, or service due to a departure from established requirements. Also may include the cost associated with the provision of deliverables that are more than required. *

**device** In an electrical system, a component that carries but does not consume electricity, such as a switch or a receptacle.

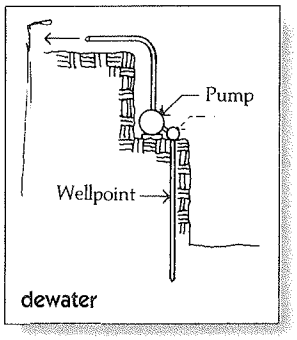

device

**devil** A fire grate used to heat asphalt-spreading tools. *See also* **devil float.**

**devil float (devil, nail float)** A flat, hand-held tool with nails in each edge, used to scratch a coat of plaster prior to applying the next coat.

**deviling** The act of scratching a plaster coat prior to applying another coat.

**dewater** To remove water from a job site by pumps, wellpoints, or drainage systems.



dewater

**dewpoint** **1.** The temperature at which air of a given moisture content becomes saturated with water vapor. **2.** The temperature at which the relative humidity of the air is 100%.

**dextrin (amylin, starch gum)** A starch compound used for wall sizing and wallpaper adhesive.

**D-grade wood** Used only for interior wood applications, such as for inner plies and backs, where specified.

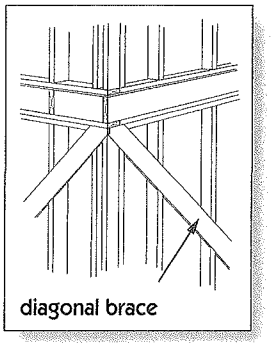
**diabase (traprock)** An igneous rock used extensively in construction materials such as asphaltic concrete, concrete, and pavement base courses. The rock crushes into sharp, angular fragments that interlock well with one another.

**diaglyph** A relief sculptured below the general surface.

**diagonal** A straight structural member forming the hypotenuse of a right triangle, as in the diagonal bracing of a stud wall.

**diagonal bond** A pattern of bricklaying in which every sixth course is a header course, with the bricks placed diagonally to the face of the wall to form a decorative herringbone pattern.

**diagonal brace** A member installed at an angle to make a rectangular frame more rigid.


diagonal brace

**diagonal bridging** Crossing pairs of diagonal bracing that extend between the top of one floor joist and the bottom of the adjacent joist. The bracing is used to distribute the load and to decrease deflection.

**diagonal buttress** A support structure constructed at a 45° angle to the right-angle corner extension of two exterior walls.

**diagonal crack** A crack forming at about a 45° angle to the longitudinal dimension of a concrete member, beginning at the tension surface of the member.

**diagonal grain** In lumber, a deviation of the grain from a line parallel to the longitudinal edges, caused by improper sawing.

**diagonal pitch** The distance between one rivet or bolt in one row to the nearest rivet or bolt in the next row of a structural member with two or more rows of bolts.

**diagonal rib** A structural member that crosses the bay of a vault in a diagonal direction.

**diagonal sheathing** A covering of wooden boards placed diagonally over an exterior stud wall. Although slightly more expensive to install, this method provides a more rigid frame than horizontally-installed boards, and may be more architecturally pleasing.

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# D

**diagonal slating (drop-point slating)** A method of applying diamond-shaped roofing slates with one diagonal laid horizontally.

**diagonal tension** In concrete structural members, the tensile stress resulting from shearing stresses within the member.

**dial saw** An attachment used with a power drill to cut holes.

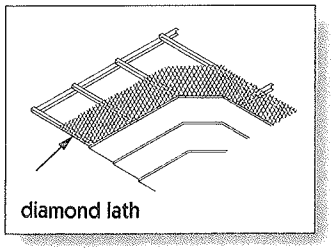
**diameter** The line in a circle passing through its center. Also refers to the nominal diameter designated by an approved material standard.

**diamond blade** A high strength circular saw blade used to cut brick, concrete, tile, and other hard surfaces.

**diamond drill** A high-strength rotary rock drill that cuts a core in rock to create blasting holes.

**diamond fret (lozenge fret, lozenge molding)** A molding with a diamond pattern.

**diamond lath (diamond mesh)** A type of expanded metal strip used as a base for plaster. Manufactured by slitting and expanding metal sheets.


diamond lath

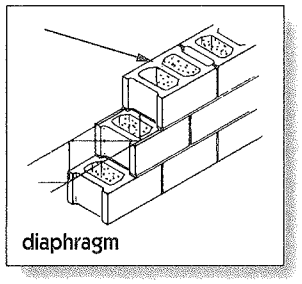
**diamond matching** A method of laying up veneers in which four pieces are used, each with the grain running perpendicular to a line drawn diagonally across the whole panel. The resulting design is diamond-shaped.

**diamond mesh** *See* **diamond lath.**

**diamond slate** An asbestos-cement roofing shingle shaped like a diamond and used in diagonal slating; no longer used.

**diamondwork** Masonry laid up so as to incorporate diamond shapes, usually every sixth course.

**diaphragm** **1.** A stiffening member between two structural steel members, used to increase rigidity. **2.** The web across a hollow masonry unit. **3.** An instrument to measure the flow of water in pipes.


diaphragm

**diaphragm pump (mud sucker)** A reciprocating water pump with a flexible diaphragm used for continuous dewatering of excavations containing mud and small stones.

**diaphragm valve** A valve that is actuated by fluid pressure on a diaphragm.

**diazo** A group of chemical compounds, such as benzenediazo hydroxide or diazomethene, generally used as a light-sensitive emulsion on a support such as paper or plastic. When this material is exposed, as in a photographic process by the passage of light through an original drawing and developed by reaction of a coupler (either an acid compound or alkaline agent), an image called a *whiteprint* is produced.

**dichroic reflector lamp** An incandescent lamp with a filter for correcting the lamp's light color to make it approximate daylight.

**die** A tool for cutting threads on pipe and bolts.

**die-cast** A method of casting by forcing molten metal into a mold.

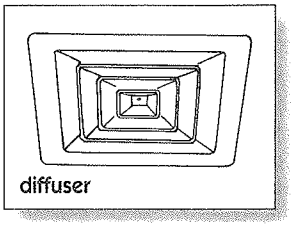
**differential leveling** A method for determining the difference in elevation between two points using a level and rod.

**differential settlement** Uneven, downward movement of the foundation of a structure, usually caused by varying soil or loading conditions and resulting in cracks and distortions in the foundation.

**differing site conditions** Unanticipated physical conditions at the site that differ materially from those set forth in the contract or ordinarily encountered in work of the same nature.

**diffused light** Light reflecting from a surface rather than radiating directly from a light source.

**diffuser** **1.** Any device or surface that scatters light or sound from a source. **2.** A circular, square, or rectangular air distribution outlet, generally located in the ceiling, and comprised of deflecting members to discharge supply air in various directions.


diffuser

**diffusing glass** A glass with an irregular surface, such as ground glass or sandblasted glass. Irregular surfaces can also be produced by grinding, sandblasting, or by rolling the glass during manufacturing. This type of glass provides a softer light for greater eye comfort.

**diffusing panel** A translucent material, usually plastic, used as a cover over a light source such as a luminaire to distribute the light more evenly.

**diffusing surface** A reflecting surface, usually rough-textured, used to scatter light or sound.

**digital** Refers to communications equipment and procedures in which information is represented in binary

form (1 or 0), as opposed to analog form (variable, continuous wave forms).

**digital theater system** A surround-sound system used in homes and commercial applications.

**digital video recording (DVR)** A video recording system used as a surveillance device that is capable of retaining voluminous records for long periods of time, limited only by the digital storage device.

**dike (dyke)** **1.** An earth embankment for retaining water. **2.** A large ditch.

**dilation** The expansion of concrete during cooling or freezing.

**diluent** Any agent used as a thinner.

**dilution air** Air mixing with flue gases in a draft hood or regulator.

**dimension** A distance between two points, lines, or planes.

**dimensionally stable** Refers to any building material whose shape does not alter appreciably with changes in temperature, moisture, and loading conditions.

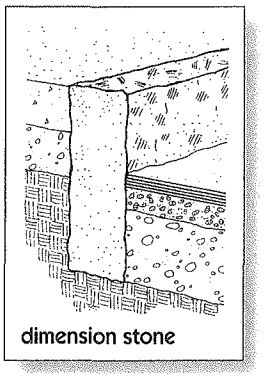
**dimension line** A light, fine line with arrowheads or tic marks at each end, used to show the measurements of the main object lines.

**dimension lumber (dimension stuff)** Lumber that is cut from 2" to less than 5" thick, and 2" or more wide.

**dimension shingles** Shingles cut to a uniform size, usually 5" or 6" wide, and used for special architectural effects.

**dimension stock** Hardwood plywood that has been manufactured to specific dimensions for a particular user.

**dimension stone** Stone that has been trimmed or cut to specifications for a particular use, such as for curbs, building stone, paving blocks, and the like.


dimension stone

**dimension stuff** *See* **dimension lumber.**

**diminished arch (skeen arch, skene arch)** An arch with less rise than a semicircle.

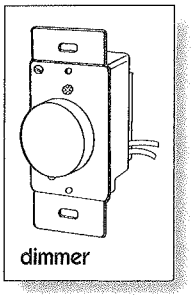
**diminished stile (diminishing stile, gunstock stile)** A door stile that has a narrower dimension at a panel, particularly at a glazed panel.

**diminishing course** *See* **graduated course.**

**diminishing pipe (taper pipe)** A pipe reducer.

**diminishing stile** *See* **diminished stile.**

**dimmer** An electrical device that varies the amount of light given off by an electrical lamp by varying the current.


dimmer

**dimples** A colloquial term used to describe the round depressions left in wall board by a hammer driving nails. Dimples are beneficial as they provide a bed to hold the joint compound applied to hide nail heads.

**dinging** A rough stucco coat applied to a wall and sometimes scored to imitate masonry joints.

**diocletian window** A semi-circular window divided into three lites by wide mullions, also referred to as a therm. First used by Romans, this type of window was also used in Classical Revival buildings of the early 1900s.

**diorama** A three-dimensional scene constructed to scale, usually with a painted background.

**diorite** A granular, igneous rock composed of feldspar and hornblende.

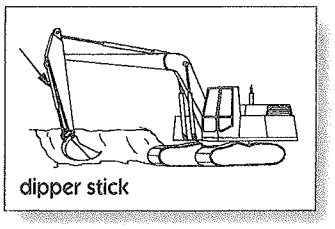
**dip** **1.** In geology, the slope of a fault or vein. **2.** In plumbing, the lowest point of the inside top of a trap.

**dipcoat** A covering of paint or other coating applied by immersing an object in a liquid. Usually applied as an anticorrosive.

**dipper** The digging bucket attached to the arm of a power shovel or backhoe.

**dipper dredge** A bucket used as part of a dredging operation for excavating under water.

**dipper stick** The straight arm that connects the dipper with the boom of a power shovel.


dipper stick

**dipper trip** The mechanism that releases the latch to the bucket door of a power shovel to discharge the load.

**dip solution** The solution used to produce a specific finish or color on copper or copper-alloy products.

**direct-acting controllers** Increase control pressure as the control variable (temperature or pressure) increases.

**direct-acting thermostat** A device that activates a control circuit within a predetermined temperature range.

# D

**direct component** The portion of light from a lamp or luminaire that arrives at the workplane without being reflected.

**direct costs** The labor, material, subcontractor, and heavy equipment costs directly incorporated into the construction of physical improvements.

**direct cross-connection** A connection between two systems for maintaining equal water pressure.

**direct current** A term applied to an electrical circuit in which the current flows in one direction only.

**direct damages** Damages that can be expected to arise as a matter of course from a breach.

**direct digital control (DDC)** A system that receives electronic signals from sensors, converts those signals to numbers, and performs mathematical operations on the numbers inside a computer. The computer output (in the form of a number) is converted to a voltage or pneumatic signal to operate an actuator.

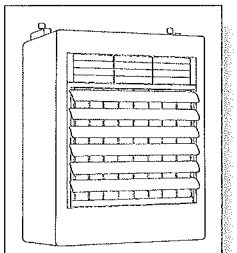
**direct drive** A system in which the driver and the driven element (motor and fan) are positively connected in line to operate at the same speed.

**direct dumping** The placing of concrete using a chute or bucket directly into open forms at or near its final position.

**direct expansion (DX)** Refrigeration systems that employ expansion valves or capillary tubes to meter liquid refrigerant into the evaporator.

**direct expense** All cost items that are directly incurred by or chargeable to a project, assignment, or task.

**direct-fired air heater** An air heating system in which the heat of combustion is applied directly to the intake air so that no heat exchanger is needed.



direct-fired air heater

**direct heating** The heating of a space by means of exposed heated surfaces or a heat source such as a stove, a radiator, or fire.

**direct-indirect lighting** A lighting system employing diffused light luminaires that emit little or no light horizontal to the lighting unit.

**directional drill rig** A drill rig that can drill holes in directions other than vertical.

**directional lighting** The lighting of an object or workplace from a desirable source location.

**direct leveling** The determination of the difference in elevation of two or more points using a surveyor's level and a graduated rod.

**direct lighting** A lighting system, usually emitting light in a downward direction, that distributes 90% to 100% of its light in the direction of the surface to be lit.

**direct luminaire** A luminaire that directs 90% to 100% of its light downward.

**direct nailing** *See* **face nailing.**

**directory board** An informational panel with changeable letters, such as those located in an office building lobby.

**direct overhead costs** Project overhead costs that are directly related to one individual project. These may include temporary facilities, trailer rental, superintendence, telephone usage, staging or lifts, and electrical power.*

**direct personnel expense** Salaries and wages, including fringe benefits, of all principals and employees attributable to a particular project or task.

**direct return system** A heating or cooling system in which the heating or cooling fluid is returned from the heat exchanger to the boiler or evaporator by the shortest, most direct route.

**direct selection** A process whereby the owner selects a contractor to construct a project. The selection is made at the owner's discretion based on the contractor's experience, availability, and capability. The terms of the contract for construction are reached by negotiation rather than through the process of competitive bidding.

**direct solar gain** Solar heating achieved when sunlight enters a room directly and heats the room or is stored in walls or floors.

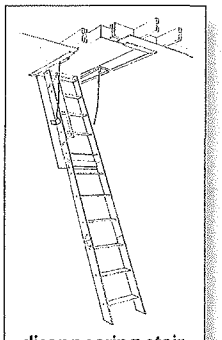
**direct stress** Tensile or compressive force applied without shear or bending.

**direct system** A heating, air conditioning, or refrigerating system that employs no intermediate heat exchanger to heat or cool a space.

**dirt-depreciation factor** A measurement of the reduction of light emitted by a luminaire as a result of accumulated dirt.

**disability glare** An objectionable effect of brightness that hampers visibility and causes discomfort.

**disappearing stair** A hinged stair, usually folding, that is attached to a trap door in the ceiling and can be raised out of sight when not in use.



disappearing stair

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**discharge head** The pressure (in pounds per square inch or psi) measured at the center line of the discharge side of a pump and very close to the discharge flange converted into feet.

**discharging arch** An arch built above the lintel of a door or window to distribute the weight to each side of the wall above.

**discoloration** Any change in hue, shade, or color from the original or adjacent color.

**discomfort glare** An objectionable effect of brightness that does not necessarily hamper visibility.

**disconnecting means** A device or group of devices that can disconnect the conductors of a circuit from their supply source.

**discontinuous construction** A method of construction whereby structural members are staggered to reduce sound transmission through a wall or floor.

**discontinuous easement** A right of accommodation (for a specific purpose) requiring action by one of the parties, such as a right-of-way.

**discounting** Adjusting cash flow to a common point in time (often the present) when an analysis is performed. The conversion of all costs and savings to time-equivalent "present values" allows them to be added and compared in a meaningful way.

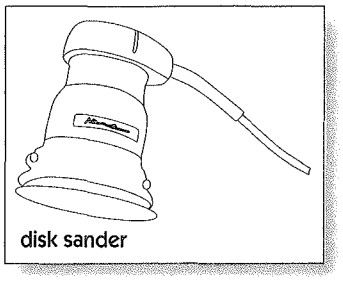
**discount points** The amount of money a borrower must pay a lender to obtain a mortgage with a stated rate.

**discount rate** A percentage rate used to compute the present value of future cash flow.

**discovery** A pretrial procedure providing for the full disclosure of all facts and documents related to a contract dispute. The methods used include production of documents, depositions, interrogations, and requests for admission.

**disintegration** Deterioration or crumbling caused by oxidation, freezing, or exposure to other elements. The term is often applied to the deleterious effects suffered by exposed concrete.

**disk sander** A hand-held power tool that has a rotating, circular abrasive disk used for smoothing or polishing a surface.



disk sander

**dismantling** The process of taking apart a structure or building in sections in order to reassemble them elsewhere.

**dispatchability** The ability of a generating unit or another source of power to vary its output.

**dispatching** The selecting and sequence of jobs to be run at individual work stations and the assignment of these jobs to workers. In many companies, dispatching is done by the actual shop line supervisor, set-up worker or lead worker. A dispatcher is usually a representative of the production control department which handles this job assignment task.*

**dispersant** A material capable of holding finely ground particles in suspension. Used as a slurry thinner or grinding compound.

**dispersing agent** An additive that increases the workability or fluidity of a paste, mortar, or concrete.

**dispersion** In painting, small particles of pigment or latex held in suspension in paint or varnish.

**displacement** **1.** The volume displaced by a piston or ram moving to the top or bottom of its stroke. **2.** In hydraulics, the volume of water displaced by a floating vessel.

**displacement pile** A pile that displaces soil as it is driven by either shifting or compacting it.

**displacement ventilation** Ventilation that uses natural convection processes to move warm air up and out of a building. Displacement ventilation tends to use less energy than conventional forced air ventilation, as it works with natural convection processes.

**disposal field** *See* **absorption field.**

**disposal unit** An electric motor-driven unit installed in a sink to grind food waste for disposal through the sanitary sewer system.

**dispute** A disagreement between the owner and the contractor as to a question of fact or contract interpretation which cannot be resolved to the mutual satisfaction of the parties.*

**dispute procedure** The administrative procedure for processing a contract dispute with the United States government. This procedure is provided for in the Contract Disputes Act.

**disruption** The result of actions or inactions that interfere with performance efficiency, thereby requiring additional effort in performance of the contract work.

**distance separation** The distance, as specified in fire-protection codes, from an exterior wall to an adjacent building, property line, or the centerline of an adjacent street.

**distemper** An interior wall paint whose colors are tempered in a glutinous base.

**distemper brush** A wide, flat, long-bristled brush used to apply distemper.

**distributed antenna system** Antennas and active repeater amplifiers used to enhance wireless communications within a building.

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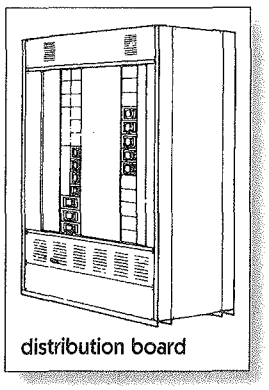
# D

**distributed generation** A facility's generation and supply of electricity or heat for its own use. Surplus electrical power can be delivered to the utility's grid.

**distributed load** A load distributed evenly over the entire length of a structural member or the surface of a floor or roof, expressed in weight per length or weight per area.

**distribution** **1.** The movement of heated or conditioned air to desired locations. **2.** The delivery of electricity over a system from transmission points. **3.** The placement of concrete from where it is discharged to its final location.

**distribution board (distribution panel, distribution switchboard)** An electric switchboard or panel used to distribute electricity within a building. The switchboard is enclosed in a box and contains circuit breakers, fuses, and switches.


distribution board

**distribution box** A container located at the outlet of a septic tank to distribute the effluent evenly to the drain tiles in the absorption field.

**distribution cutout** In a primary electrical circuit, a safety device that disconnects a circuit to prevent overload.

**distribution line** The main electrical feed line to which other circuits are connected.

**distribution panel** *See* **distribution board.**

**distribution reinforcement** The placement of small-diameter reinforcing steel at right angles to the main reinforcing steel in a slab. This method of reinforcement is used to distribute the load and prevent cracking.

**distribution steel** The small-diameter reinforcing steel used in distribution reinforcement.

**distribution switchboard** *See* **distribution board.**

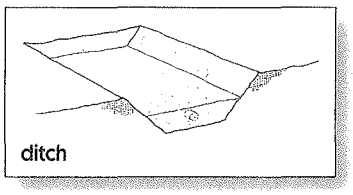
**distribution tile** The tile laid in an absorption field to distribute effluent from a septic tank.

**distribution transformer** A device that transforms primary voltage into a lower secondary voltage for use within a building.

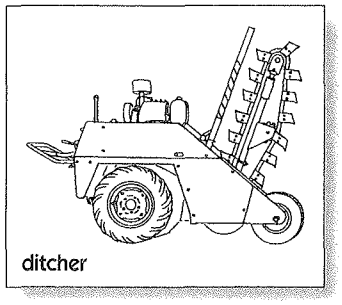
**distributor truck** A truck that is equipped with an insulated tank, heating units, and bars for applying liquid asphalt to a pavement area.

**district heating or cooling** Distribution of heat or cooling from a large district plant, at greater efficiency than would be the case with numerous, smaller plants.

**ditch** A long, open trench used for drainage, irrigation, or for burying underground utilities.


ditch

**ditcher (ditching machine)** A device used for digging temporary ditches or trenches with vertical slopes. The device operates by means of buckets or teeth mounted on a continuously rotating wheel or chain.


ditcher

**ditching machine** *See* **ditcher.**

**diurnal flux** Temperature fluctuation between the day and night hours.

**diversion** A pipe, trench, or channel, usually temporary, used to divert the flow of water from its usual course.

**diversity factor** In electrical systems, the sum of the individual demands of the subsystems divided by the maximum demand of the whole system.

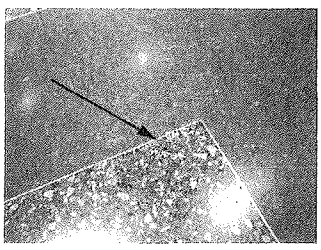
**diver's paralysis (the bends, caisson disease)** Paralysis that may be fatal, caused by too-rapid decrease in air pressure after spending a period of time in a compressed atmosphere.

**divided light door** A French door with the glass divided into small panes.

**divided tenon** Two tenons side by side in the end of a member.

**dividers** A compass with both legs terminating in points. Used for transferring measurements from a plan or map to a scale, or vice versa.

**divider strips** The nonferrous metal or plastic strips used as screeds in terrazzo work. Also used to divide the panels.


divider strips

**division** One of the standard major construction index classifications used in specifying, pricing, and filing construction data.

**division bar** *See* **muntin.**

**division wall (fire wall)** A regulation fire-resistant wall extending from the lowest floor of a building through the roof to prevent the spread of fire.

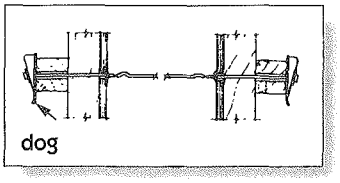
**D-line crack (D-crack)** **1.** One of several fine, closely spaced, randomly patterned cracks in concrete surfaces. **2.** Similar cracks parallel to the edges or joints in a slab. **3.** Larger cracks in a highway slab that run diagonally across its corners.

**dobying** Blasting a boulder by mud-capping rather than drilling.

**dock** A raised platform for the loading and unloading of trucks. Often, the elevation of a portion of the dock is adjustable to accommodate the differing heights of truck beds.

**dock bumper** A recoiling or resilient device attached to a dock to absorb the impact of a truck.

**dog** **1.** In concrete forming, the hardware that holds the end of a snap tie. **2.** Any device used for holding, gripping, or fastening an object. *See also* **dog anchor.**


dog

**dog anchor (dog iron)** A short piece of iron with its two pointed ends bent at right angles, driven into two adjoining pieces of timber to hold them together.

**dog bars** Intermediate vertical members in the lower part of a gate, used to prevent animals from passing through.

**dog-ear** In roofing or flashing, an external corner formed by folding rather than cutting the metal.

**dog house dormer** *See* **gable dormer.**

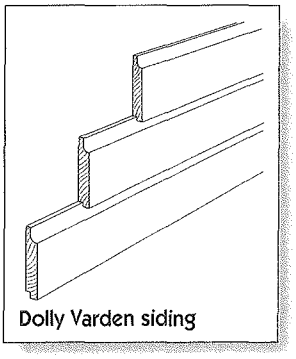
**dog iron** *See* **dog anchor.**

**dogleg stair** A stair that forms a right angle turn at a landing.

**dog's tooth** A bricklaying pattern in which the corners of bricks project from the wall.

**dolly** **1.** One of a variety of small, wheeled devices used to move heavy loads. **2.** A block of wood placed on the upper end of a pile to cushion the blow of a hammer. **3.** A steel bar with a shaped head to back up a rivet while the rivet is being driven.

**Dolly Varden siding** Beveled wood siding that is rabbeted along the bottom edge, such as on novelty siding.

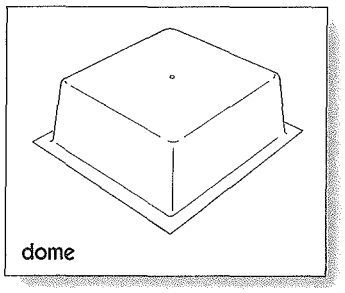

Dolly Varden siding

**dolomite** A mineral containing calcium and magnesium carbonate, used primarily as an aggregate in making concrete. *See also* **dolomitic limestone.**

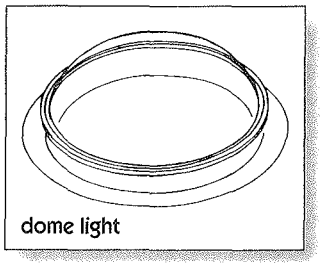
**dolomitic lime** A name commonly used for high-magnesium lime.

**dolomitic limestone** A form of cut limestone that contains dolomite and is used in building construction.

**dome** **1.** A hemispherical roof such as that commonly seen on government structures. **2.** A rectangular pan form used in two-way joist or waffle concrete floor construction.


dome

**dome light** A dome-shaped skylight made of glass or plastic.


dome light

**domestic hot-water heater** A packaged unit that heats water for household purposes.

**domestic sewage** Household waste, including that originating from single- or multi-family housing.

**dominant estate** Pertaining to legal rights and benefits in property deeds. The property receiving the right or benefit is the *dominant estate*, whereas the property granting the right or benefit is the *servient estate*.

**dook** A wooden plug inserted into a wall and used for attaching finish trim to the wall.

**door** A movable member used to close the opening in a wall.

**door area** The total area of outside doors and facings. Used in computing heating and cooling requirements of a building.

**door bolt** A sliding bar or rod for locking a door.

**door buck** A rough wood or metal frame to which the finished door frame is aligned and attached.

# D

**door bumper** A device placed on the wall or floor behind a door to limit its swing.

**door butt** A door hinge.

**door casing** The finished visible frame into which a door fits.

**door catch** A device for fastening a door, usually attached to one side of the door only.

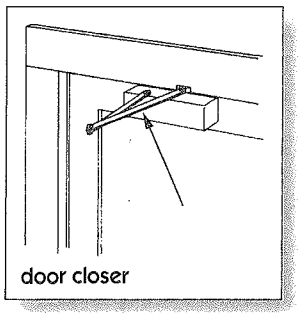
**door check** An automatic door closer.

**door cheek** *See* **door jamb.**

**door class** A fire-rating classification for doors.

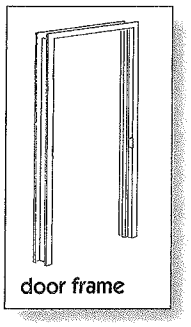
**door clearance** The distance or space between the bottom of a door and a finished floor, or between two double doors.

**door closer** A device that controls the speed and force of closure of a door.


door closer

**door contact (door switch)** A switch in an electrical circuit that is opened or closed by opening or closing a door.

**door frame** The surrounding assembly into which a door fits. Consists of two uprights, jambs, and a head over the top.


door frame

**door frame anchor** A device used to align and attach the door frame to the wall. The type of device used depends upon the type of wall and the material of the frame.

**door guide** A channel used to keep a sliding or rolling door on track during operation.

**door hand (door swing)** The direction of the swing of a door, expressed as either left-hand or right-hand.

**door head** **1.** The horizontal upper member of a door frame. **2.** A lintel.

**door holder** A device for holding a door open.

**door jack** A device for holding a wooden door in place while the hinges are being set or while the door is being planed to fit.

**door jamb** The vertical member on each side of a door frame.

**door latch** A device for holding a door closed. Usually a beveled bolt self-activated by a spring or by gravity when hitting the strike.

**door mullion** The vertical member in the middle of a double door frame that contains the strike of the two leaves.

**door nail** A large-headed nail against which a knocker strikes. Any large-headed, exposed nail in a wooden door.

**door opening** The size of a door frame opening measured between jambs and from the finished floor (or threshold) to the head.

**door operator** A power-operated mechanism for opening and closing an elevator door.

**door pivot** The pin on which a swinging door rotates.

**door plate** A nameplate on the outside of a door.

**door pocket** The opening in a wall or partition that receives a sliding door. The door is installed on tracks during the rough framing stage of construction.

**door post** *See* **door jamb.**

**door rail** Any of the horizontal members that connect the stiles of a door. In a flush door, the members are hidden. In a panel door, the members are exposed.

**door roller** The operational hardware used primarily on heavy doors, such as refrigeration doors, to allow them to roll.

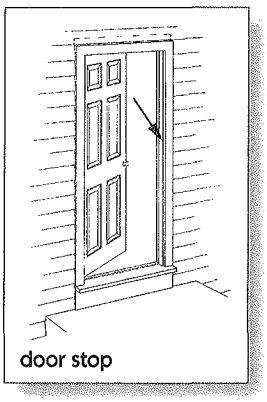
**door saddle** A threshold or door sill.

**door schedule** A table in the contract documents listing all the doors by size, specifications, and location.

**door sill** *See* **threshold.**

**door stile** The outside, upright members of a door.

**door stop** The strip on the door frame against which the door closes.


door stop

**door strip** A weatherproofing material used around a door.

**door swing** *See* **door hand.**

**door switch** *See* **door contact.**

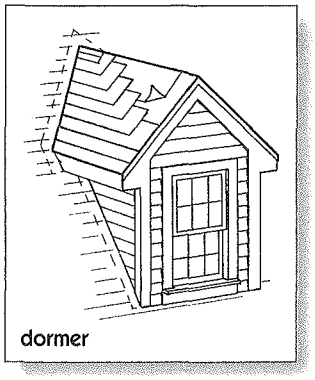
**door trim** The casing or molding around a door frame that covers the joint between the frame and the wall.

**doorway** Any opening in a wall that has a door.

**dope** **1.** In plumbing, a material placed on pipe threads to make them waterproof. **2.** An additive in mortar or plaster to accelerate or retard the set.

**dormant beam** Any large beam that supports smaller ones.

**dormer** A projection through the slope of a roof for a vertical window.


dormer

**dormer cheek** The side wall of a dormer.

**dormer window** A window on the front vertical face of a dormer.

**dormitory** A residential building that includes sleeping facilities. Most commonly found at an educational institution.

**dosing tank** A holding tank for raw or partially treated sewage that discharges automatically when a desired quantity has accumulated.

**dot** A small amount of plaster placed on a surface between grounds to aid the plasterer in maintaining a constant thickness.

**dote (doze)** An early form of decay in wood. Usually, the decay can be cut out and the remainder of the wood salvaged.

**DOT shipping name** A material classification name assigned by the Department of Transportation to all transportable materials.

**doty** A term used to describe wood that shows an early form of decay.

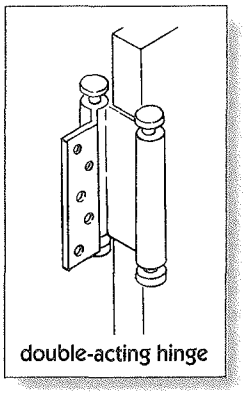
**double-acting** Piston machine that performs excavation work on both up and down strokes.

**double-acting butt** A butt hinge that swings both ways.

**double-acting door (swinging door)** A door with double-acting hinges so that it can swing both ways.

**double-acting frame** A door frame without stops, which allows a double-acting door to swing both ways.

**double-acting hinge** A door hinge that allows the door to swing both ways.


double-acting hinge

**double angle** A structural member formed by using two L-shaped angle irons back to back.

**double back (double up)** A method of applying two coats of plaster where the second coat is applied before the first coat has set.

**double-bend fitting** An S-shaped pipe fitting.

**double-beveled edge** The edge of a swinging door stile that is beveled from the center of the edge toward the two faces.

**double-bitted ax** An ax with two cutting edges.

**double-break switch** An electrical switch that opens and closes a conductor in two places.

**double breasted** A firm that operates or has ownership in both open shop and union companies.

**double brick** A masonry unit that measures 4" by 5 1/3" by 8". The nominal measurement of standard bricks is 2" x 4" x 8".

**double bridging** Bridging that breaks the span of joists into three sections.

**double-center theodolite** A precision instrument used in surveying to take repeated readings of the same angle. A standard procedure is to take the sum of six readings and divide by six to minimize human error.

**double cheek cut** A two-sided cut that forms a "V" at the end of a rafter, especially in hip and gambrel roofs.

**double-cleat ladder** A wide, site-constructed ladder with a center rail to allow both ascending and descending traffic.

**double corner block** A concrete masonry unit that has flat, rectangular faces.

**double course (doubling course)** Two thicknesses of roofing or siding shingles laid one over the other so that there is complete coverage of at least two layers overall.

**double-cut file** A file with two sets of diagonal cutting ridges crossing each other on the face of the file.

**double-cut saw** A saw with teeth that cut both on the push and the pull stroke.

**double door** Two single doors or leaves hung in the same door frame.

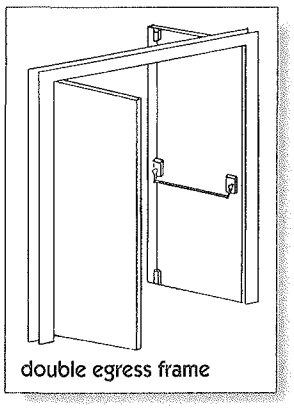
**double-dovetail key** A hardwood wedge used to join two timbers. The wedge has a dovetail on each end, which is driven into a corresponding recess in each timber.

**double drum hoist** An engine for a material or personnel hoist. It has two drums that can be driven separately.

**double eaves course** A double course of roofing installed at the eaves of a sloping roof.

# D

**double egress frame** A door frame designed for two doors, both of the same hand, swinging in opposite directions. The door that swings toward the viewer is called a *reverse-hand door.*




**double-end tenoner** A machine with a fixed and a movable cutter that is used by industrial woodworkers for the simultaneous double end trimming and shaping of panel type or lineal wood products.

**double-end-trimmed** Refers to wood that has been passed through saws and trimmed smoothly at both ends, commonly in length increments of 2'.

**double-extra-strong pipe** A specification for steel pipe that indicates the wall thickness has been increased to give the pipe double strength.

**double-faced hammer** A hammer whose head has two striking faces.

**double-faced stock** AA and AB grades of sanded plywood, both interior and exterior, having a good appearance on both sides.

**double Flemish bond** Brickwork laid up so that it has a pattern of headers and stretchers laid alternately on both faces.

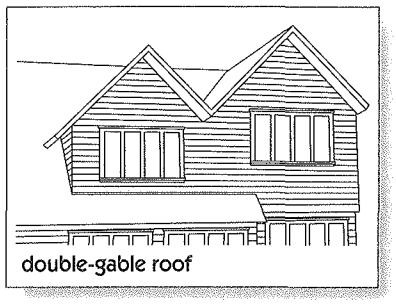
**double floor** A floor constructed with a subfloor under a finished wood floor.

**double-framed floor** A floor system constructed with both binding joists and common joists. The ceiling is attached to the binding joists and the floor is laid on the common joists. The binding joists are framed by girders.

**double-framed roof** A roof framing system in which both longitudinal and lateral members are used, such as one that employs purlins.

**double-fronted lot** A lot bounded by a street on both the front and the back.

**double-gable roof** An M-shaped roof with a valley between two gables.




**double glazing** Window with two panes of glass with an air space between for increased thermal and sound insulation.

**double gold** Gold leaf that is 10%-20% thicker than the regular gold leaf.

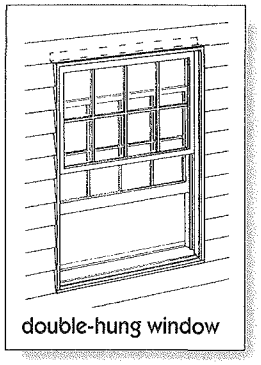
**doublehanded saw** A crosscut saw with a handle on each end, designed to be used by two people.

**double-headed nail (duplex-head nail, form nail, scaffold nail)** A nail with two heads, one above the other, used for temporary construction such as concrete forms and scaffolds. The nail can secure the work but still be easily extracted.

**double header** A header joist for an opening made stronger by using two pieces of lumber.

**double hem** In sheet metal construction, the folding over of the sheet edge twice for greater rigidity and strength.

**double-hung window** A window that has two vertical sliding sashes, one above the other, mounted on separate guides so that either or both can be opened at one time. This is the type of window most commonly used on wood-frame houses.

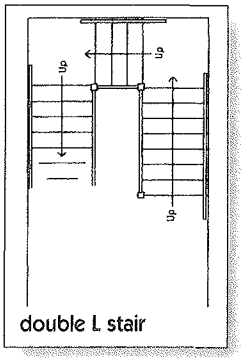



**double jack rafter** A rafter that joins the roof hip to the valley.

**double layer** Two layers of gypsum board installed over each other to improve fire resistance or sound-suppression characteristics.

**double-lock seam** In metal roofing and ductwork, a seam formed by double-folding the edges of adjacent sheets and laying them down.

**double L stair** A stair with two landings turning 90° each, one near the top and one near the bottom.

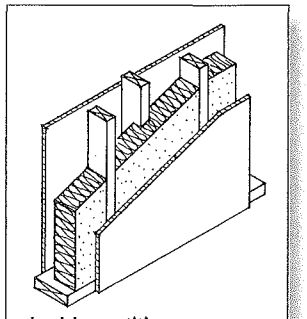



**double-margin door** An extra-wide door constructed to look like two doors.

**double nailing** A method of applying drywall using two nails where one nail would ordinarily be used.

**double offset** In piping, a dogleg or two changes of direction near to each other.

**double partition** A partition constructed with two rows of studs to form a pocket door or a cavity for soundproofing.


double partition

**double-pitched** A roof with a second pitch or slope, such as a gambrel roof.

**double-pole scaffold** A scaffold erected with two rows of uprights independent of an adjacent wall.

**double-pole switch** An electrical switch that has two blades and contacts that open or close both sides of a circuit simultaneously.

**double pour** In built-up roofing, a second, final application of bitumen without adding another layer of felt.

**double-rabbeted frame** A door frame with a longitudinal groove cut on each edge so that a door can be hung on each side.

**double rafter** A pair of roof rafters installed alongside each other.

**double return stair** A stair with one flight to a landing, separating into two flights to the next floor.

**double roof** A roof-framing system in which the rafters rest on purlins.

**double-shell tile** A ceramic tile with two finished faces separated by a web.

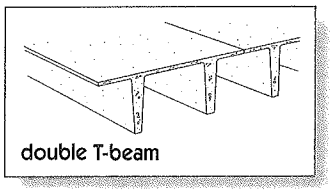
**double step** In timber framing, a double notch cut into a tie beam supporting the rafters to reduce horizontal shear.

**double-strength glass** Plate or float glass that is 1/8" thick.

**double suction riser method** The use of two pipes for the upward flow of refrigerant suction gas. During periods of low refrigeration load, the refrigerant flow of one of the risers is blocked by the accumulation of oil in the base of the riser, diverting refrigerant flow at a higher velocity to transport oil up the other riser.

**double swing frame** A frame for two matching doors, each of which swing in the same direction.

**double T-beam** A precast concrete member composed of two beams with a flat slab cast monolithically across and projecting beyond the top of the two beams.


double T-beam

**double tenons** Two tenons side by side in the end of a wood beam. *See also* **tenon.**

**double-throw switch** An electrical switch that can make connections in either of two circuits by changing its position.

**double-tier partition** A partition that is continuous through two stories of a building.

**double-up** Successive plaster coat applications with no setting or drying time allowed between coats; usually associated with veneer plastering. The double-up coat is applied (from the same mix) to a scratch coat over a gypsum base. *See also* **double back.**

**double-wall cofferdam** A cofferdam constructed from two rows of sheet piling with fill between them. Used principally for high cofferdams that require greater stability.

**double-walled heat exchanger** A heat exchanger with two walls between the collector fluid and the potable water.

**double waste and vent** In plumbing, a single vent that serves two fixtures.

**double-welded joint** A joint welded on both sides.

**doubling course** *See* **double course.**

**doubling piece** A cant strip or fillet.

**doubly prestressed concrete** A concrete member prestressed in two directions perpendicular to each other.

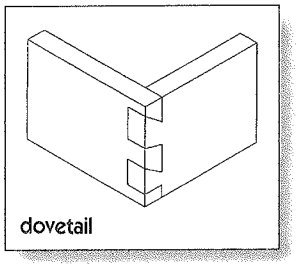
**doubly reinforced concrete** A concrete member cast with compression reinforcing steel as well as tension reinforcing steel.

**doughnut** **1.** A large washer used as a concrete form accessory to increase the holding capacity of the forms. **2.** A small, round concrete casting with a hole in the middle used to keep reinforcing steel the desired distance from the forms during the placement of concrete. **3.** A concrete collar cast around a column and used to jack up the column. **4.** A slang term for the wax ring used as a watertight seal in toilet installation.

**Douglas Fir** *Pseudotsuga taxifolia.* A coniferous softwood found throughout the western United States and Canada and grown abundantly on the western slopes of the Cascade Mountains in Oregon. This tree produces a strong, durable timber that is widely used in general construction as well as in finish applications.

# D

**dovetail (dovetail joint)** In finish carpentry, an interlocking joint that is wider at its end than at its base.




**dovetail cramp** A dovetail-shaped metal fastener used for lifting masonry units.

**dovetail cutter** A rotary power tool used to shape dovetail joints and mortises.

**dovetail half-lap joint** A dovetail joint and mortise cut halfway through adjoining pieces to give the appearance of a butt or miter joint on the opposite side.

**dovetail hinge** A strap hinge with both leaves shaped like a dove's tail (wider at the end than at the base).

**dovetail joint** *See* **dovetail.**

**dovetail lath** *See* **rib lath.**

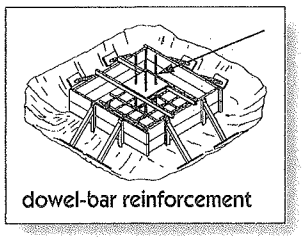
**dovetail miter** A joint having a concealed dovetail so that it appears to be a miter joint.

**dovetail plane** A wood-finishing tool used for preparing dovetail joints.

**dovetail saw** A small tenon saw or back saw with a stiffening strip along its back and fine teeth for preparing dovetails.

**dowel** A cylindrical piece of stock inserted into holes in adjacent pieces of material to align and/or attach the two pieces.

**dowel-bar reinforcement** Short sections of reinforcing steel that extend from one concrete pour into the next. Used to increase strength in the joint.




**dowel bit (spoon bit)** A carpenter's bit used with a brace for drilling dowel holes. The bit is shaped like a half-cylinder.

**dowel lubricant** A lubricant applied to dowels placed in adjoining concrete slabs to allow longitudinal movement in expansion joints.

**dowel pin** A special nail pointed at both ends and used to fasten mortise and tenon joints.

**dowel plate** A steel plate with holes through which dowels are driven to trim them to size.

**dowel screw** A threaded dowel.

**down-cycling** Using product materials to make other products, such as turning plastic soda containers into park benches (rather than recycling into soda containers). This approach is preferable to disposing of materials directly into landfills, but less favored than recycling.

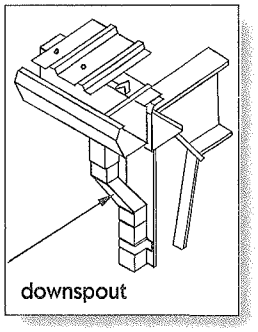
**downdraft** A downward current of air, such as that which occurs in a chimney flue or a stairwell.

**down-feed system** A piping system in which the distribution lines are above the systems being supplied.

**downlight** A small direct-lighting unit, usually recessed in the ceiling and directing light downward only.

**downpayment** A partial payment of the construction project's contract price made by an owner to a contractor immediately at the beginning of the contract.*

**downspout (drainpipe, conductor, leader)** A vertical pipe used to carry rainwater from the roof to either the ground or a drainage system.




**down-the-hole drill** A percussion drill used for excavation powered from the surface that goes down the hole without the use of steels. *

**downtime** The amount of time a piece of equipment cannot be used due to failure, repair, or maintenance.

**doze** *See* **dote.**

**dozer** *See* **bulldozer.**

**dozer shovel** A tractor-mounted unit that can be used for pushing, digging, or loading earth.

**draft** **1.** The drawing power of air and gases through a chimney flue. **2.** A note similar to a check except that banks will not cash it without certain preliminary processing. A draft takes 10 to 14 days to "clear," or be guaranteed by the bank. **3.** A smooth strip worked on a stone surface to be used as a guide for finishing the surface.

**draft bead (deep bead, draft stop)** A fillet or bead on the windowsill of a double-hung window that permits ventilation of the joint, but prevents a draft from entering the room.

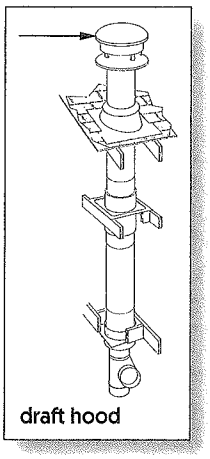
**draft curtain (curtain board)** A noncombustible curtain surrounding a high-hazard area to contain and direct flame, smoke, and fumes.

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**draft fillet** A narrow strip of material on which glass rests in glazing.

**draft gauge** An instrument used to measure differences in air pressure.

**draft hood** A cap that fits over a chimney flue to prevent downdrafts.


draft hood

**drafting chisel** A tool used most commonly to cut a narrow border or line at the end of a stone.

**drafting machine** A device attached to a drafting table that combines the functions of a T-square, triangle, scale, and protractor.

**drafting pen** One of a variety of drawing instruments used for drafting.

**draft regulator** A controlling device that maintains a desired draft level in an appliance.

**draft stop** *See* **draft bead.**

**drag** **1.** A long, serrated plate used to level and score plaster in preparation for the next coat. **2.** Any combination of logs, chains, or other materials dragged behind a tractor to fine-grade earth.

**dragging** A textured finish similar to graining in which a wet, stippled paint surface is brushed with a clean, natural brush to produce subtle stripes.

**dragline** A bucket attachment for a crane that digs by drawing the bucket towards itself using a cable. The attachment is most commonly used in soft, wet materials that must be excavated at some distance from the crane. This device is used extensively in marsh or marine work.

**dragon beam** A short, horizontal membrane that bisects the angle of the wall plate at the corner of a wood-frame building, and bisects the angle brace at its other end. The member supports a hip rafter at one end and is supported by the angle brace at the other end.

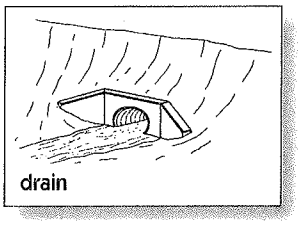
**dragon tie** An angle brace that supports a dragon beam.

**drag saw** A powered reciprocating saw used to cross-cut logs.

**drag shovel** *See* **backhoe.**

**drag strut** A structural member that transfers lateral force from one vertical member to another.

**drain** A pipe, ditch, or trench designed to carry away waste water.


drain

**drainage** **1.** Waste water. **2.** The process by which waste water is carried away.

**drainage fill** **1.** Granular material placed beneath a concrete floor slab to inhibit the capillary rise of moisture. **2.** Lightweight concrete that is placed on a floor or roof to promote drainage.

**drainage piping** The piping comprising the plumbing of a drainage system.

**drainage system** All the components that convey the sewage and other waste water to a point of disposal.

**drain cock** A cock or spigot at the lowest point of a water system where the system can be drained.

**drain field** *See* **absorption field.**

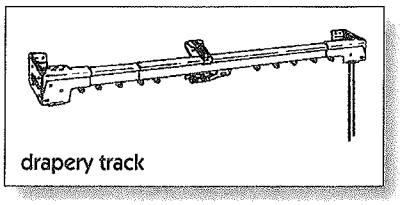
**drainpipe** *See* **downspout.**

**drain tile** Short-length sections of tile laid with open joints, usually surrounded with aggregate and covered with asphaltic paper or straw. Used to drain the water from an area.

**drain trap** *See* **trap.**

**draped tenon** *See* **deflected tendon.**

**drapery track** A system of tracks or bars that support draperies and allow them to be drawn.


drapery track

**drawbar** The bar attached to the back of a tractor for pulling equipment.

**drawbore** A hole in a tenon that is out of line with the holes in the mortise of a mortise-and-tenon joint, so that the joint is tightened when a pin is driven into the hole.

**drawdown** The distance by which the groundwater level is lowered by excavation, dewatering, or pumping.

**drawer dovetail** A dovetail joint in which the tenons of one member do not pass completely through the other member, such as the joint used on the front of a drawer.

**drawer kicker** A block that prevents a drawer from tilting downward when open.

**drawer roller** Prefabricated sliding drawer hardware employing rollers to facilitate the opening of a drawer.

**drawer runner (drawer slip)** The strips on which a drawer slides.

**drawer slide** The hardware on which a drawer slides.

**drawer slip** *See* **drawer runner.**

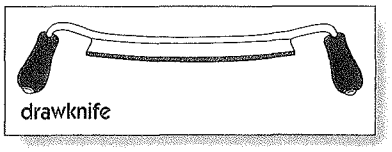
**drawer stop** A device that prevents a drawer from sliding all the way out.

# D

**drawings** **1.** Graphic illustrations depicting the dimensions, design, and location of a project. Generally including plans, elevations, details, diagrams, schedules, and sections. **2.** The term, when capitalized, refers to the graphic portions of a project's contract documents.

**draw-in system** An electrical wiring system in which all cables are pulled through conduits, ducts, and raceways.

**drawknife (drawshave)** A two-handled, curved, woodworking knife used by pulling it toward the user.


drawknife

**drawn finish** A smooth, bright finish on longitudinal stock obtained by drawing the stock through a die.

**draw pin** A pin that attaches a tongue to a drawbar.

**drawshave** *See* **drawknife.**

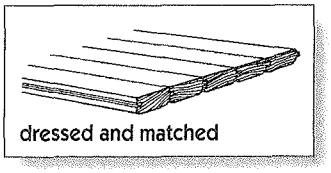
**draw tongue** The bar attached to a machine so that it can be pulled by another machine.

**dredge** **1.** To excavate under water. **2.** The equipment used for excavating under water, such as a clamshell, dragline, or suction line.

**drencher system** A fire-protection sprinkler system that protects the outside of a building.

**dressed** Building material that has been prepared, shaped, or finished on at least one side or edge.

**dressed and matched (tongued and grooved)** Refers to boards or planks that have been machined so that each piece has a tongue on one edge and a groove on the other.


dressed and matched

**dressed lumber (dressed stuff)** Lumber that has been processed through a planing machine in order to attain a smooth surface and uniformity of size on at least one side or edge.

**dressed size** The true dimensions of lumber after sawing and planing, as opposed to the nominal size.

**dressed stuff** *See* **dressed lumber.**

**dresser** A plumber's tool for flattening sheet lead and straightening lead pipe.

**dresser coupling** A device for connecting unthreaded pipe.

**dressing compound** Liquid bituminous material used to cover and protect the exposed surfaces of roofing felt.

**dress up** To fasten and fabricate structural members on the ground before erection.

**drier** **1.** A unit containing a desiccant that is installed in a refrigeration circuit to collect excess water in the system. **2.** An additive to paints and varnishes that speeds the drying process.

**drift** **1.** In a water-spraying system, the entrained, unevaporated water picked up by the air movement through it. **2.** In aerial surveying, the angle at which a plane must crab, or turn its nose into the wind, in order to fly a predetermined line. **3.** A natural deposit of loose material such as rock or sand. **4.** The lateral movement or deflection of a structure.

**driftbolt** A short rod or bar, 1' to 2' long, driven into prebored holes in timber to secure them to each other. The driftbolt is usually of square stock and slightly larger than the hole.

**drift control agent** An additive used in spray mixtures to ensure a cohesive spray solution and reduce spray drift.

**drift eliminators** Baffles in a cooling tower through which air passes before exiting the tower, the purpose of which is to remove entrained water droplets from the exhaust air.

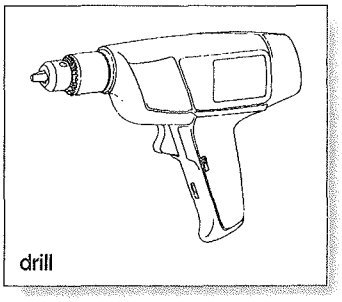
**drifter** A pneumatic drill used for drilling horizontal or sloped blastholes.

**driftpin (drift punch)** A tapered pin used in steel erection to align holes for bolting or riveting.

**drift plug** A hardwood plug that is driven into a lead pipe to straighten it or to flare the end.

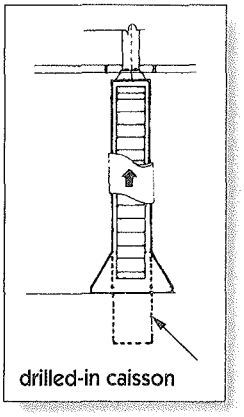
**drift punch** *See* **driftpin.**

**drill** **1.** A hand-held, manually operated or power-driven rotary tool for boring holes in construction materials. **2.** A large machine capable of drilling 4" diameter blast holes 100' deep in rock cuts or quarries. **3.** A machine capable of taking core samples in rock or earth.

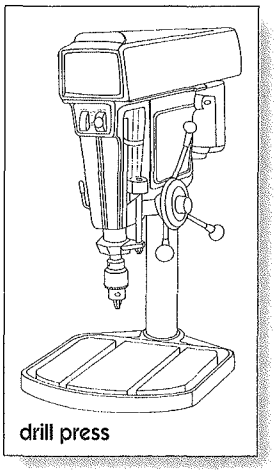

drill

**drill bit** The part of a drill that does the cutting.

**drilled-in caisson** A caisson that is socketed into rock. *See also* **caisson.**


drilled-in caisson

**drill press** A rotary drill, mounted on a permanent stand, that operates along a vertical shaft.


drill press

**drill steel** Hollow steel sections that connect the percussion drill with the bit. Air is blown through the steel to clean out the drill hole.

**drip** **1.** A groove in the underside of a projection, such as a windowsill, that prevents water from running back into the building wall. **2.** A condensation drain in a steam heating system. **3.** An interruption or offset in an exterior horizontal surface, such as a soffit, immediately adjacent to the fascia, designed to prevent the migration of water back along the surface.

**drip cap (drip mold, drip molding)** A horizontal molding placed over exterior door or window frames to divert rainwater.

**drip channel** *See* **drip (1.)**.

**drip edge** **1.** The edge of a roof from which rainwater drips into a gutter or away from the structure. **2.** The metal or wood strip that stiffens and protects this edge.

**drip irrigation** A landscape watering system using low water pressure and flexible tubing placed on the ground. These systems conserve water by targeting the roots of plants, rather than letting water evaporate as sprinklers would do.

**drip mold** *See* **drip cap.**

**drip molding** *See* **drip cap.**

**drip pan** A device for catching and containing drips and leaks from liquid storage drums.

**dripstone** A drip cap made of stone.

**dripstone course** A course of stone projecting out beyond the face of a wall to shed water away from the wall.

**drive band (driving band)** A steel band placed around the top of a wooden pile to protect it during driving.

**drive cap** A steel covering placed atop a pile to protect it during driving.

**driven pile** A pile that is driven into place by striking it with a pile-driving hammer.

**driven well** A pipe fitted with a well point that has been driven into water-bearing soil.

**drivepoint** *See* **well point.**

**drivescrew (screwnail)** A screw that is driven with a hammer and removed with a screwdriver.

**drive shoe** A cap placed over the bottom of a pile to protect the pile during driving.

**driveway** A private access for vehicular traffic.

**driving band** *See* **drive band.**

**driving cap** A steel cap placed over the top of a pile to protect the pile during driving.

**driving resistance** The number of blows required to drive a pile a given distance.

**drop** In air conditioning, the vertical distance that a horizontally projected air stream has fallen when it reaches the end of its throw.

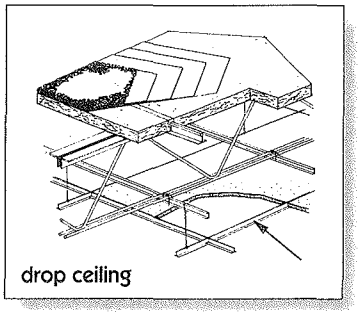
**drop apron** A metal strip that is bent downward at the edge of a metal roof to act as a drip.

**drop-bottom bucket** A concrete bucket whose bottom opens when it touches the surface where the concrete is to be deposited.

**drop-bottom seal** *See* **automatic door bottom.**

**drop box** An electrical outlet box hung from above, as from a ceiling.

**drop ceiling (dropped ceiling, suspended ceiling)** A nonstructural ceiling suspended below the structural system, usually in a modular grid pattern. A drop ceiling usually contains a lighting system and can also conceal wiring, piping, and ductwork in the space above (the plenum).


drop ceiling

**drop chute** A device, much like an elephant's trunk, used to place concrete with a minimum amount of segregation.

**drop elbow** A pipe fitting, at a 90° angle, with one or more flanges for attachment to a wall or stud.

**drop hammer** A pile-driving hammer that gains impact by free-falling after being lifted by a cable in the leads.

**dropout** An event where voltage decreases to zero for at least five milliseconds.

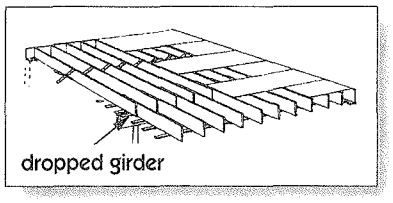
**dropout ceiling** A suspended ceiling with heat-sensitive tiles that are designed to drop out in the event of a fire and sprinkler discharge. A dropout ceiling is aesthetically pleasing, as it does not require that sprinklers be extended below the ceiling.

# D

**drop panel** The part of a cast-in-place flat slab that has been thickened on the underside at the location of the columns.

**dropped ceiling** *See* **drop ceiling.**

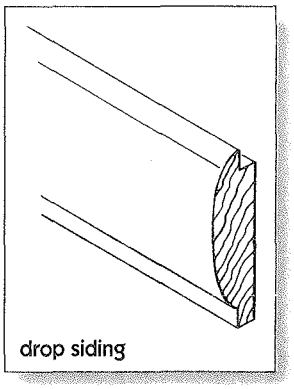
**dropped girder (dropped girt)** A girder that runs below the floor joists and supports them.


dropped girder

**dropped girt** *See* **dropped girder.**

**drop-point slating** *See* **diagonal slating.**

**drop siding** A type of siding that is tongued and grooved or ship-lapped so that the edge of each board fits into the edge of the adjoining board.


drop siding

**drop tee** A pipe tee with lugs in the sides for attachment to a support.

**drop vent** In plumbing, a vent that is connected at a point below the fixture.

**drop window** A vertically sliding window that slides into a recess below the window stool so that the entire opening can be used for ventilation.

**drop wire** An electrical conductor dropped from a pole to a building to supply electric power to the building.

**drought tolerance** The capacity of a landscape plant to function well in drought conditions.

**drove** A mason's broad, blunt chisel used for facing stone.

**drum** **1.** One of the stone cylinders forming a column. **2.** The wall supporting a dome. **3.** The rotating cylinder used to wind up cable on a hoist. **4.** The cylinder in which transit-mixed concrete is transported, mixed, and agitated.

**drum paneling** A door panel that is covered with leather.

**drum rasp** A cylindrical abrasive device used with a power drill to smooth or contour wood, plastic and soft metals.

**drum sander** A power tool with a cylindrical abrasive sleeve used to smooth or contour wood, plastic and soft metals. Usually mounted on a stand.

**drum trap** A cylindrical plumbing trap usually set flush with a floor so that easy access can be gained by unscrewing the top.

**drunken saw (wobble saw)** A type of circular saw designed to operate with a built-in wobble so that the kerf it makes is greater than the thickness of the saw. This type of saw is used for grooving and for other special purposes in carpentry.

**dry area** A narrow roofed area between a basement wall and a retaining wall, constructed to keep the basement wall dry.

**dry basin systems** Condenser water systems in which the cooling tower basin is located indoors, and away from the cooling tower.

**dry batch weight** The weight of the materials, excluding water, used to make a batch of concrete.

**dry-bond adhesive (contact adhesive)** An adhesive that seems dry but that adheres on contact.

**dry-bulb temperature** The ambient temperature indicated by an ordinary thermometer with an unmoistened bulb.

**dry clamping** The practice of piecing together all parts of an assembly, such as a table, before fastening to confirm that all joints fit.

**dry concrete** Concrete that has a low water content, making it relatively stiff. The effects are a lower water-cement ratio, less pressure on forms, lower heat of hydration, and a consistency that allows for placement on a sloping surface.

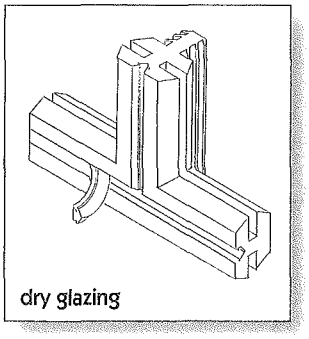
**dry construction** Building construction without the use of plaster or mortar. The use of dry materials speeds the construction process and allows earlier occupancy.

**dry course** The first course of a built-up roof, which lies directly on the insulation without bitumen.

**dry density** The weight of a soil sample that has been heated to 105° centigrade (Celsius) to remove the moisture.

**dry filter** A device for removing pollutants from the air in a system by passing the air through various screens and dry, porous materials. Most dry filters in HVAC systems today are made of spun fiberglass.

**dry glazing** The installation of glass using dry, preformed gaskets in place of glazing compound.


dry glazing

**dry hydrate** *See* **hydrated lime.**

**dry ice** A substance made of solid carbon dioxide that is used in refrigeration applications. Dry ice sublimates, or changes directly from a solid to a gas.

**drying inhibitor** A substance added to paint to prevent the surface from drying too rapidly, causing wrinkling or cracking.

**drying oil** An oil used in paints to promote quick, smooth, hard, and elastic drying qualities.

**drying shrinkage** Contraction caused by the loss of moisture, particularly in concrete, mortar, and plaster.

**dry joint** A masonry joint without mortar.

**dry kiln** A chamber in which wood products are seasoned by applying heat and withdrawing moist air.

**dry masonry** Masonry laid without mortar.

**dry mix** A concrete or mortar mixture that contains little water in proportion to its other ingredients.

**dry-mix shotcrete** Concrete or mortar that is pumped through a hose and to which water is added at the nozzle during application.

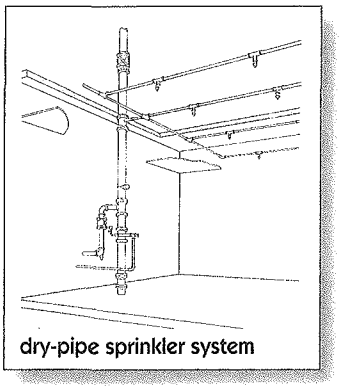
**dry mortar** Mortar mixed to a very dry consistency, but still wet enough for hydration. This type of mortar is used to prevent compaction in the joints of high, narrow lifts.

**dryout** In plywood manufacturing, an unsatisfactory glue bond that can occur if the glue becomes too dry to adhere properly when pressure is applied in the hot press.

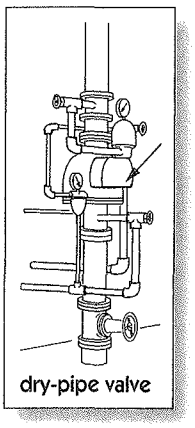
**dry-packed concrete** *See* **concrete, dry-packed.**

**dry-packing (dry-tamp process)** The forceful injection of a damp concrete mixture into a confined space where high strength and little shrinkage is desired, such as under a bearing plate.

**dry-pipe sprinkler system (dry sprinkler)** A sprinkler system whose pipes remain empty of water until the system is activated. This type of system is particularly useful where there is danger of freezing.


dry-pipe sprinkler system

**dry-pipe valve** The valve that activates a dry-pipe sprinkler system.


dry-pipe valve

**dry-powder fire extinguisher** A hand-held fire extinguisher that discharges a dry powder by means of a compressed gas. This type of extinguisher is effective for Class B and Class C fires.

**dry press** A mechanical device for molding masonry units from a very dry mixture.

**dry-press brick** Bricks made in a dry press.

**dry return** In a steam heating system, a return pipe above the water level.

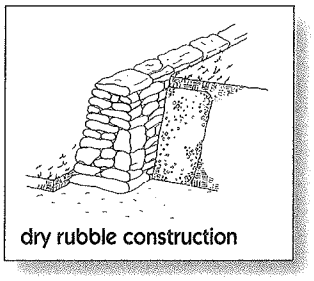
**dry-rodded volume** A standard method of compacting aggregate when designing a concrete mix.

**dry-rodded weight** The unit weight of aggregate compacted under standard conditions and used when designing a concrete mix.

**dry rodding** Compaction of aggregate in a container under standard conditions for determining the unit weight in a concrete mix design.

**dry rot** A type of decomposition in seasoned wood caused by fungi.

**dry rubble construction** A method of construction using stone rubble but no mortar.


dry rubble construction

**dry sampling** In soil testing, the practice of obtaining an undisturbed sample of earth with a boring tool.

**dry shake (dry topping)** A concrete surface treatment, such as color, hardening, or antiskid, which is applied to a concrete slab by shaking on a dry, granular material before the concrete has set and then troweling it in.

**dry sheet** The nonbituminous felt or light roofing paper laid between the roof deck and the roofing material to prevent adherence and to allow for independent motion of the two systems.

**dry sprinkler** *See* **dry-pipe sprinkler system.**

**dry stone wall** A stone wall constructed without mortar.

**dry strength** The strength of an adhesive joint determined under standard laboratory testing conditions.

# D

**dry-tamp process** *See* **dry packing.**

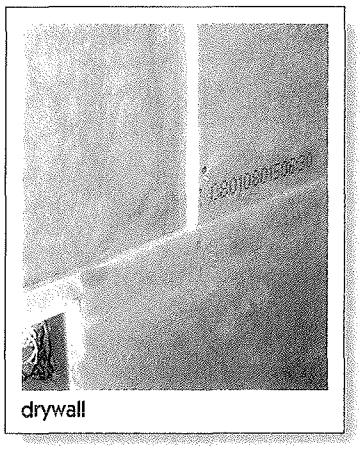
**dry tape** The application of joint tape to gypsum board using an adhesive other than the standard joint compound.

**dry topping** *See* **dry shake.**

**dry-type transformer** A transformer whose core and coils are not immersed in an oil bath.

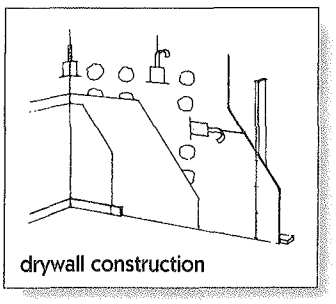
**dry-volume measurement** Measurement of the ingredients of a concrete or mortar mix by using their bulk volume. This method is used principally in mix design.

**drywall** Interior finish construction materials that are manufactured and installed in preformed sheets, such as gypsum wallboard. Drywall is an alternative to plaster.



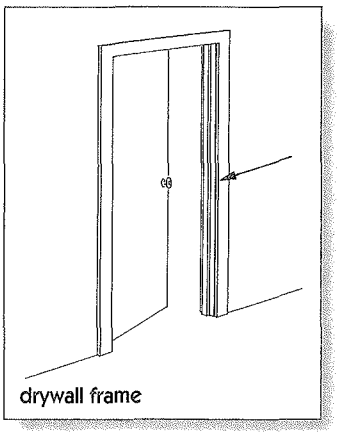
drywall

**drywall construction** Interior construction using drywall rather than plaster.



drywall construction

**drywall frame** A door frame specifically designed to be used with drywall construction.



drywall frame

**drywall router** A small power tool for making cutouts for electrical boxes, windows, and other openings in drywall and paneling.

**dry well** A pit or well that is filled or lined with coarse aggregate or rocks and designed to contain drainage water until it can be absorbed into the surrounding ground.

**DTS-HD master audio** Digital surround sound system with unlimited channels.

**dual bed system** A gas-phase or liquid adsorption treatment system with two carbon absorbers, a pump, and associated piping, that can be configured in series or in parallel, depending on facility requirements.

**dual duct** In electrical wiring, a duct that has two individual raceways.

**dual-duct system** An HVAC system using two ducts, one for hot air and one for cold air. The air from these ducts is blended in mixing boxes before distribution.

**dual-flush toilets** Toilets that conserve water by allowing different settings for liquid versus solid waste.

**dual-fuel system** A heating unit that can use either of two types of fuel.

**dual glazing** *See* **double glazing.**

**dual-head nail** *See* **double-headed nail.**

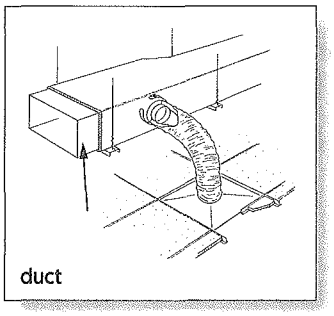
**dual vent (common vent)** A single plumbing vent that serves two fixtures.

**dubbing (dubbing out)** **1.** Filling in irregularities in a plaster wall before applying the final coat. **2.** Roughing in a plaster cornice before forming it with the final coat.

**dubbing out** *See* **dubbing.**

**duckboard** A wooden walkway across a wet area.

**duct** **1.** In electrical systems, an enclosure for wires or cables, often embedded in concrete floors or encased in concrete underground. **2.** In HVAC systems, the conduit used to distribute the air. **3.** In post-tensioning, the hole through which the cable is pulled.



duct

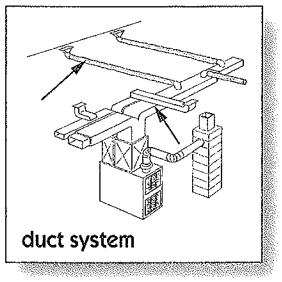
**duct liner** Fiberglass sound and thermal insulation material used inside the sheet metal ducts of air conditioning systems.

**duct sheet** The metal used in fabricating HVAC ducts.

**duct silencer** *See* **sound attenuator.**

**duct static pressure** **1.** The pressure acting on the walls of a duct. **2.** The total pressure less the velocity pressure. **3.** The pressure existing by virtue of the air density and its degree of compression.

**duct system** The connected elements of an air-distribution system through ductwork.


duct system

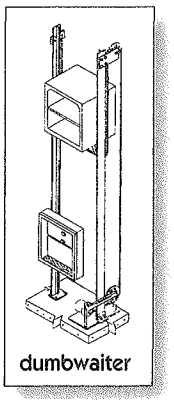
**ductwork** The ducts of an HVAC system.

**due care** A legal term defining the standards of performance that can be expected, either by contract or by implication, in the execution of a particular task.

**due-on-sale clause** A clause within a mortgage requiring that the mortgage be paid in full upon any sale, preventing it from being assumed by the purchaser.

**dug well** A hand-excavated water well that was cased either during or after excavation.

**dumbwaiter** A small hoisting mechanism or elevator in a building used for hoisting materials only. The dumbwaiter was originally developed by Thomas Jefferson for use in his home at Monticello.


dumbwaiter

**dummy** In CPM (critical path method) scheduling, a restraint with no activity and no time.

**dummy joint** A groove formed on the surface of a concrete slab or wall for appearance and crack control.

**dumpcrete** A term applied to concrete that has been batched on site and delivered to placing location by agitator vehicle.

**dumped fill** Soil that has been deposited, usually by truck, but has not yet been spread or compacted.

**dumpling** Unexcavated soil, left in the middle of an excavation, which can be used for bracing against sheeting and forms during construction of the subgrade walls.

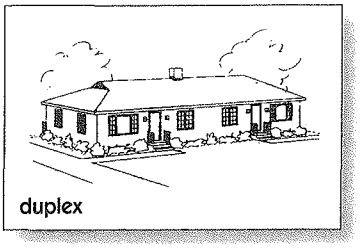
**dumpster** Portable container box normally placed on a construction site for the disposal of job-generated refuse.

**dumpy level** A surveying instrument consisting of a telescope rigidly attached to a vertical spindle. Used to determine relative elevation.

**dunnage** **1.** Waste lumber. **2.** Temporary timber decking. **3.** Structural support for a system within a building that is independent of the building's structural frame. An example would be the supports for an air-conditioning cooling tower. **4.** Strips of wood used in stowing cargo to provide air space between pieces or packages.

**dunter** A pneumatic machine for polishing stone surfaces.

**duplex (duplex house, two-family house)** A house with two separate dwelling units sharing the same parcel of land.


duplex

**duplex apartment** An apartment with rooms on two floors connected by a private staircase.

**duplex burner** A gas heating system with two burners that can either burn simultaneously for rapid heating or separately during lower heating demand.

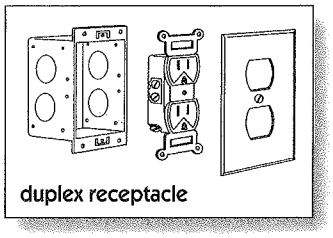
**duplex cable** Two conductors, separately insulated, encased in a common insulated cover.

**duplex-head nail** *See* **double-headed nail.**

**duplex house** *See* **duplex.**

**duplex outlet** *See* **duplex receptacle.**

**duplex receptacle (duplex outlet)** Two electrical receptacles housed in the same outlet box.

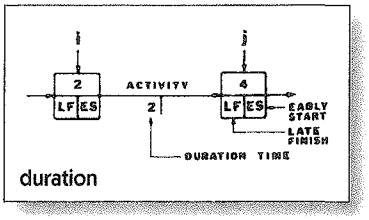

duplex receptacle

**duraluminum** An aluminum alloy that has good anticorrosive properties, used principally in extrusions and rolled sheets.

**duramen** The hard inner portion, or heartwood, of a tree.

**duranodic** An Alcoa trade name for an electrochemical treatment to aluminum that results in the development of color while still protecting against oxidation. Commonly used in the coloring of aluminum storefront systems.

**duration** The amount of time estimated to complete an activity in the time scale used in the schedule (hours, days, weeks, etc.). Planned production rates and available resources will define the duration used in a given schedule.*



duration

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# D

**Durham fitting** A cast-iron, threaded, pitched fitting used on drainage pipes.

**Durham system** A waste-water system using all threaded pipes and pitched fittings.

**durometer** An instrument for determining the relative hardness of a material.

**Dur-O-Wal®** Trade name for horizontal reinforcement in masonry design.

**dust collector** Any device used to collect the dust produced by a machine or tool, such as those required at all rock-drilling operations and those used with bench saws.

**dust-free** In paint and varnish drying, the stage in which dust will no longer stick to the surface.

**dust-free time** The time required for a paint or varnish application to become dust-free under given environmental conditions.

**dusting** The development of dust on the surface of a concrete floor. Dusting can result from troweling too soon, too much water in the mix, improper mix design, and other reasons.

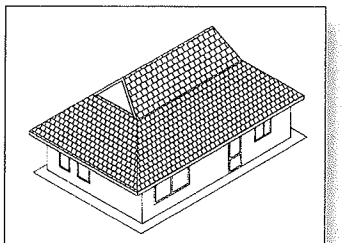
**dust-laying oil** A petroleum distillate applied cold for dust control in unpaved areas.

**dustproof strike** A strike plate for a lock with a spring plunger that completely fills the bolt hole when the bolt is not in it.

**Dutch door** A door with two leaves, one above the other.

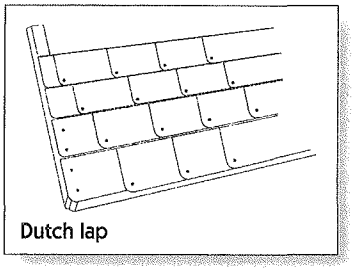
**Dutch door bolt** A bolt for locking together the upper and lower halves of a Dutch door.

**Dutch hip roof** A style of roof framing similar to that in a hip roof, but with a small gable at the top.



Dutch hip roof

**Dutch lap** A method of applying shingles with a head lap and a side lap.



Dutch lap

**Dutch light** A removable sash used in greenhouses.

**dutchman** In carpentry and joinery, a small piece inserted to cover a joint or a defect.

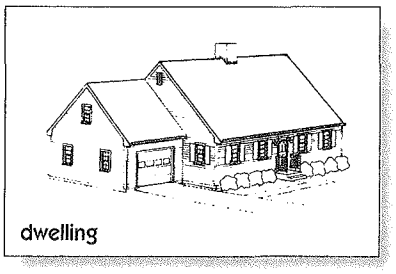
**dwang** A crowbar.

**dwarf partition** A partition that does not extend to the full ceiling height.

**dwarf rafter** *See* **jack rafter**.

**dwarf wall** Any wall less than one story in height, such as a subwall for a crawl space or a wall that supports sleepers for the floor above.

**dwelling** Any building designed for permanent living accommodations for one or more persons.



dwelling

**dwelling unit** A room or rooms designed for permanent living accommodations for one or more persons.

**dynamic** Refers to information that will be updated and displayed automatically on a building automation system CRT or display panel when the status of the building equipment changes.

**dynamic analysis** The analysis of stresses in a framing system under dynamic loading conditions.

**dynamic impedance testing** Also known as "impact echo," the process of sending a pulse of mechanical energy through a large, solid, homogeneous object to measure its depth and condition.

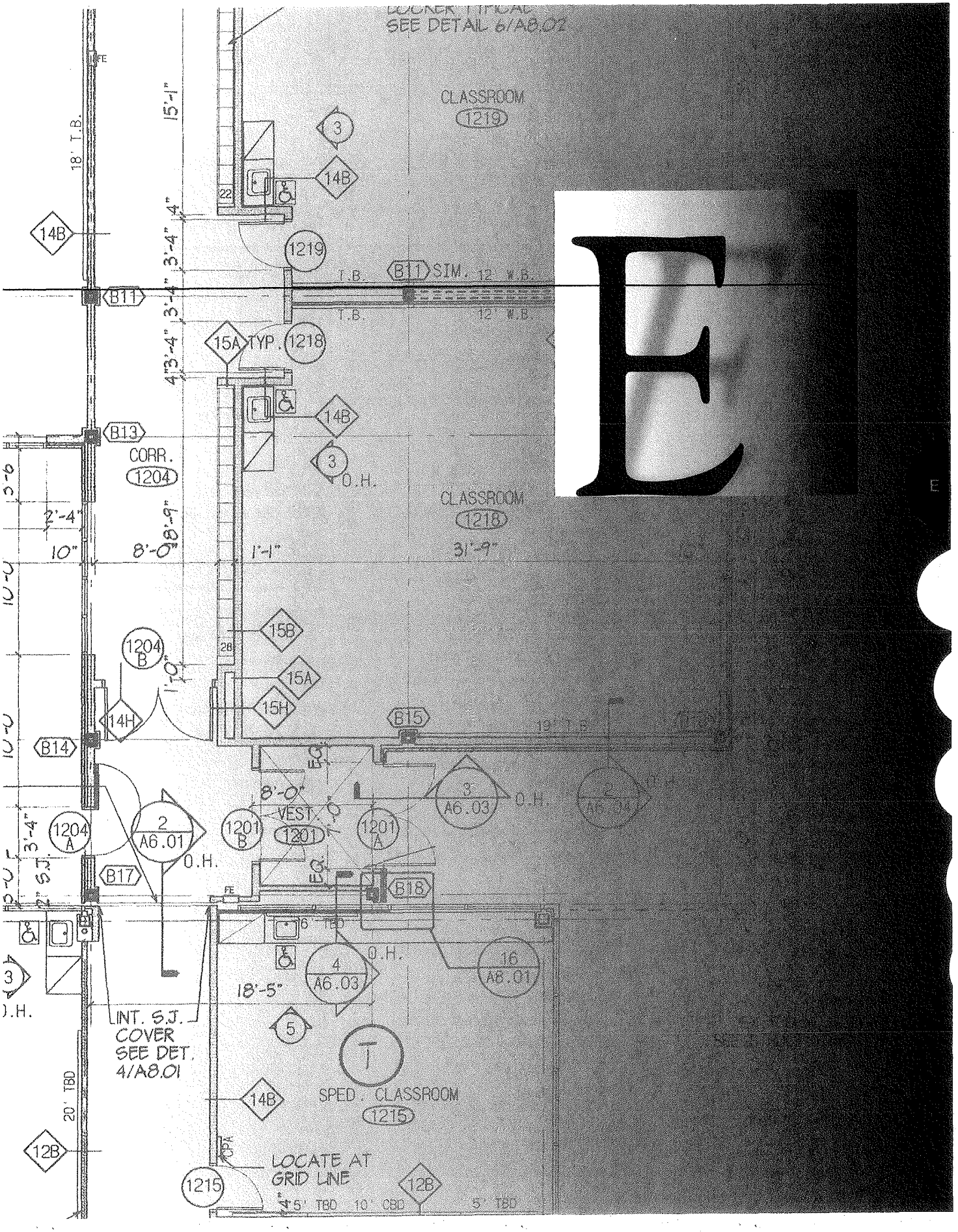
**dynamic load** A load on a structural system that is not constant, such as a moving live load or wind load.

**dynamic loading** Loading imposed by a piece of machinery through vibration, in addition to its dead load.

**dynamic penetration test** A test to determine the bearing capacity of soil where a testing device is delivered a series of blows to penetrate the soil.

**dynamic resistance** The resistance of a pile to blows from a pile hammer, expressed in blows per unit of penetration.

**dyne (acoustics)** A unit of force required to accelerate one gram of mass at a rate of 1 cm per second.


LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
3
14B
1219
B11
SIM.
T.B.
12' W.B.
15A TYP.
1218
B13
CORR.
1204
O.H.
CLASSROOM
1218
15B
15A
15H
14H
1204
B
B14
B15
19' T.B.
8'-0"
VEST.
1201
3
A6.03
O.H.
1204
A
2
A6.01
1201
B
1201
A
B17
B18
S.J.
6' TBD
4
A6.03
16
A8.01
18'-5"
INT. S.J.
COVER
SEE DET.
4/A8.01
5
SPED. CLASSROOM
1215
14B
12B
LOCATE AT
GRID LINE
1215
5' TBD
10' CBD
5' TBD
18' T.B.
15'-1"
3'-4"
3'-4"
3'-4"
2'-4"
10"
8'-0"
8'-9"
1'-1"
31'-9"
1'-0"
20' TBD

E

# E Abbreviations

*The abbreviations listed below are commonly used in the construction industry.*

**e** eccentricity, erg

**E** east, engineer, equipment only, modulus of elasticity, 90° elbow

**ea** each

**EA** exhaust air

**EAM** enterprise asset management

**E&CB2S** edge and center bead two sides

**E and OE** errors and omissions excepted

**eastern S-P-F** eastern spruce, pine, or fir

**EB1S** edge bead one side

**EC** electrical contractor

**ECI** energy conservation initiative

**ecol** ecology

**Econ** economy

**ECM** energy conservation measure

**ECN** engineering change notice

**EDA** emergency declaration area, equipment distribution area

**EDP** electronic data processing

**EDR** equivalent direct radiation

**EE** eased edges, electrical engineer, energy efficiency, errors excepted

**EEM** energy efficiency measure

**EEO** equal opportunity employer

**EF** entrance facilities

**eff** efficiency

**EG** edge (vertical) grain

**ehf** extremely high frequency

**EHP** effective horsepower, electric horsepower

**EHS** environmental health and safety

**EIA** Electronic Industries Alliance

**EIS** energy information system

**EL** elevation, elevator, electroluminescence

**elec** electric, electrical, electrician

**elev** elevation, elevator

**Elev** elevating, elevator

**EM** end matched

**EMCS** energy management and control system, energy monitoring and control system

**EMF** electromotive force

**EMI** electromagnetic interference

**EMPP** equal marginal performance principle

**EMS** energy (or emergency) management system

**EMT** electrical metallic conduit, thin wall conduit

**emu** electromagnetic unit

**enam** enameled

**encl** enclosure

**eng** engine

**Eng** engine

**engr** engineer

**EOC** energy operations center

**EOL** end of line termination

**EPA** Environmental Protection Agency

**EPC** Electronic product code; engineering, procurement, and construction

**EPDM** ethylene propylene diene monomer

**EPO** Emergency power off

**EPS** expanded polystyrene

**eq** equal

**Eq** equation

**Eqhv** equipment operator, heavy

**Eqlt** equipment operator, light

**Eqmd** equipment operator, medium

**Eqmm** equipment operator, master mechanic

**Eqol** equipment operator, oilers

**equip** equipment

**equiv** equivalent

**erec** erection

**ER** equipment room

**ERW** electric resistance welding

**ES** energy saver

**ESCO** energy service company

**ESD** emergency shut-down, electrostatic discharge

**est** estimate

**EST** estimated

**esu** electrostatic unit

**ET** ethyl

**EV** electron volt

**evap** evaporate

**EV1S** edge vee one side

**EW** each way

**EWSD** early warning smoke detector

**EWT** entering water temperature

**ex** example, extra

**exc** excavation, except

**excav** excavation

**exh** exhaust

**exp** expansion, exposure

**exp bt** expansion bolt

**ext** exterior

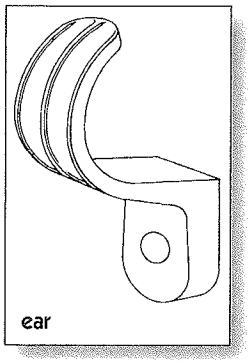
**extg** extracting

**extru** extrusion

**exx** examples

**E** The rating of elasticity or stiffness of a material.

**ear (shoulder)** **1.** A small decorative or structural projecting member or part of a structure or piece. **2.** A small metal projection on a pipe by which it can be nailed to a wall.


ear

**ear lamp** An incandescent lamp, part of whose envelope serves as an ellipsoidal reflector.

**earliest event occurrence time** In CPM (critical path method) scheduling, the earliest completion of all the activities that precede the event.

**earliest expected completion date** The earliest calendar date on which the completion of an activity work package or summary item occurs.*

**early finish** In CPM (critical path method) scheduling, the first day on which no work is to be done for an activity, assuming work began on its early start time.

**early start** In CPM (critical path method) scheduling, the first day of a project on which work on an activity can begin if all preceding activities are completed as early as possible.

**early stiffening** The premature development of rigidity in freshly mixed Portland cement paste, mortar, or concrete. Stiffening occurs when there is little heat generation from the batch, a condition that can be overcome by further mixing without adding water.

**early strength** The strength that has developed in concrete or mortar, usually within 72 hours after placement.

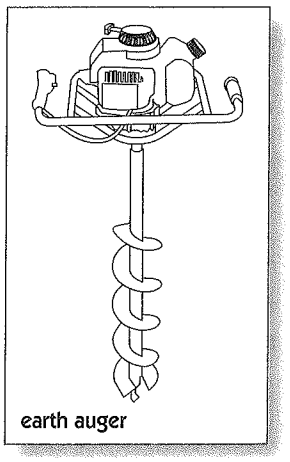
**early warning smoke detector** A device designed to alert building occupants before they become endangered by a fire.

**earlywood** *See* **springwood.**

**earnest money** The deposit that is made by the purchaser when a purchase contract is made to show the purchaser's serious intent.

**earth** *See* **soil.**

**earth auger (earth borer, earth drill)** A screw-like drill (usually powered) for boring cylindrical holes in earth or rock.


earth auger

**earth berm** A small, earthen, dike-like embankment, usually used for diverting runoff water.

**earth borer** *See* **earth auger.**

**earth coupling** The practice of building into the ground to take advantage of the vast thermal mass of the earth, which typically remains a constant temperature at a certain depth below grade (depending on the climate).

**earth dam** A water barrier composed of earth, clay, sand, gravel, or combinations of these materials.

**earth drill** *See* **earth auger.**

**earth electrode** A metal plate, water pipe, or other conductor of electricity partially buried in the earth so as to constitute and provide a reliable conductive path to the ground.

**earthen flooring** Earth compacted with fibers such as straw and conditioned with natural oils to form a stable, hard flooring surface.

**earthing lead** The conductor that makes the final connection to an earth electrode.

**earth pigment** Pigment derived from the processing of materials or substances mined directly from the earth.

**earth plate** A buried metal plate that serves as an earth electrode.

**earth pressure** The horizontal pressure exerted by retained earth.

**earthquake load** The total force that an earthquake exerts on a given structure.

**earth sheltering** The practice of building into the ground or earth-berming to protect a building from inclement weather and strong wind. It takes advantage of the vast thermal mass of the ground, which remains at a constant temperature at a certain depth below grade (depending on the climate).

**earth station (ground station)** The equipment set up on earth to communicate with satellites.

**earthwork** A general term encompassing all operations relative to the movement, shaping, or compacting of earth.

**eased edge** Any slightly rounded edge.

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# E

**easement** **1.** The legal right afforded a party to cross or to make limited use of land owned by another. **2.** A curve formed at the juncture of two members that otherwise would intersect on an angle.

**easing** Excavation that allows an allotted space to accommodate a foreign piece or part.

**eastern fir** *See* **eastern S-P-F.**

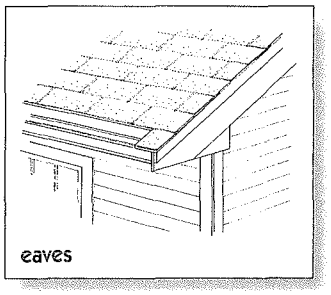
**eastern pine** *See* **eastern S-P-F.**

**eastern red cedar** A distinctively red, fine-textured, aromatic wood often used for shingles and closet linings.

**eastern S-P-F** Eastern spruce, pine, or fir-softwoods whose primary uses include structural lumber as in posts, beams, framing, and sheathing.

**eastern spruce** *See* **eastern S-P-F.**

**eaves** **1.** Those portions of a roof that project beyond the outside walls of a building. **2.** The bottom edges of a sloping roof.

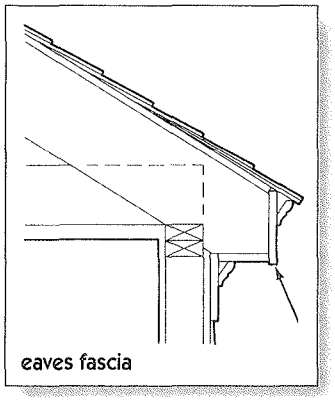

eaves

**eaves board** A thick, feather board nailed across rafters at the eaves of a building to slightly raise the first course of shingles.

**eaves channel** A long, shallow depression that serves to direct roof dripping along the top of a wall and into downspouts or gargoyles.

**eaves course** The first course of shingles or tiles at the eaves of a roof.

**eaves fascia (fascia board)** A board secured horizontally to, and covering the vertical ends of, roof rafters. The board may support a gutter.


eaves fascia

**eaves flashing** A thin metal strip dressed into an eaves gutter from a roof in order to prevent overflowing water from running down the exterior siding.

**eaves gutter (eaves trough)** A long, shallow, wood or metal trough fitting installed under and parallel to the eaves in order to catch and direct water dripping from a roof.

**eaves plate** A wood beam installed horizontally at the eaves and used in the absence of a rafter-supporting wall to support the feet of roof rafters between existing posts or piers.

**eaves strut** A structural piece spanning columns at the edge of a roof. The term is usually associated with pre-engineered steel buildings.

**eaves tile** A shorter-than-usual roofing tile used specifically in the eaves course.

**eaves trough** *See* **eaves gutter.**

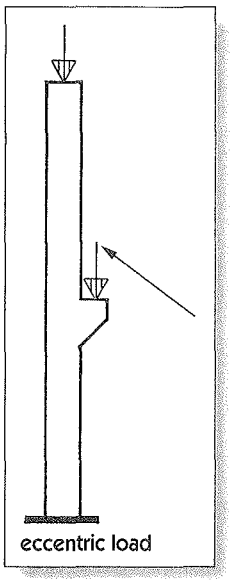
**eaves vent** Vent openings under the eaves of a house to allow the exchange of air in the attic.

**ebony** Dark, durable, tropical hardwood used most often for ornamental work or carving.

**eccentric** Not having the same center or centerline.

**eccentric fitting** A fitting whose opening or centerline is offset from the run of pipe.

**eccentric load** A load or force upon a portion of a column or pile not symmetric with its central axis, thus producing bending.


eccentric load

**eccentric tendon** In prestressed concrete, a steel element or tendon that does not follow a trajectory coincidental with the gravity axis of the member.

**echo** The reflection of sound waves with a magnitude and time delay sufficient to be perceived by a listener as separate from sound communicated directly to the listener.

**ecology** The study of the relationship between living things and their environment.

**economic life** The term during which a structure is expected to be profitable. Generally shorter than the physical life of the structure.

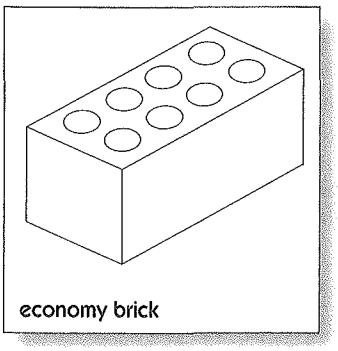
**economic obsolescence** Loss in value due to unfavorable economic influences occurring from outside the structure.

**economic rent** Rent on a property that is sufficient to pay all operating costs exclusive of services and utilities.

**economizer cycle** A system of dampers, temperature and humidity sensors, and

actuators, which maximizes the use of outdoor air for cooling.

**economy brick** A cored, modular brick with nominal dimensions of 4" x 4" x 8" and intrinsic dimensions of about 3-1/2" x 3-1/2" x 7-1/2".


economy brick

**economy wall** A 4" thick, back-mortared brick wall strengthened at intervals with vertical pilasters. Designed to support roof framing or walls.

**ecoprofile** An assessment of a building's or material's impact on the environment and overall toxicity, including consumption of fossil fuels and water over its lifetime.

**edge beam** A stiffening beam at the edge of a slab.

**edge flange weld** A weld with both members flanged at the point of the weld.

**edge form** Formwork used to limit the horizontal spread of fresh concrete on flat surfaces such as pavements or floors.

**edge grain** Lumber sawn so as to reveal the annual rings intersecting the wide face or surface at an angle of at least 45°.

**edge guide** An attachment to a router that ensures straight cuts by keeping the bit parallel to the work surface edge.

**edge joint** **1.** A joint between two veneers or laminations, formed in the direction of the grain. **2.** A joint created by the edges of two boards or surfaces united so as to form an angle or corner.

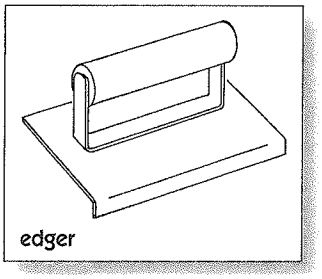
**edge molding** Any molding along the edge of a relatively thin member such as a door or a counter.

**edge nailing** Nailing through the edges of successive boards, such as floorboards, so that each board conceals the nails in the board adjacent to it.

**edge plate** An angle iron or channel-shaped guard to protect the edge of a door.

**edge pull** Mortising in the edge of sliding doors or windows by which they can be pulled open or closed.

**edger (edging trowel)** A tool used to fashion finishing edges or round corners on fresh concrete or plaster.

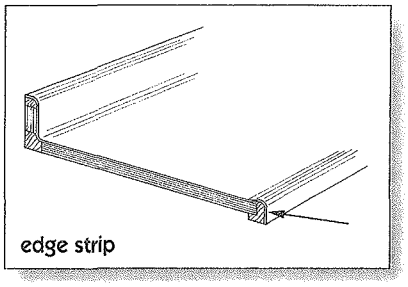

edger

**edge shot** Planed on the edges.

**edge spacer** A spacer that positions and holds a pane of glass in place within a window frame.

**edgestone** A stone used for curbing.

**edge strip** A plain or molded strip of wood or metal used to protect the edges of panels.


edge strip

**edge tool** Any tool that has a sharp cutting edge, such as a chisel, plane, or hatchet.

**edge treatment** The finish used to conceal the plies of a plywood edge. Finish may involve molding, wood strips, or wood putty.

**edge vent** An opening at the perimeter of a roof for the relief of water vapor pressure within the roof system.

**edge void** The gap that occurs on the edge of a plywood panel when an inner ply splits.

**edging** **1.** An edge molding. **2.** An edging strip. **3.** The process of rounding to reduce the possibility of chipping or spalling exposed edges of concrete slabs. **4.** The process of grinding the edge of flat glass to fit an application.

**edging trowel** *See* **edger**.

**educated guess ("guesstimate")** The guess of an experienced person.

**educational design specialists** Architectural firms that specialize in the design of educational environments and have knowledge of building materials and furnishings suitable to schools.

**effective age** The estimated age of a structure based on observed physical condition determined by the degree of maintenance and repair.

**effective area** **1.** The net area of an air inlet or outlet system through which air can pass. The effective area equals the free area of the device multiplied by the coefficient of discharge. **2.** The cross-sectional area of a structural member, calculated to resist applied stress.

**effective area of reinforcement** In reinforced concrete, the product derived by multiplying the cross-sectional area of the steel reinforcement by the cosine of the angle between its direction and the direction for which its effectiveness is considered.

**effective bond** In brickwork, a bond that is completed at the ends with a 2-1/2" closer.

# E

**effective date of the agreement** The date indicated in the agreement on which it becomes effective, but if no such date is indicated, the date on which the agreement is signed and delivered by the last of the two parties to sign and deliver.*

**effective depth** The depth of a beam or slab section as measured from the top of the member to the centroid of the tensile reinforcement.

**effective flange width** The width of a slab poured monolithically with a stem acting as the compression flange of a T-section. This width is usually equal to one-half of the span on each side of the stem.

**effective height** The height of a brick.

**effective height of a column** In calculating the slenderness ratio, multiply a valve by the actual column length. The valve varies depending on whether the column is fully or partially restrained at both ends.

**effective length** The distance between inflection points in a column when it bends.

**effective modulus of elasticity** The combination of elastic and plastic effects in an overall stress-strain relationship in a service structure.

**effective opening** The minimal cross-sectional area of the opening at the point of water supply discharge, expressed in terms of the diameter of a circle. The diameter of a circle of equivalent cross-sectional area is given in instances where the opening is not circular.

**effective prestress** The stress remaining in concrete resulting from prestressing after loss of prestress. Effective prestress includes the effect of the weight of the member, but not the effects from any superimposed loads.

**effective reinforcement** The reinforcement assumed to be active in resisting applied stress.

**effective span** The center-to-center distance between the supports of a beam, girder, or other structural member.

**effective stress** In prestressed concrete, the remaining stress in the tendons after the loss of prestress.

**effective temperature** A single-figure index reflecting the combined effects of temperature, humidity, and air movement on the sensation of warmth and/or cold felt by the human body. Numerically equivalent to the temperature of still, saturated air, which produces an identical sensation.

**effective thickness of a wall** The thickness of a wall, used in calculating the slenderness ratio.

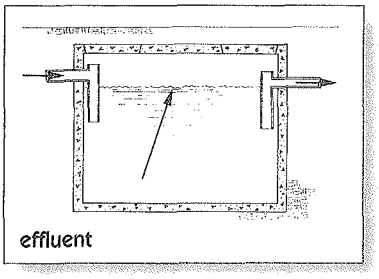
**efficacy** The ratio of light output to energy consumption, measured in lumens per watt.

**efficiency** The ratio of actual performance to theoretical maximum performance.

**efflorescence** A whitish, powdery deposit of soluble salts carried to the surface of stone, brick, plaster, concrete, or mortar by moisture. The moisture evaporates, leaving the residue.

**effort** The number of labor units necessary to complete work. Effort is usually expressed in staff hours, staff days or staff weeks and should not be confused with duration.*

**effluent** **1.** In sanitary engineering, the liquid sewage discharged as waste, as in the discharge from a septic tank. **2.** Generally, the discharged gas, liquid, or dust by-product of a process.



effluent

**egg and dart** An ornamental convex molding with a tooled finish that alternates egg and arrow head shapes.

**eggcrate louver** A louver whose rectangular openings resemble the dividers used in some egg cartons.

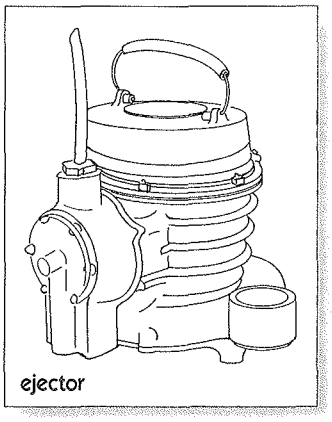
**eggshell** A semi-matte glaze or porcelain enamel surface that resembles the texture of an eggshell.

**eggshell gloss** **1.** A low-gloss designation for a paint film that is glossier than flat or satin, but less glossy than semi-gloss or gloss. **2.** A smooth matte face to building stone.

**egress** An exit or means of exiting.

**Eichleay formula** A method of approximating the contractor's recovery for home office overhead costs in the event of delays caused by the owner.

**ejector** **1.** A pump for ejecting liquid. **2.** In plumbing, a device used to pump sewage from a lower to a higher elevation. **3.** In excavation, a dirt-pushing mechanism in a scraper bowl.



ejector

**ejector grille** A ventilating grille with slots shaped so as to force out air in divergent streams.

**e-lamp™** An electrode-less induction lamp with a compact size and long life.

**elastic** Refers to any material that can return to its initial state after having been deformed by an outside force.

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**elastic arch** An arch whose design is based on the elastic theory of materials.

**elastic constant** A constant or coefficient that expresses the degree to which a material possesses elasticity. In an elastic material that has been subjected to a strain below its elastic limit, the elastic constant is the ratio of the unit stress to the corresponding unit strain.

**elastic curve** In structural analysis, the curve showing the deflected shape of a beam with an applied load.

**elastic deformation** A modification to the shape of an elastic material, but not its elasticity.

**elastic design** An analytical design method in which the design of a structural member is based on a linear stress-strain relationship that assumes that the active stresses are equal to only a fraction of the given material's limit of elasticity.

**elasticity** The ability of a material to return to its initial state after having been deformed by some outside force.

**elastic knife** A tool with a flexible steel blade used by plasterers to trim the brown coat.

**elastic limit** The maximum amount of deforming stress a material can sustain and still return to its initial shape without having incurred any permanent deformation.

**elastic loss** In pretensioned concrete, the condition resulting in the reduction of prestressing load due to the elastic shortening of a member.

**elastic shortening** **1.** A linearly proportional decrease in the length of a structural member under an imposed load. **2.** In prestressed concrete, the shortening of a member caused by, and occurring immediately upon, application of force induced by prestressing.

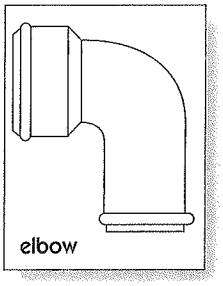
**elastomer** A term descriptive of various polymers that, after being temporarily but substantially deformed by stress, will return to their initial size and shape immediately upon the release of the stress.

**elastomeric bearing** An expansion bearing made from an elastomer. This type of bearing allows movement of the structure it supports.

**elastomeric sealant** A sealant made of a flexible material in a plastic state during forming or application. A common elastomeric sealant, polysulfide, is a high-performance type, made of either polysulfide polymer or rubber.

**elastomeric waterproofing** A method of foundation moisture protection using impervious flexible sheet metal.

**elbow** A sharply bent or fabricated angle fitting, usually of pipe, conduit, or sheet metal. *See also* **knee**.




**elbow board** **1.** A window board installed under a window on the interior side. **2.** An elbow rail.

**elbow catch** A spring-loaded locking device having on one end a hook that engages a strike, and on the other end a right angle bend that provides a means for releasing the catch. Commonly used to lock the inactive leaf of a pair of cabinet doors.

**elbow rail** A length of millwork or metal rail attached to a partition or under a window on the interior side and used as an armrest.

**electric appliance** A piece of equipment or a mechanism operated by electricity. Commonly found in a household or office.

**electrical conductivity** The ability to transmit an electrical current.

**electrical drawings** Graphic representations of the electrical requirements of a project, including power distribution, lighting, and low-voltage specialty wiring, such as for fire alarms, telephone/data, and technology wiring.

**electrical insulator** An electronics component that, because of the electrical resistance inherent in the material(s) from which it is fabricated, is itself considered to be a nonconductor of electric current. The component is sometimes designed so as to physically support a conductor while separating it electrically from another conductor or object.

**electrically supervised** Refers to a closed-circuit wiring system that utilizes a current-responsive device to indicate a failure within the circuit or an accidental grounding.

**electrical metallic conduit** Heavy-walled conduit that encloses and protects wiring.

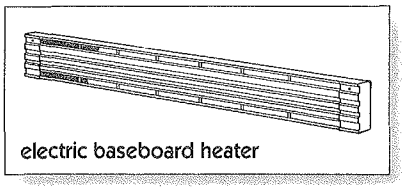
**electrical resistance** The opposition to the flow of an electric current as manifested by a device, conductor, substance, or circuit element. Electrical resistance is measured in *ohms*.

**electrical tape** A tough, fibrous or thermoplastic adhesive tape used primarily to insulate electrical joints or conductors.

**electric arc welding (electric welding)** The joining of metal pieces by fusion, the heat for which is provided by an electric arc or the flow of electric current between the electrode and the base metal. The electrode is either a consumable, melting and bead-depositing, or nonconsumable metal rod. The base is the parent metal.

# E

**electric baseboard heater** A heating system with electric heating elements installed in longitudinal panels, usually along the baseboards of exterior walls.


electric baseboard heater

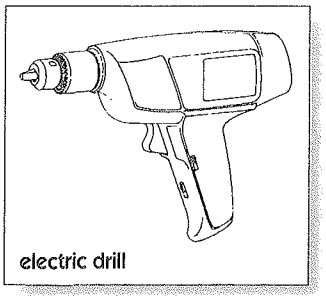
**electric blasting cap** A blasting cap that is detonated by an electric current.

**electric cable** **1.** An electric conductor comprising several smaller-diameter strands that are twisted together. **2.** A group of electric conductors that are insulated from one another.

**electric delay blasting caps** Electronically controlled blasting caps designed to detonate only after a predetermined length of time has elapsed after the ignition system has been electronically activated.

**electric-discharge lamp** A lamp that emits light through a process where electric current flows through a vapor or gas.

**electric drill** A portable, hand-held, motor-driven tool used for boring holes in a material. Powered either by direct or alternating current.


electric drill

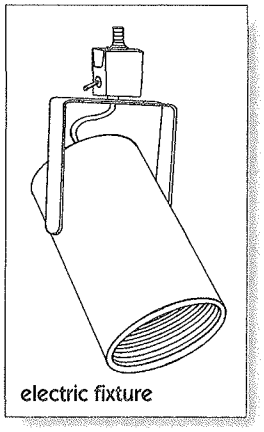
**electric duct** An enclosed metal runway for electrical conductors or cables.

**electric eye** A photoelectric cell whose resistance varies in response to the amount of light that falls on the cell. An electric eye is often incorporated into electric circuits where it is used in measuring or control devices that depend on illumination levels or on the interruption of a light beam.

**electric feeder** In power distribution, a set of electric conductors that originate at a primary distribution center and supply power to one or more secondary distribution centers, branch-circuit distribution centers, or a combination of these. *See also* **feeder**.

**electric field** A particular region or space characterized by the existence of a detectable electric intensity at every point within its perimeter.

**electric fixture** An electrical device that is fastened to a ceiling or wall and used to hold lamps.


electric fixture

**electric generator** A mechanism that transforms mechanical power into electrical power.

**electric heat** Heat resulting from the flow of electric current through resistance elements.

**electric heating element** A heat-producing device consisting of a length of resistance material, insulated supports, and terminals that connect to an electrical power source.

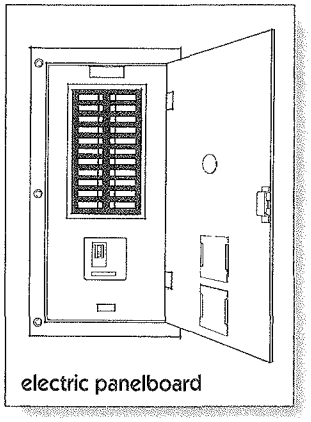
**electric lock** A locking mechanism in which the motion of a latch or bolt is controlled by applying voltage to the terminals of the mechanism.

**electrical metallic tubing (EMT)** *See* **thin-wall conduit**.

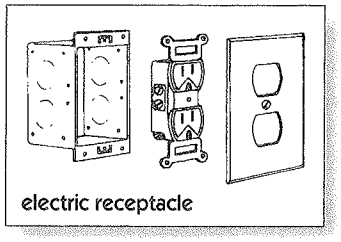
**electric meter** A device that measures the amount of electricity consumed over a certain period of time.

**electric outlet** A point in an electric wiring system at which current is delivered through receptacles equipped with sockets for plugs, making it available to supply lights, appliances, power tools, and other electrically powered devices.

**electric panelboard** A panel or group of individual panel units capable of being assembled as a single panel and designed to include fuses, switches, and circuit breakers. The units are housed in a cabinet or cutout box positioned in or against a wall or partition and accessible only from the front.


electric panelboard

**electric receptacle** A contact device, usually installed in an outlet box, which provides the socket for the attachment of a plug to supply electric current to portable power equipment, appliances, and other electrically operated devices.

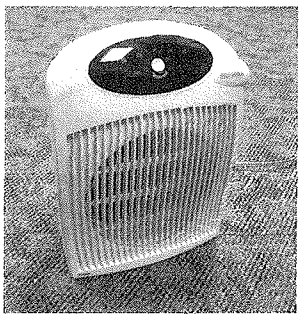

electric receptacle

**electric resistance welding (electric welding)** A coalescence-producing set of welding processes whereby the required heat is derived from the application of pressure and from resistance of the work to the flow of electric current in a circuit, of which the work itself is an integral part.

**electric screw compressor** An electric-powered rotary compressor that uses less electricity than traditional reciprocating refrigeration compressors (typically .7–.95 kWh/ton hr).

**electric scroll compressor** An electric-powered rotary compressor that uses less electricity than traditional reciprocating refrigeration compressors (typically .9–1.4 kWh/ton hr).

**electric space heater** A portable, self-contained heating device in which electricity supplies the heat energy. The heat is blown into a given space or room by a powerful electric fan also contained within the unit.



electric space heater

**electric squib** An electronically activated mechanism used in blasting operations to ignite a charge.

**electric strike** An electrical mechanism that allows the release of a door at a remote location.

**electric switch** A device used for opening or closing electric circuits or for changing the connection of a circuit.

**electric welding** *See* **electric arc welding** *and/or* **electric resistance welding.**

**electroacoustics** The branch of electricity concerned with the transformation of acoustical energy into electrical energy, and vice versa.

**electrode** **1.** A solid electric conductor through which an electric current enters or leaves an electrolyte, vacuum, gas, or other medium. **2.** That component in an arc welding circuit through which electric current is conducted between the electrode holder and the arc itself. **3.** In resistance welding, that component through which the electric current in the welding machine passes directly to the work and that is usually accompanied by pressure, such as from a clamp.

**electrode boiler** A boiler containing submerged electrodes that heat the surrounding water by passing electric current through it.

**electrogalvanizing** A method of coating iron or steel with zinc deposited by electroplating rather than by immersion.

**electrogas welding** A method of gas-metal arc welding or flux-cored arc welding that utilizes an externally supplied gas.

**electrolier** A hanging electric light fixture, such as a chandelier.

**electrolysis** The process of producing chemical changes or the breakdown of chemical compounds into their constituent parts by passing a current between electrodes and through an electrolyte.

**electrolyte** **1.** A substance that separates into ions when in a solution or when fused, thereby becoming electrically conducting. **2.** A conducting medium in which the flow of electric current occurs by the migration of ions.

**electrolytic copper** Copper refined through electrolytic deposition and used in the manufacturing of tough pitch copper and copper alloys.

**electrolytic corrosion** The deterioration of metal or concrete by the chemical or electrochemical reaction resulting from electrolysis.

**electromagnet** An iron-based object that becomes magnetic when a current is passed through the coils around it. The object loses its magnetism when the current is stopped.

**electromagnetic interference (EMI)** Radiation emission from a transmission medium caused by using high-frequency signal modulation. Can be reduced by shielding.

**electromotive force (EMF)** The force that moves electricity in a conductor. EMF, usually measured in volts, is the difference in electric potential, or voltage, between the terminals of a source of electricity.

**electron acceptor** An element or ion that accepts free electrons during a chemical treatment process.

**electronic ballast** A ballast that uses semiconductor components to increase the efficiency of a fluorescent system by increasing the frequency (in kilohertz) of its lamp operation.

**electronic controls** In an HVAC system, the electronically operated sensors and controls.

**electronic distance meter (EDM)** A surveying device used to measure distance. Distance is determined from the time it takes transmitted electromagnetic waves to reach a target.

**electroplating** The deposition of a thin, sometimes decorative but usually protective metal coating onto another metal. Electroplating occurs by submerging the receiving metal into an electrolyte, where electrons from the anode (the coating metal) flow to and are deposited on the receiving metal (or cathode).

**electrostatic air cleaner** *See* **electrostatic precipitator.**

**electrostatic discharge** A potentially damaging static shock or spark.

# E

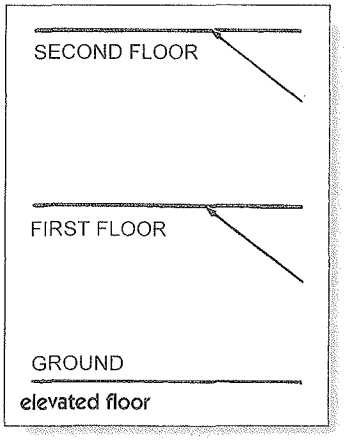
**electrostatic precipitator (electrostatic air cleaner)** A type of filtering device that prevents smoke and dust from escaping into the atmosphere by charging the particles electrically as they pass through a screen. The particles are attracted to one of two electrically charged plates and subsequently removed.

**element** The smallest division of a breakdown.

**elephant trunk** A long, cylindrical, device with a hopper-like top through which concrete is placed in deep shafts or forms. When in use, the device is kept filled with concrete to eliminate the free fall of material and the possible resultant segregation of its constituents.

**elevated conduit** An electrical conduit hung from structural floor members.

**elevated floor** Any floor system not supported by the subgrade.



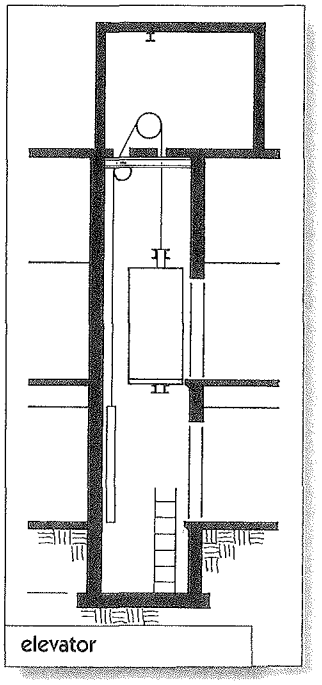
elevated floor

**elevated slab** A floor or roof slab supported by structural members.

**elevated water tank** A domestic water tank supported on an elevated structural framework to obtain the required head of pressure.

**elevation** **1.** A vertical distance relative to a reference point. **2.** A view or drawing of the interior or exterior of a structure as if projected onto a vertical plane.

**elevator** A "car" or platform that moves within a shaft or guides and is used for the vertical hoisting and/or lowering of people or material between two or more floors of a structure. An elevator is usually electrically powered, although some short-distance elevators (serving fewer than six or seven floors) are powered hydraulically.


elevator

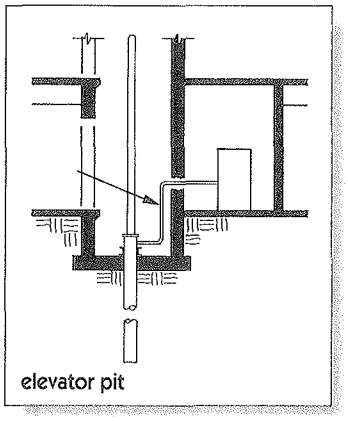
**elevator car** That part of an elevator that includes the platform, enclosure, car frame, and gate or door.

**elevator car safety** A mechanism attached to the car frame of an elevator or to the frame of the counterweight and whose function it is to slow, stop, and hold the car or counterweight in the event of integral equipment malfunction or failure, such as excessive speed or free-fall of the car.

**elevator interlock** A device on the door of each elevator landing that prevents movement of the elevator until the door is closed and locked.

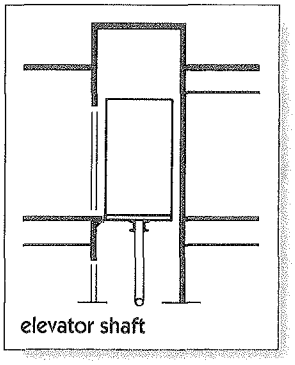
**elevator machine beam** A steel beam that is usually positioned directly over the elevator in the elevator machinery room and is used to support elevator equipment.

**elevator pit** That part of an elevator shaft that extends from the threshold level of the lowest landing door down to the floor at the very bottom of the shaft.

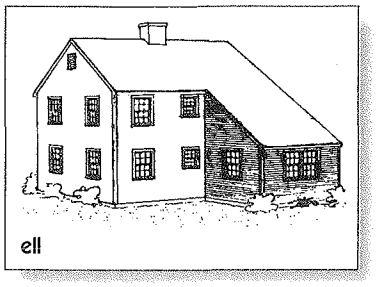

elevator pit

**elevator recall** The override of elevator operation by a building's fire safety system upon activation of a fire alarm. In a fire emergency, elevator cars automatically return to the ground floor and can be operated only by a fire department.

**elevator shaft** A hoistway through which one or more elevator cars may travel.


elevator shaft

**ell (el)** **1.** An extension, addition, or secondary wing that joins the principal dimension of a building at a right angle. **2.** Same as *elbow*.



ell

**elliptical arch** An arch in the shape of a semi-ellipse and whose intrados is in the form of an ellipse.

**elm** A strong, tough, dull brown, easily worked hardwood with moderately high density and a twisted, interlocking grain. Elm is used more for ornamental landscaping and shade purposes than for veneer, piles, or planks.

**elongated bowl** A toilet bowl with an extra few inches added to the front for added comfort and cleanliness.

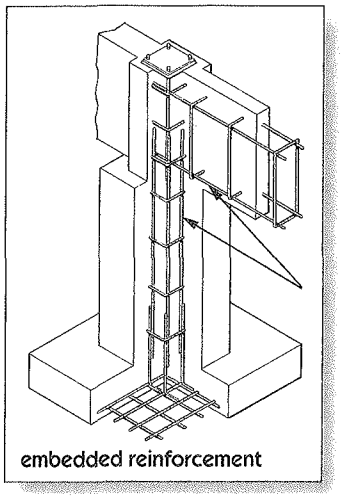
**elongated piece** A particle of aggregate whose length-to-width ratio exceeds a specified value.

**emarginate** To notch a margin or perimeter of an object.

**embankment** A ridge constructed of earth, fill rocks, or gravel and used most commonly to retain water or to carry a roadway. The length of an embankment exceeds both its width and its height.

**embedded length** That length of embedded steel reinforcement that extends beyond a critical section.

**embedded reinforcement** In reinforced concrete, any slender steel members, such as rods, bars, or wires, that are embedded in concrete in such a way as to function together with the concrete in resisting forces.



embedded reinforcement

**embedment** **1.** The depth of a pile, measured from its deepest point to ground level. **2.** The placing of one material into another so that the two become a single material.

**embodied energy** The energy needed to produce a building product, not accounting for transportation, durability, reuse, and recycling.

**embossed** Describes a material whose surface is raised or indented.

**emergency ballast** A lighting system that uses a battery to function in the event of a power loss. When AC power fails, the emergency ballast senses the failure and immediately switches to the emergency mode to illuminate lamps at a reduced lumen output.

**emergency declaration area (EDA)** An area officially declared in need of hazardous waste or material cleanup.

**emergency exit** A door, hatch, or other device leading to the outside of the structure and usually kept closed and locked. The exit is used chiefly for the emergency evacuation of a building, airplane, or other occupied space when conventional exits fail, are insufficient, or are rendered inaccessible.

**emergency lighting** Temporary illumination provided by battery or generator and essential to safety during the failure or interruption of the conventional electric power supply.

**emergency power** Electricity temporarily produced and supplied by a standby power generator when the conventional electric power supply fails or is interrupted. Emergency power is essential in facilities like hospitals, where even relatively short power outages could be life-threatening to certain individuals.

**emergency release** On a door, a safety device that allows exit during emergency conditions. Unlike a panic exit device, an emergency release magnetic door holder that automatically releases in emergencies to close fire door, not necessarily preventing egress.

**emergency shut-down** (also **emergency power-off**) A system that halts power to equipment or a process.

**emergency stop switch** A safety switch in the car of an elevator that can be manually operated to cut off electric power from the driving machine motor and brake of an electric elevator, or from the electrically operated valves and/or pump motor of a hydraulic elevation.

**emery** Bluish-grey or black, impure carborundum in granular form used as an abrasive for grinding and polishing the surfaces of materials such as metal, stone, glass, and other materials.

**emery cloth** A finely abrasive cloth manufactured by sprinkling powdered emery or aluminum oxide onto a thin cloth coated with glue. Used either wet or dry for polishing metallic surfaces.

**emery wheel** An abrasive wheel similar to a grinding wheel but composed primarily of emery (or aluminum oxide) and rotated at high speeds for fine grinding or polishing.

**eminent domain** The legal right or power of a government to take for public use privately owned property, usually with some degree of compensation to its owner.

# E

**emissivity** The relative ability of a surface to emit radiant heat.

**emittance** A percentage of the energy absorbed by a solar energy collector.

**employee's liability insurance** Insurance protection against employee's claims for damages resulting from sickness or injury sustained during the course of work. Protection is based on negligence of common law (not under workers' compensation).

**employee's quarterly federal tax return** Form 941 on which employers must report the amount of federal income taxes and FICA taxes withheld and the dates and amounts deposited during each quarterly period.

**employee's withholding allowance certificate** The W-4 form prepared by each employee showing the number of withholding allowances currently claimed. This number establishes the amount of federal income tax that should be withheld by the employer from the employee's earnings.

**empty-cell process** A procedure in which wood is impregnated with liquid preservatives under pressure.

**emulsified asphalt** Asphalt cement that has been mixed with water containing a small amount of an emulsifying agent. *See also* **bituminous emulsion.**

**emulsifier** A substance that modifies the surface tension of colloidal droplets, inhibiting their coalescence and maintaining their suspension.

**emulsion** **1.** A mixture of two liquids that are insoluble in one another and in which globules of one are suspended in the other (such as oil globules in water). **2.** The mixture of solid particles and the liquid in which they are suspended but insoluble, as in a mixture of uniformly dispersed bitumen particles in water, in which the cementing action required in roofing and waterproofing would occur as the water evaporates.

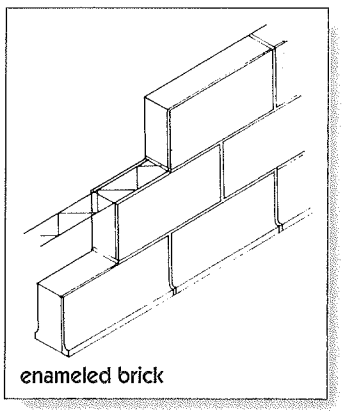
**emulsion glue** A usually cold-setting glue manufactured from emulsified synthetic polymers.

**emulsion paint** A paint comprising tiny beads of resin binder that, along with pigments, are dispersed in water. Evaporation of the water affects the coalescence of the resin particles, thus forming a film that adheres to the surface and binds the pigment particles. Vinyl, latex, or plastic paints are examples based on polyvinyl acetate emulsion.

**emulsion sprayer** An apparatus used in highway resurfacing to spray an emulsified asphalt tack coat on the existing surface.

**enamel** A type of paint composed of particles of finely ground pigments and a resin binder that dries to form a hard, glossy film with very little surface texture.

**enameled brick** In masonry, a brick or tile with a glazed ceramic finish.



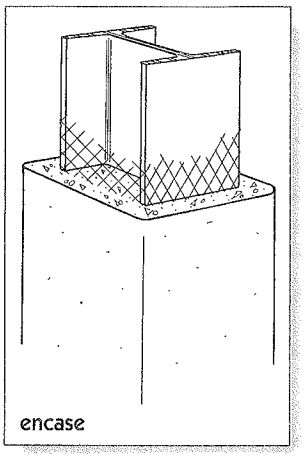
enameled brick

**encapsulant (sealant)** A liquid applied to asbestos-containing material that prevents the release of fibers into the air either by forming a membrane over the material or by penetrating the material and binding the fibers together.

**encapsulate** To encase a material or substance; to hide data (such as computer processing logic).

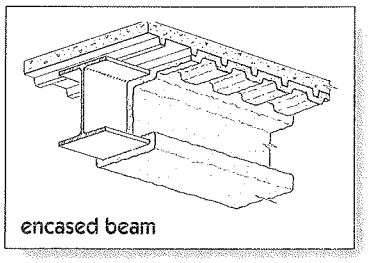
**encapsulation** A technique for trapping asbestos fibers in a dense chemical substance.

**encase** To cover with or enclose in a case or lining.



encase

**encased beam** A metal beam usually enclosed in concrete or some other similar material.



encased beam

**encaustic** **1.** Descriptive of a process in which a material is covered with a mixture of paint solution and wax, then set by heat after application. **2.** Relating to paint or pigment that has been applied to glass, tile, brick, or porcelain and then set or fixed by the application of heat.

**encaustic tile** A decorative or pavement tile whose pattern is created by inlaying clay of one color in a background of a different-colored clay.

**enchased** Refers to hammered metalwork whose pattern in relief is created by

hammering down the background or depressed portions of the design.

**enclosed knot** A wood knot that is invisible from the surface of a wood member because it is completely covered by surrounding wood.

**enclosed stair** An interior staircase that has a closed string on each side, often encased in walls or partitions. There are also door openings at various floor levels, thus making it accessible to hallways of living units.

**enclosure** The containment behind airtight, impenetrable, permanent barriers of sprayed-on or troweled-on asbestos-based materials.

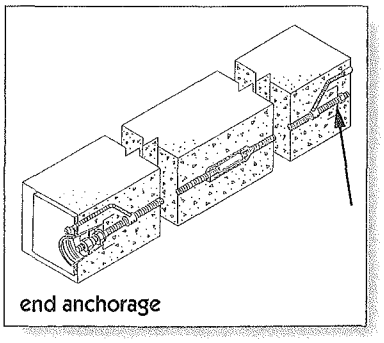
**enclosure system** A contamination-control system consisting of a work area, a holding area, a washroom, and an uncontaminated area.

**enclosure wall** An interior or exterior non-load-bearing wall of skeleton construction, usually anchored to columns, piers, or floors.

**encroachment** The unauthorized intrusion or extension of a building or structure onto the property of another.

**encumbrance** **1.** A liability attached to real property, such as a mortgage, a lien, and certain easements. **2.** A restriction on the use of a piece of property.

**end anchorage** A mechanism designed to transmit prestressing force to the reinforced concrete of a post-tensioned member.



end anchorage

**end bearing pile** A pile supported mainly by point resistance. The pile's point (toe) rests on or is embedded in a posttensioned member.

**end block** A member that has an enlarged end section designed to reduce anchorage stresses to allowable values.

**end butt joint (end joint)** **1.** A joint formed when boards are connected square end to square end. **2.** A joint between two veneers, formed perpendicular to the grain. **3.** In masonry, a joint in which mortar connects the butt ends of two bricks.

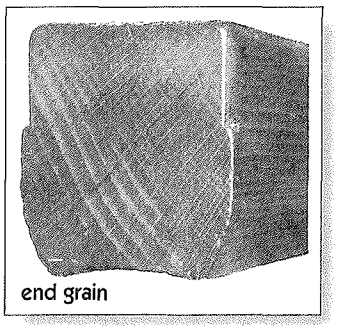
**end channel** A metal stiffener welded horizontally into the tops and bottoms of hollow metal doors to supply strength and rigidity.

**end checks** Small cracks that develop in the end grain of drying lumber.

**end-construction tile** Tile that receives its principal stress parallel to the axes of the cells, and that is laid so that the axes of cells are vertical.

**end distance** The distance from an end of a member to the center of its nearest bolt hole, nail, or screw.

**end grain** The grain that is exposed when a piece of wood is cut perpendicular to the grain.



end grain

**end-grain core** Plywood or panel core made from wood blocks that are sawn and glued so that the grain is at right angles to the forces of the panels.

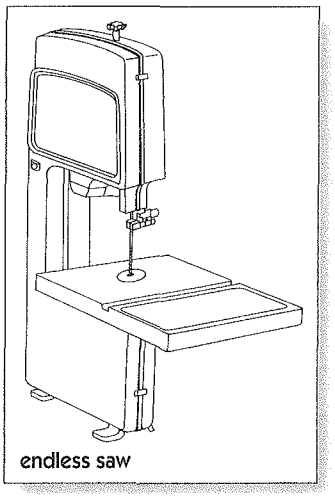
**end-grain nailing** The driving of nails into the end-grain surface of wood so that the resultant position of each nail shank is parallel to the grain.

**end joint** *See* **end butt joint.**

**end lap** The overlap in a lap joint, such as at the end of a ply of roofing felt.

**end lap joint** An angle joint involving two members, each having been cut to half its thickness and lapped over the other in such a way as to result in a change of direction.

**endless saw** A band saw.



endless saw

**end loader** A tractor with a front-mounted liftable bucket.

**end matched** Descriptive of boards or strips that are tongued along one end and grooved along the other.

**endorsement** A document supplemental to an insurance policy covering a specified loss. An endorsement modifies the conditions of the contract terms stated on the face of the insurance policy.

**endothermic** Descriptive of a reaction occurring with the absorption of heat.

**end post** A post or other structural member in compression at the end of a truss.

# E

**end product specifications** Embankment compaction specifications written to define the requirements rather than the method or equipment to obtain those requirements.

**end rafter** A common rafter positioned in line with the ridge of the roof.

**end scarf** A scarf joint between two timbers made by notching and lapping the ends and then inserting the end of one into an end of the other.

**end section** In a drainage system, the prefabricated, flared metal end attached at the inlet and outlet to prevent erosion.

**end span** In a continuous-span floor design, the exterior span, which is often more heavily reinforced.

**end stiffener** One of the vertical angles connected to the web of a beam or girder at its ends, to stiffen the beam and transfer the end shear to the shoe, baseplate, or supporting member.

**end thrust** The force that the end of a structural member exerts.

**endurance limit** The maximum stress that can be applied to a material during a specified number of stress cycles without causing failure of the material being stressed.

**end-use/least cost** A major green consideration when designing a building and selecting products. This factor involves an evaluation of the end users' needs and explores different ways of achieving them at the lowest cost with the greatest efficiency over time.

**energized** Electrically connected to a source of voltage.

**energy** The ability to do work.

**Energy and Atmosphere (EA)** A term used by LEED in reference to energy consumption and efficiency and greenhouse gas emissions.

**energy audit** A survey of heat loss through the components of a structure.

**energy efficiency measure (EEM)** A design, operation, or technology change for the purpose of reducing energy consumption.

**energy efficiency ratio (EER)** A measure of energy efficiency in the cooling mode that represents the ratio of total cooling capacity to electrical energy input.

**energy-efficient design** Design that emphasizes highly effective space conditioning equipment and controls, a tight building envelope, and an efficient ventilation system.

**energy-efficient lighting** Light fixtures and lamps, such as CFL and LED, that consume substantially less energy than conventional incandescents.

**energy harvesting** Capture of renewable energy, such as solar, and conversion of that energy into usable electricity.

**Energy Information Administration** A division of the U.S. Department of Energy.

**energy management system (EMS)** A system that monitors and controls energy-consuming systems, in the most energy-efficient manner, through software programs.

**energy modeling** Using computer modeling software to analyze alternative energy systems to help determine the most efficient design. It typically involves not only mechanical and electrical systems, but building orientation, materials, lighting, and landscaping.

**energy recovery** A process whereby energy from one source is used to provide energy for another process.

**energy recovery ventilator (ERV)** Mechanical equipment that is added to the ventilation system, featuring a heat exchanger to provide controlled ventilation into a building, while increasing energy efficiency.

**energy savings performance contract (ESPC)** A contracting partnership between an agency/consumer and an energy services company (ESCO) in which the ESCO evaluates the facility's energy needs and consumption and identifies strategies for improvement. The ESCO often helps pay for the initial cost of implementation in exchange for a share of the energy savings.

**energy service company (ESCO)** A firm that provides energy management services in exchange for a set fee or an amount tied to a facility's energy cost savings.

**energy service provider (ESP)** A company that provides energy or energy management services.

**Energy Star** A volunteer rating and labeling program sponsored by the Department of Energy and the Environmental Protection Agency (EPA) to encourage the use of energy-efficient products.

**Energy Star buildings** A voluntary partnership between U.S. organizations and the U.S. Environmental Protection Agency (EPA) to promote energy efficiency in buildings.

**Energy Usage Intensity (EUI)** A measurement used for the purpose of rating a facility's energy consumption per square foot; used by the U.S. Department of Energy.

**enfilade** The axial alignment of a series of doors through a sequence of rooms.

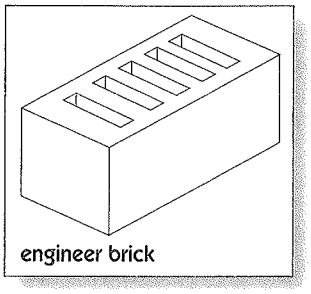
**engaged** Apparently or actually attached to a wall by virtue of being bonded to it or partially embedded in it.

**engaged column** A column that is apparently or actually attached to a wall by being bonded to it or partially embedded in it. The column is not actually freestanding; it is at least partially built into a wall.

**engineer** A design professional who, by education, experience, and examination, is duly licensed by one

or more state governments for practice in the profession of engineering. This practice may be limited to one or more specific disciplines of engineering. Construction-related engineering disciplines include civil, structural, mechanical, or electrical systems design.

**engineer brick** Brick whose nominal dimensions are 3-1/5" x 4" x 8".


engineer brick

**engineered brick masonry** Brick masonry whose design is the product of structural analysis.

**engineered items** Items that are purchased to be used for a particular purpose and are engineered to unique specifications, as opposed to commodity materials. This typically includes tagged items and materials that require detailed engineering data sheets.*

**engineered wood** Composite wood product made from pieces of recycled/reconstituted/scrap wood and fibers bonded together with adhesive to create a durable and resource friendly substitute for raw-sawn lumber.

**engineering officer** An engineer designated as having authority over specific operations or duties. Usually designated by a government agency or private corporation.

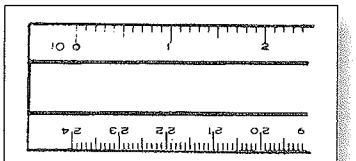
**engineering survey** A survey undertaken for the purpose of obtaining information essential to the planning of an engineering project.

**engineer-in-training** A person who is qualified to become a registered professional engineer in all respects but the necessary professional experience.

**engineer's chain** A chain-like device consisting of a series of one hundred links, each one foot long. The chain is used in land surveying for measuring distances.

**engineer's level** A precision leveling instrument used for establishing a horizontal line of sight and to determining differences of elevation.

**engineer's scale** A straightedge on which each inch is divided into uniform multiples of ten, thus enabling drawings to be made with distances, loads, forces, and other calculations expressed in decimal values.

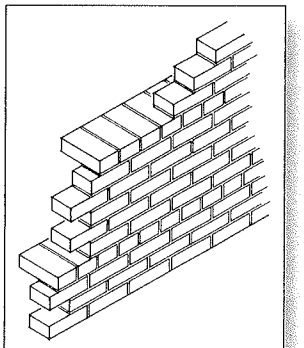

engineer's scale

**engineer's transit** **1.** An instrument used in surveying to measure and to lay out vertical and horizontal angles, distance, directions, and differences in elevation. **2.** A theodolite, the directions of whose alidade and telescope are reversible.

**English bond** **1.** Brickwork consisting of alternate courses of headers and stretchers. **2.** A strong, easily laid bond.

**English cross bond (St. Andrew's cross bond)** Alternate courses of headers and stretchers on which the stretcher course breaks joints with the stretcher courses next to it.

**English garden wall bond (American bond, common bond)** Widely used brickwork that can be laid quickly because headers constitute only every fifth or sixth course, with all the other courses being stretchers.


English garden wall bond

**English tile** A smooth, flat, single-lap clay roofing tile with interlocking sides.

**engrail** To cut with a series of concave lines or curves.

**enriched** Adorned with ornate and/or decorative elements.

**entablature** In classical architecture, the total beam member spanning from column to column, including the architrave (bottom), frieze (middle), and cornice (top).

**enterprise asset management** Any software system designed to assist with facility management, including the maintenance of physical assets, proper and safe plant operation, and warranty and leasing information.

**enthalpy** The total amount of heat in a material or system, measured in Btus per pound.

**enthalpy wheels** Also referred to as heat wheels, a heat recovery system that removes moisture from the ambient air while also cooling the ventilated air by passing all incoming air over a desiccant-coated wheel. This process removes up to 85% of heat/moisture.

**entitlement** A claimant's right or grounds for recovering losses (as opposed to determining the amount of the losses).

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# E

**entrained air** Nearly spherical microscopic air bubbles that are purposely incorporated into mortar or concrete during mixing. Entrained air is added in order to lessen the effects of the freeze/thaw cycle on concrete that will be exposed to the weather.

**entrainment** The capture of part of the surrounding air by the air stream discharged from an air outlet.

**entrance** An exterior door, lobby, passage, or other designed point of entry into a building.

**entrance facilities (EF)** Equipment, such as hardware and cables, used to connect utilities to a facility.

**entrance room** A space that houses equipment for connecting an outside utility to a facility's cabling system.

**entrapped air** Voids in concrete that are of at least one millimeter in diameter, and that are the result of air other than entrained air.

**entry** A passage hallway that affords entrance inside an exterior door.

**envelope** **1.** A term used to denote the extreme outside surface and dimensions of a building. **2.** An assembly of planes representing the limits of an area that may house a structure, i.e., a zoning envelope.

**environmental audit** An assessment of a facility's compliance with local and national environmental requirements.

**environmental building consultant** A specialist in sustainable building design who makes recommendations regarding the impact of building materials as they are produced, including waste generated in the construction process and over the product life cycle.

**environmental design** The adaptation of a building to its surroundings and the consequences of its incorporation into the setting.

**environmental impact statement** A detailed analysis, as required by the National Environmental Policy Act of 1969, of the probable significant environmental effects of either large-scale, federally funded construction or other proposed construction that may have potentially significant consequences on the environment.

**environmental monitoring** A process of measuring physical and/or chemical properties of an environmental medium, such as air, soil or water.

**Environmental Protection Agency (EPA)** An independent federal agency, formed in 1970, that establishes and controls rules for protecting the environment.

**environmental remediation** The process of treatment, containment, or removal of hazardous or toxic wastes to protect human health and the environment.

**EOL resistor** A means of monitoring the function of an alarm or fire detector circuit.

**EOS** Economy of scale.

**EPAct** The U.S. Energy Policy Act of 2005. Among its many components, it allows for tax incentives and loan guarantees for various energy-related projects and conservation.

**EPA Identification Number** A number assigned to each generator of hazardous waste that notifies the EPA of its activity.

**EPA Regional Administrator** The senior EPA official in charge of EPA activities at a generation site.

**EPDM roofing** A single-ply roofing material manufactured of an elastomeric polymer synthesized from ethylene, propylene, and a small amount of diene monomer. Because of its versatility in application methods, EPDM roofing may be used for any roof shape, slope, height, and climatic exposure.

**epoxy** Any of several synthetic, usually thermosetting, resins that provide superior adhesive power and hard, tough, chemical- and corrosion-resistant coatings.

**epoxy joint** In masonry, an unsealed joint in which epoxy resin is used in place of mortar.

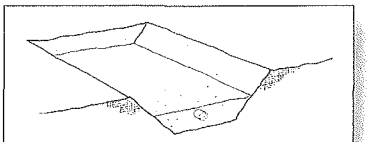
**epoxy resin** A material containing an average of more than one epoxy group per molecule used in the preparation of special coatings or adhesives for concrete and as binders in epoxy resin mortars and concrete.

**Equal Employment Opportunity Commission (EEOC)** A government agency under the administration of the Department of Labor dedicated to enforcing the provisions of Title IV of the Civil Rights Act of 1964, which forbids discrimination by an employer based on the race, color, religion, sex, or national origin of a potential employee.

**equal friction method** A way of sizing ductwork systems for a constant pressure loss per unit length of duct.

**equalizer** Any device that compensates for an undesired characteristic of a system or component.

**equalizing bed** A layer of sand, stone, or concrete laid in the bottom of a trench as a resting place for buried pipes.



equalizing bed

**equalizing grid** A series of individual adjustable blades installed at the diffuser inlet to produce uniform velocity through the diffuser neck.

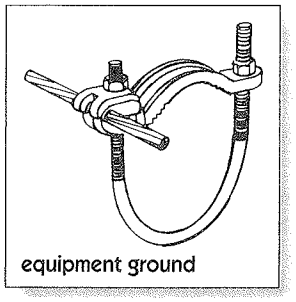
**Equal Marginal Performance Principle** A design tool used to assess systems composed of variable speed power-modulating components, such as fans, chillers, and pumps, optimizing the design to ensure optimal performance at all possible loading levels.

**equipment** All the machinery, tools, and apparatus necessary for the

proper construction and acceptable completion of a project.

**equipment distribution area (EDA)** A space housing equipment cabinets in a data center.

**equipment ground** **1.** A connection that provides a path to ground a conductor within the equipment. **2.** A ground connection to any metal part of a wiring system or equipment that does not carry current.


equipment ground

**equipment room** An area or room used to store contaminated clothing and equipment. Part of the worker decontamination enclosure system.

**equitable adjustment** An adjustment to the contract price or time resulting from a change, differing site condition, or the like, which compensates the contractor for reasonable costs, plus overhead and profit.

**equity** The residual value of a business or property, often calculated by subtracting the amount of outstanding liens or mortgages from the total value of the business or property.

**equivalent direct radiation (EDR)** A unit of heat delivery equal to 240 Btu per hour.

**equivalent embedment length** That longitudinal part of an embedded reinforcement that is capable of developing stress equivalent to that developed by a hook or mechanical anchorage.

**equivalent length** The resistance of a duct or pipe elbow, valve, damper, orifice, bend, fitting, or other obstruction to flow, expressed in the number of feet of straight duct or pipe of the same diameter that would have the same resistance.

**equivalent round** A term used to define the size of an oblong-shaped pipe. The equivalent round of the oblong pipe is equal to the diameter of a pipe with the same circumference.

**equivalent thickness** The solid thickness to which a hollow unit would be reduced if there were no voids and it had the same face dimensions.

**erecting bill** A list of structural building components prepared by the fabricator and indicating the tagging and location of each member.

**erection** The positioning and/or installation of structural components or preassembled structural members of a building, often with the assistance of powered equipment such as a hoist or crane.

**erection bracing** Temporary bracing used to hold framework in a safe condition during construction until enough permanent construction has been put in place to provide complete stability.

**erection drawing** A shop drawing that illustrates the constructional components of a project, with each one lettered or numbered to facilitate erection.

**erection stress** The stress effected by loads applied during erection.

**erection wrench** A wrench with an open end jaw on one side and a tapered point at the other. The pointed end is used to align bolt holes in adjoining members.

**ergonomics** The interaction between people and work, particularly the design of machinery and work stations, to suit the body and to permit work with minimum fatigue.

**erosion** The gradual deterioration of metal or other material by the abrasive action of liquids, gases, and/or solids.

**erratum** An error in printing, writing, or editing, especially one included in a list of corrections appended to a book or publication in which the error appeared.

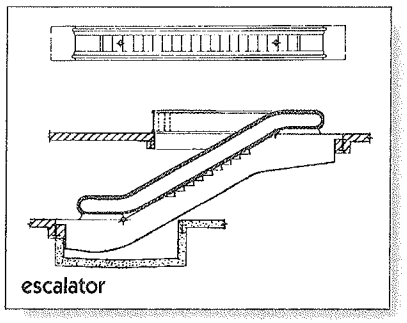
**error of closure** The measured difference between a theoretical angle or linear measurement and the actual value.

**errors and omissions** Deficiencies, usually in design or drafting, in the plans and specifications that must be corrected in order for the facility to operate properly. Errors in plans and specifications are normally items that are shown incorrectly, while omissions are normally items that are not shown at all.*

**errors and omissions insurance** Professional liability insurance protecting architects or engineers from claims for damages that may result from alleged professional negligence.

**escalation** An increase in the cost of performing construction work, resulting from performing the work in a later period of time and at a cost higher than originally anticipated in the bid.

**escalator** A continuously moving, power-driven, inclined stairway used to transport passengers between different floor levels of a building or into and out of underground stations.


escalator

**escape** The curved portion of a column shaft where it springs out from the base.

**escape lighting** *See* **emergency lighting.**

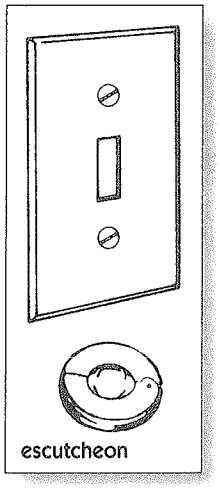
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# E

**escheat** The assumption of ownership by the state of property whose owner cannot be determined.

**escrow** Property (such as money, a deed, stock, or a writing) that is delivered by a person (called a *grantor*) to a third party to be held until certain conditions are fulfilled. When the conditions are satisfied, the third party releases the property to another person (called a *grantee*).

**escutcheon** **1.** The protective plate, usually metal or plastic, that surrounds a door keyhole or a light switch. **2.** A pipe flange covering a floor hole through which the pipe passes. *See also* **faceplate**.


escutcheon

**escutcheon pin** A small nail, usually brass and often ornamental, used to fix an escutcheon.

**esker** A long, narrow deposit of coarse gravel left by a stream.

**espagnolette** A casement window lock that uses a long sliding rod with hooks to secure the window. *See also* **cremone bolt**.

**espalier** **1.** A framework or trellis that directs branches of fruit trees or other decorative plantings to grow in a predesigned shape or to form on a single plane for improved air circulation and exposure to sun as well as for ornamental effect. **2.** The trees or plants grown in this manner.

**esplanade** A flat, unobstructed stretch of grass or pavement, usually for strolling but sometimes for driving and observing a view.

**esquisse** A rough sketch demonstrating the general features of a project.

**Essex board measure** A chart appearing on a certain type of carpenter's steel square, listing the number of board feet contained in a board one inch thick and of several standard sizes.

**estate** A legal right, title, or interest in real property. Estates in real property fall into two broad categories: ownership, and rights to possess and use real property owned by another.

**estimate** The anticipated cost of materials, labor, equipment, or any combination of these for a proposed construction project.

**estimated design load** The sum of (a) the useful heat transfer, (b) the heat transfer to or from the connected piping, and (c) the heat transfer that occurs in any auxiliary apparatus connected to a heating or air-conditioning system.

**estimated maximum load** The calculated maximum heat transfer that a heating or air-conditioning system might have to provide.

**estimating** The process of determining the anticipated cost of materials, labor, and equipment of a proposed project.

**estimator** One who is capable of predicting the probable cost of a building project.

**etching** The process of using abrasion or corrosion (acid) to wear away the surface of glass or metal, often in a decorative pattern.

**EtherCAT** Ethernet for Control Automation Technology

**Ethernet** Computer networking technology used for local area networks and wireless and metropolitan area networks. The Institute of Electrical and Electronics Engineers (IEEE) provides Ethernet standards.

**ethylene glycol** **1.** Antifreeze. **2.** A water-miscible alcohol used to transfer heat in heating and cooling provide stability in latex- and water-based paints during freezing conditions.

**etiologic agent** A substance that causes disease, such as the flu virus.

**ettringite** A naturally occurring mineral containing a large amount of sulfate calcium sulfoaluminate. Ettringite is also produced synthetically by sulfate attack on mortar and concrete.

**eurythmy** In architecture, orderliness or harmony of proportion.

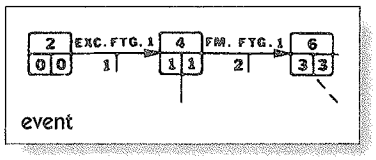
**evaporable water** Water held by the surface forces or in the capillaries of set cement paste, measured as the water that can be removed by drying under specific conditions.

**evaporation** Loss, from a liquid, of moisture in vapor form.

**evaporative cooling** Cooling achieved by the evaporation of water in air, thus increasing humidity and decreasing dry-bulb temperature.

**evaporator** The part of a refrigeration system in which vaporization of the refrigerant occurs, absorbing heat from the surrounding fluid and producing cooling.

**event** In a CPM (critical path method) arrow diagram, the starting point for an activity that cannot occur until all work preceding it has been performed.



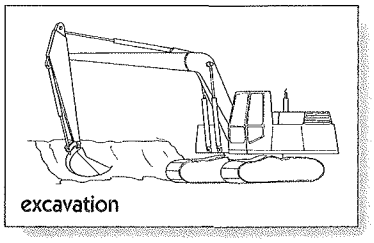
event

**event management** A system that tracks, identifies, sends an alert, and corrects problems in a building or network.

**eviction** The lawful or unlawful removal of a tenant from a property.

**e-waste** Electronic equipment that contains lead, mercury, or other hazardous material, and is subject to federal and state disposal requirements.

**excavation** **1.** The removal of earth, usually to allow the construction of a foundation or basement. **2.** The hole resulting from such removal.



excavation

**excavator** **1.** A company or individual who contracts to perform excavation. **2.** Any of several types of power-driven machines used in excavation.

**excelsior** Thin, curved wood shavings used for packing and stuffing.

**exception report** A report sent to the EPA by a generator of hazardous waste. It is released when the generator does not receive copies of hazardous waste manifest forms from transporters or disposers of wastes that the generator has shipped off-site for disposal.

**exceptions** Those occurrences that cause deviation from a plan, such as issues, change requests, and risks. Exceptions can also refer to items that the cost variance and schedule variance exceed predefined thresholds.*

**excess reprocurement costs** Additional costs that the government incurs following a default termination to reprocure the defaulted quantity of supplies, services, or unfinished work.

**exchange** The centrally located arrangement of communications equipment governing the connection of incoming and outgoing lines, including signaling and supervisory tasks.

**exchange, private branch (PBX)** A telephone exchange system that provides manually operated private telephone service within an organization (a company, for example) as well as access to the public telephone network.

**exclusionary provision** A provision stated in an insurance policy covering potential loss where specific types or origins of loss are specifically excluded (by description) from the coverage provided.

**exclusionary zoning** The practice of requiring large lots in subdivisions, as well as extensive design requirements that raise housing prices above the financial means of certain income groups. This term is also referred to as "snob zoning," because its effect is to exclude lower income homeowners.

**exculpatory language** Specific language or clause within an agreement that excuses one party from certain actions or behavior relative to that agreement.

**excusable delay** A delay to contract performance that is beyond the control, fault, or negligence of the contractor. If a delay is determined to be excusable, the government cannot initiate a termination for default.

**executed** **1.** Under contract law, a contract that has been signed by both parties. **2.** Work that has been completed.

**Execution, Part 3** The third of three parts of a technical specification under CSI MasterFormat, which addresses the issues of the incorporation of the products addressed in Part 2 of the technical specification. It defines installation standards, tolerances, preparations, etc.

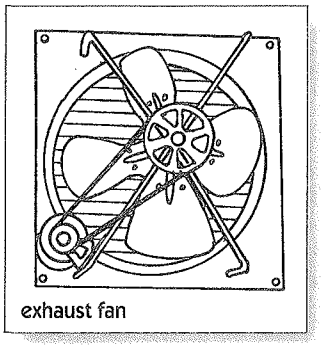
**exempt employees** Employees exempt from overtime compensation by federal wage and hours guidelines.*

**exfiltration** The flow of air outward through walls, joints, or other apertures.

**exfoliated vermiculite** Vermiculite whose original volume has been expanded several times by heat processing so as to render it suitable for lightweight aggregation, such as thermal insulation.

**exfoliation** **1.** The flaking, scaling, or peeling of stone or other mineral surfaces usually caused by physical weathering, but sometimes by heating or chemical weathering. **2.** The heat treatment of minerals for the purpose of expanding their original volume many times over.

**exhaust fan** A device used to draw unwanted, contaminated air away from a particular room or area of a building to the outside.



exhaust fan

**exhaust fume hood** A prefabricated hood unit that serves to confine noxious or toxic fumes for subsequent exhausting or filtration.

**exhaust grille** A grate or louvers through which contaminated air exits to the atmosphere.

**exhaust shaft** A duct through which exhaust air is carried to the outside atmosphere.

**exhaust ventilation** A method of ventilation that allows fresh air to enter a space through available or controlled openings and employs mechanical means such as fans to remove foul air from the same space.

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# E

**existing building** In codes and regulations, an already completed building or one that prior laws or regulations allowed to be built.

**existing conditions survey** Inspection and documentation of a building's composition, configurations, and as-built conditions. Includes visual inspection, laboratory analysis, and often more invasive, destructive investigational procedures.

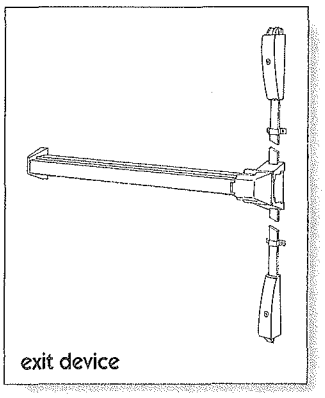
**exit** That part of an exit system that, because of its separation from the rest of the building by devices such as walls, doors, and floors, provides a reasonably safe and protected emergency escape route from a building.

**exit access** The corridor or door leading to an exterior exit.

**exit control alarm** An electronic device that activates an alarm when a fire exit door is opened.

**exit corridor** An enclosed passageway or corridor that connects a required exit with direct or easy access to a street or alley.

**exit device (panic exit device)** An exit door locking device, consisting of a bar across the inside of a door that, when pushed, releases the door latch.



exit device

**exit discharge** That part of an exit system beginning at the termination of the exit at the exterior of a building and ending at ground level.

**exit light** An illuminating sign above an exit that identifies it as an exit.

**exothermic** Descriptive of a reaction during which heat is released.

**expanded aluminum grating** An aluminum grating manufactured by cutting and mechanically stretching a single piece of sheet aluminum.

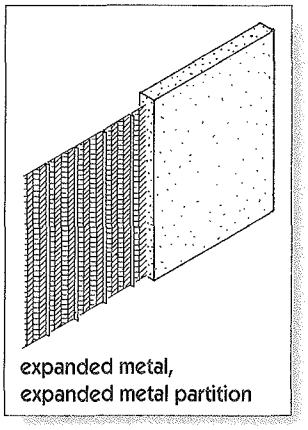
**expanded blast-furnace slag** A cellular material, used as lightweight aggregate, derived from treating molten blast-furnace slag with water, steam, and/or other agents.

**expanded cement** *See* **expansive cement.**

**expanded clay** Clay expanded to several times its original volume by the formation of internal gas caused by heating it to a semiplastic state.

**expanded glass (foam glass)** A thermal insulation with a closed-cell structure, manufactured by foaming softened glass so as to produce a myriad of sealed bubbles, and then molding the glass into boards and blocks.

**expanded metal** A type of open-mesh metal lath made by slitting and stretching sheet metal. Comes in different patterns and thicknesses.



expanded metal, expanded metal partition

**expanded metal partition** A partition constructed from thin framing or support members covered with heavy expanded metal lath and plastered on both sides to produce a solid finished product 1-1/2" to 2-1/2" thick.

**expanded perlite** A glassy, lightweight, naturally occurring, cellular volcanic material whose properties make it suitable for aggregate in concrete.

**expanded plastic (cellular plastic)** **1.** A plastic containing a myriad of cells incorporated uniformly throughout its mass. **2.** A plastic that has been expanded chemically, mechanically, or thermally to form a lightweight, closed-cell structure. This material is commonly used for thermal insulation.

**expanded polystyrene (EPS)** A type of foamed styrene plastic that has a high resistance to heat flow and a high strength-to-weight ratio. EPS is used as insulation, as an inexpensive glazing, and in formwork for concrete, among many other applications.

**expanded rubber** Closed-cell rubber manufactured from a solid rubber compound.

**expanded shale** A material manufactured by heat treating shale that dramatically expands its volume. Suitable for use as a lightweight aggregate.

**expanded slag** A lightweight aggregate, manufactured by processing blast-furnace slag with water, which is used in concrete mix.

**expanded slate** Slate whose subjection to exfoliation results in a porous material suitable for use as a lightweight aggregate.

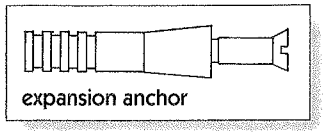
**expanding bit (expansion bit)** A drilling bit whose blade can be adjusted to bore holes of different diameters.

**expanding cement** *See* **expansive cement.**

**expanding plug** A drain stopper usually located at the lowest point of a piping system. When inflated, the plug seals the pipe.

**expansion** The increase in dimensions or volume of a body or material caused by thermal variations, moisture, or other environmental conditions. *See also* **expansion bend.**

**expansion anchor** *See* **expansion bolt.**




**expansion attic** In a completed house, an attic left unfinished to allow for future conversion into liveable space.

**expansion bead** In plastering, a metal strip placed between materials to allow for movement.

**expansion bearing** An end support of a span that allows for the expansion or contraction of a structure.

**expansion bend (expansion loop)** In a pipe run, a usually horseshoe-shaped bend inserted to allow thermal expansion of the pipe.

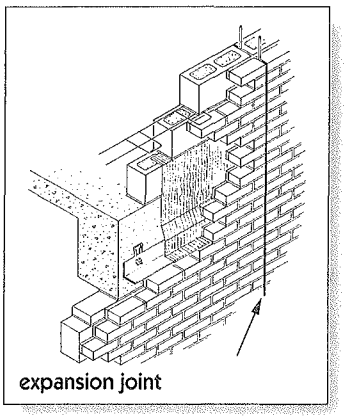
**expansion bit** *See* **expanding bit.**

**expansion bolt (expansion anchor, expansion fastener, expansion shield)** An anchoring or fastening device used in masonry that expands within a predrilled hole as a bolt is tightened.

**expansion coil** An evaporator fabricated from tubing or pipe.

**expansion fastener** *See* **expansion bolt.**

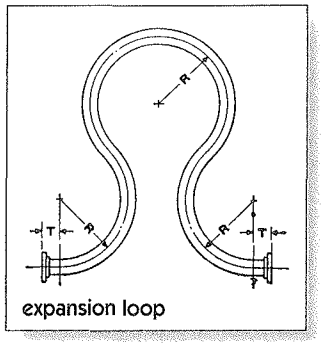
**expansion joint** In a building structure or concrete work, a joint or gap between adjacent parts that allows for safe and inconsequential relative movement of the parts, caused by thermal variations or other conditions.




**expansion joint cover** The prefabricated protective cover of an expansion joint, which also remains unaffected by the relative movement of the two joined surfaces.

**expansion joint filler** Material used to fill an expansion joint to keep it clean and dry. Materials commonly used are felt, rubber, and neoprene.

**expansion loop (expansion bend)** A large radius loop in a pipe line that absorbs the longitudinal expansion and contraction in the line due to temperature changes.



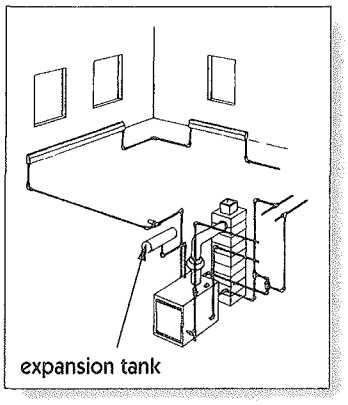

**expansion pipe** A pipe that directs hot water or steam from the relief valve of a water heater to a drain.

**expansion shield** *See* **expansion bolt.**

**expansion sleeve** A short length of metal or plastic pipe built into a wall or floor to allow for the inconsequential expansion and/or contraction of the element (usually another, smaller pipe) that passes through it.

**expansion strip** **1.** The material used in an expansion joint. **2.** Resilient insulating material used as a joint filler between a partition and a structural member.

**expansion tank** **1.** In a hot-water system, the tank that provides for the increased volume of the water heated in the heating tank below it. **2.** A device to control pressure in a fluid system by storing excess liquid.




**expansion valve** The valve that controls the flow of refrigerant to the cooling element in a refrigeration system.

**expansive cement (expanded cement, expanding cement, sulfoaluminate cement)** A type of cement whose set paste increases in volume substantially more than the set paste of Portland cement. Used in applications where the desired results include the compensation for volume decrease due to shrinkage, or the induction of tensile stress in reinforcement.

**expansive-cement concrete** A concrete made from expansive cement for the purpose of reducing or controlling volume changes that occur during curing.

**expansive soil** Soil that expands when water is added and shrinks when it dries out. This change in soil volume can cause shifting and cracking in structures.

**expediter** One who monitors and facilitates the arrival of building materials or equipment to meet a progress schedule.

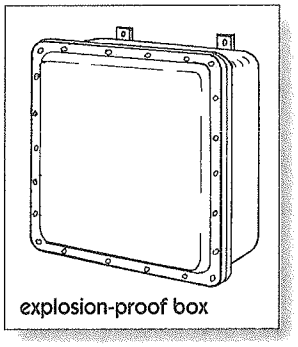
# E

**expert witness** In a court case or other legal or arbitration proceeding, an individual who, because of his/her exceptional knowledge, experience, or skill in a particular field or subject, is accepted by the court (or by those presiding over other legal or arbitration proceedings) as being qualified to render an authoritative opinion in matters relating to his or her field of expertise.

**expletive** In masonry, the stone used to fill a cavity.

**exploded view** An illustration depicting the disassembled individual components in proper relationship to their assembled positions therein.

**explosion-proof box** Electrical equipment housing designed in compliance with hazardous location requirements to withstand an explosion that could occur within it and to prevent ignition by the explosion of flammable material, liquid, or gas that might externally surround it.


explosion-proof box

**explosion-proof fixture** Electric lighting fixture that will not explode or ignite when in contact with a flammable gas or liquid.

**explosion-proof lighting** An electrical light system that will not explode or ignite flammable liquids or gases that surround it.

**explosion welding** The use of a controlled explosion to weld members together.

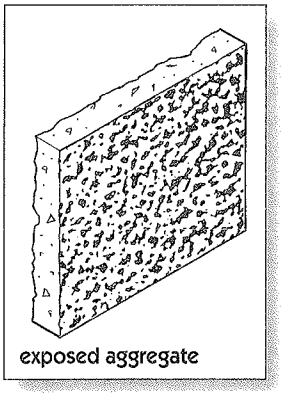
**explosive** Any device or chemical compound whose primary function is to produce an explosion.

**explosive-actuated gun (stud gun)** A stud driver in which the discharge of a blank cartridge provides the impact.

**explosive rivet** A rivet whose explosive-filled shank is exploded by striking it with a hammer after the rivet has been inserted.

**exposed** Refers to an unprotected or uninsulated "live" component of an electrical system whose location makes it susceptible to being inadvertently touched or approached by someone at an unsafe distance.

**exposed aggregate** The coarse aggregate in concrete work revealed when the surface layer of concrete paste is removed, usually before the full hardening of the concrete.


exposed aggregate

**exposed area** In roofing, the part of a shingle that is not covered by another shingle.

**exposed joint** In masonry, any masonry joint on the face of a wall that is above ground level.

**exposed masonry** Any masonry construction whose only surface finish is a coat of paint applied to the face of the wall.

**exposed nailing** A method of nailing that leaves the nails exposed to the weather.

**exposed suspension system** A method of installing a suspended acoustical ceiling in which the panel-supporting grid is left exposed in a room.

**exposure hazard** The probability of a building's exposure to fire from an adjoining or nearby property.

**exposure level** The level or concentration at which a person has been exposed to a hazardous material.

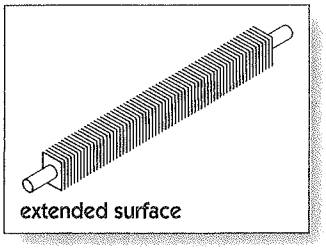
**exposure limits** *See* **permissable exposure limits.**

**extended coverage insurance** A form of property insurance protecting against loss or damage caused by wind, hail, aircraft, riot, land vehicles, explosion (except steam boiler explosion), or civil commotion.

**extended overhead** Overhead costs accumulated during compensable delay periods when full production was not achievable.

**extended-service lamp (long-life lamp)** A lamp designed to have a life substantially larger than others in its general class. Such an incandescent lamp provides an output of fewer lumens than a standard lamp of comparable voltage.

**extended surface** A fitting, usually composed of metal fins or ribs, that provides additional surface area on a pipe or tube through which heat is transferred.


extended surface

**extended use** An increase in the function of a building, achieved by interventions such as rehabilitation or adaptive use.

**extender** **1.** An opaque, white, inert mineral pigment, such as calcium carbonate, silica, diatomaceous earth, talc, or clay, that is added to paint to provide texture, lower gloss, or reduce paint cost by providing bulk. **2.** A volume-increasing, cost-reducing additive in synthetic resin adhesives.

**extensibility** The capability of a sealant to be stretched in tension.

**extension** **1.** A wing, ell, or other addition to an existing building. **2.** The product of a quantity multiplied by a unit price. **3.** The completion of a mathematical equation. **4.** An agreement between parties extending to term of a contract.

**extension bit** A drill attachment used with a standard bit to increase the drill's reach.

**extension blind stop** A molded window frame component used to attach the window frame to the wood framing.

**extension bolt** *See* **extension flush bolt.**

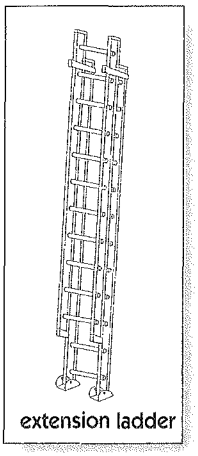
**extension casement hinge** An exterior hinge on a casement window whose sash swings outward. The hinge is located so as to provide enough clearance to allow the cleaning of the hinged side from the inside when the window is open.

**extension device** Any device, other than an adjustment screw, used for accomplishing vertical adjustment.

**extension flush bolt (extension bolt)** A type of flush bolt whose head connects to the operating mechanism via a rod, which is inserted through a hole bored in the door.

**extension jamb** *See* **jamb lining.**

**extension ladder** A ladder comprising more than one section, each of which slides within and locks on the other, thus allowing lengthening.



extension ladder

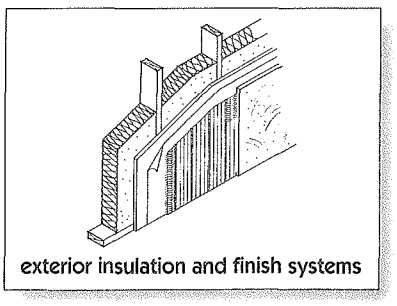
**extension line** A light line that extends from the edge or end of a main object line on a drawing, used in conjunction with dimension lines to help determine the dimension of a particular feature.

**extension link** A device that provides a long backset in the bored lock of a door.

**extension rule** A rule containing an extendable, calibrated, sliding insert.

**exterior-glazed** Descriptive of glazing that has been set from the outside of a building.

**exterior insulation and finish systems (EIFS)** Exterior cladding assembly consisting of a polymer finish over a reinforcement adhered to foam plastic insulation that is fastened to masonry, concrete, building sheathing or directly to the structural framing. The sheathing may be cement board, gypsum sheathing or another acceptable substrate.



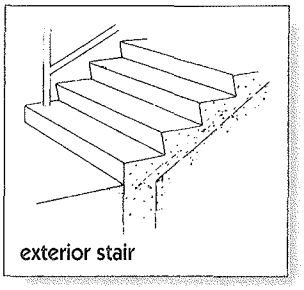
exterior insulation and finish systems

**exterior paint** Paint formulated with durable binder and pigment, making it suitable for exposure to weather.

**exterior panel** In a concrete slab, a panel with at least one of its edges not adjacent to another panel.

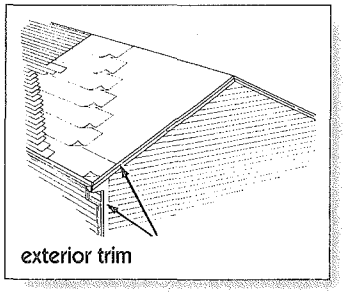
**exterior plywood** Plywood whose layers of veneer are bonded with a waterproof glue.

**exterior stair** An often legally required exit consisting of a series of flights of steps affixed to the structure but not enclosed.



exterior stair

**exterior trim** Any visible or exposed finish material on the outside of a building.



exterior trim

**exterior wall** An outer wall or vertical enclosure of a structure.

**external vibration** Brisk agitation of freshly mixed concrete by a vibrating device strategically positioned on concrete forms.

**extra** A work item performed in addition to the scope specified in the contract. Often involves an additional cost.

# E

**extraction** The process of mechanically removing layers of old paint or other material and retaining a portion of the substrate for laboratory analysis.

**extraction procedure toxicity** The propensity of a substance to emit toxins under a specific test procedure, defined by the EPA, that uses an acid to extract the toxins from the substance in question.

**extrados** The outer or upper surface of an arch.

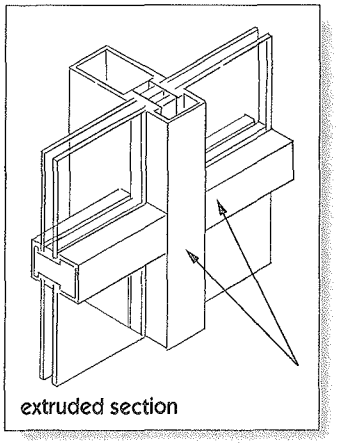
**extranet** A shared communications network that uses Internet technology to allow collaborating parties to share information. Especially useful with large, fast-track projects that require extensive documents.

**extra-strong pipe** The common designation for steel or wrought iron pipe having wall thickness greater than that of standard-weight pipe.

**extra work** Any work, desired or performed, but not included in the original contract.

**extruded** Descriptive of any item manufactured by forcing its hot constituent material through an orifice in a die.

**extruded section** Structural sections formed by extrusion and used in light construction.



extruded section

**extruded tile** A tile formed by pushing clay through a die and cutting it into specified lengths.

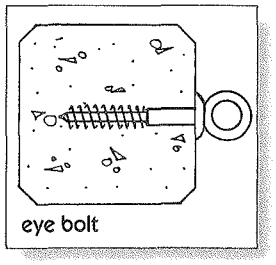
**extrusion coating** A thin film of extruded molten resin, which is pressed onto a substrate to produce a coating with an adhesive.

**exudation** A substance that passes gradually through a pore or crack in a material, as in liquid oozing from a concrete surface.

**eye** **1.** In architecture, the opening in the uppermost portion of a cupola. **2.** The nearly circular center of the roll or volute of an Ionic capital. **3.** The middle roundel of a pattern or ornament. **4.** A hole through a member to provide access, such as for the passage of a pin. **5.** In tools, the receiving orifice in the head of the implement.

**eye bar** A bar that functions as a tension member in a steel truss, as either or both of its ends contain an eye that provides for the passage of a pin, thus forming a joint.

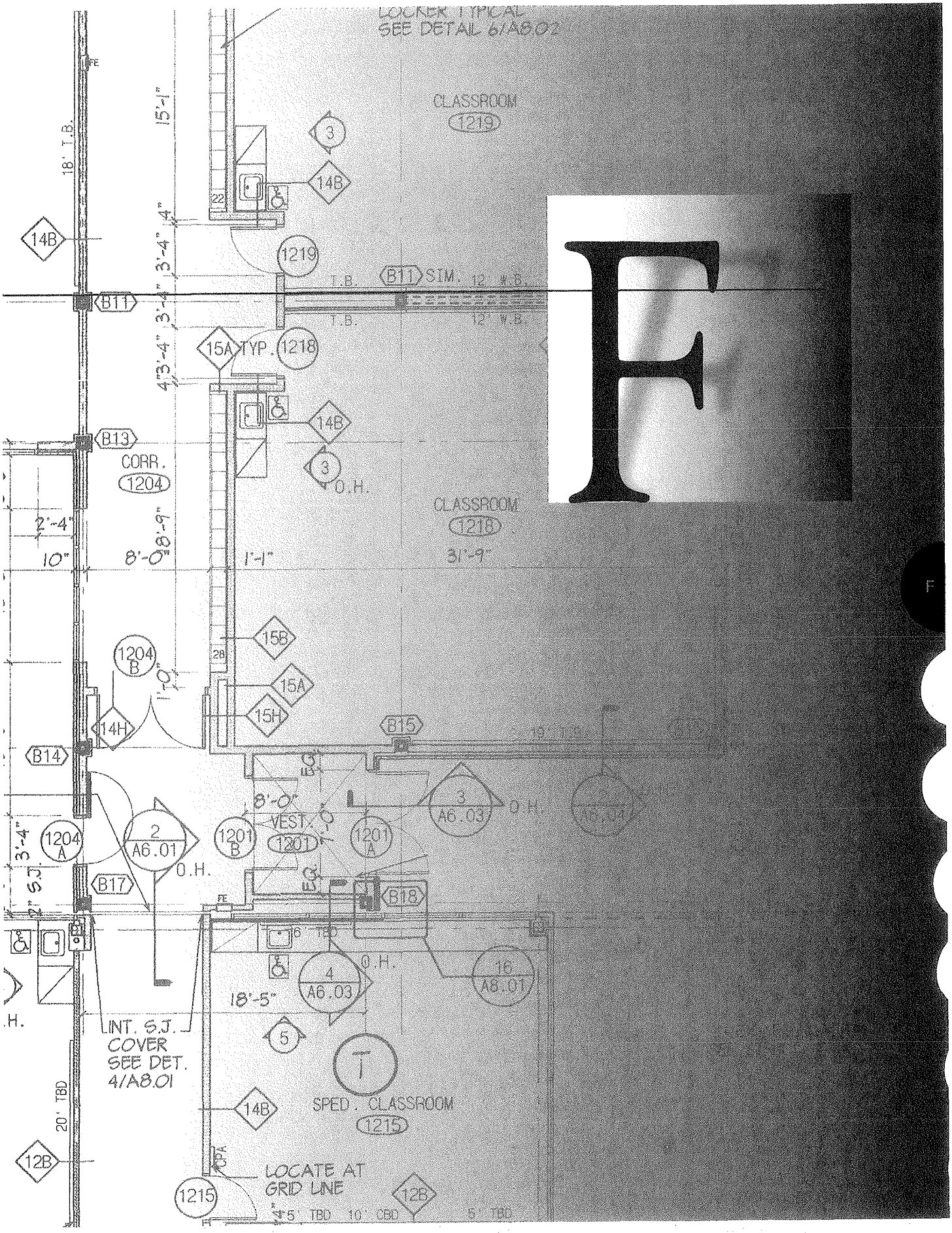
**eye bolt** An anchoring device comprising a threaded shank with a lopped head, designed to accept a hook, cable, or rope.



eye bolt

**eyebrow** A window or ventilation opening though the surface of a roof. Unlike a dormer, it forms no sharp angles with the roof, but rather is incorporated into the general horizontal line of the continuous roof, which is carried over it in a wave line. *See also* **ventilating eyebrow**.

**eye of a dome** The opening at the very top of a dome.


LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
3
14B
1219
B11
SIM.
T.B.
12" W.B.
15A TYP.
1218
B13
CORR.
1204
O.H.
CLASSROOM
1218
15B
15A
15H
14H
B14
B15
1204 B
1204 A
2 A6.01
1201 B
1201
1201 A
3 A6.03
O.H.
B17
B18
FE
TBD
4 A6.03
16 A6.01
18'-5"
INT. S.J. COVER SEE DET. 4/A8.01
5
SPED. CLASSROOM
1215
12B
LOCATE AT GRID LINE
1215
5' TBD
10' CBD
5' TBD
18' T.B.
15'-1"
3'-4"
4'-3"
8'-0"
8'-9"
2'-4"
10"
1'-1"
31'-9"
1'-0"
8'-0"
VEST.
20' TBD
S.J.

F

# F Abbreviations

*The abbreviations listed below are commonly used in the construction industry.*

**f** fine, focal length, force, frequency, fiber stress

**F** Fahrenheit, female, fill, fluorine

**FA** fresh air, fire alarm

**fab** fabricate, fabricated

**fac** facsimile

**FAI** fresh air intake

**FAIA** Fellow of the American Institute of Architects

**FAO** finish all over

**FAR** floor-area ratio

**FAS** free alongside ship, firsts and seconds

**FBGS** fiberglass

**FBM** foot board measure

**fc, FC** footcandle, compressive stress in concrete, extreme compressive stress

**fcc** face-centered cubic

**FCC** Federal Communications Commission

**FDB** forced draft blower

**FDC** fire department connection

**fdn, fdtn, fds, FDN** foundation, foundations

**fdry** foundry

**Fe** ferrum (iron)

**FE** fire escape, front end

**FEA** Federal Energy Administration

**FEMA** Federal Emergency Management Agency

**FEP** Fluorinated Ethylene Propylene (Teflon)

**FFA** full freight allowance

**FG** fine grain, flat grain, finished grain

**FHA** Federal Housing Administration

**FHC** fire hose cabinet

**FHWA** Federal Highway Administration

**FID** flame ionization detector

**Fig** figure

**fill** filling

**Fin** finish

**Fixt** fixture

**fl** floor, fluid

**Fl** floorline, floor, flashing

**flash** flashing

**FLG** flooring

**fl oz** fluid ounce

**Flr** floor

**FLUOR** fluorescent

**fm** fathom

**FM** frequency modulation, Factory Mutual

**Fmg** framing

**FML** flexible membrane liner

**FMT** flush metal threshold

**FMV** fair market value

**fndtn** foundation

**FOB** free on board

**FOC** free of charge

**FOHC** free of heart centers

**FOK** free of knots

**fount** fountain

**fp** fireplace, freezing point

**fpfg** fireproofing

**fpm** feet per minute

**FPRF** fireproof

**fps** feet per second

**fr** frame

**FR, Fr** fire rating

**frmg** framing, forming

**FRP** fiber reinforced plastic

**frt** freight

**frwy** freeway

**FS** federal specifications

**FSES** fire safety evaluation system

**FST** flat seam tin

**ft** foot, feet

**ftc** footcandle

**ftg** footing

**fth** fathom

**ft lb** foot pound

**ft sm** feet surface measure

**Furn** furnish, furnished

**fus** fusible

**fv** face velocity

**FW** flash welding

**fwd** forward, four wheel drive

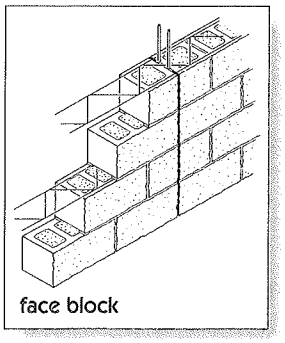
**fabricate** **1.** To build, to construct, to manufacture. **2.** To make by fitting together standardized parts. **3.** To assemble in the shop, as to assemble a reinforced steel part.

**façade** The exterior face of a building, sometimes decorated with elaborate detail.

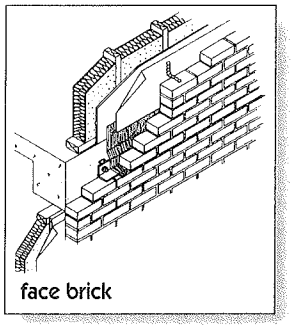
**façadism** The preservation of a structure's façade when other elements of the structure are demolished or altered.

**face** **1.** The surface of a wall, masonry unit, or sheet of material that is exposed to view or designed to be exposed in finish work. **2.** To cover the surface layer of one material with another, as to *face* a wall with brick or fieldstone. **3.** The surface area to be excavated during a construction project. **4.** The side of a hammer head used to strike.

**face block (faced block)** A unit of concrete masonry with a plastic or ceramic face surface, often glazed or polished for special architectural uses.


face block

**face brick (facing brick)** **1.** Brick manufactured to present an attractive appearance. **2.** Any brick that is exposed, such as on a fireplace.


face brick

**face bushing** A pipe fitting with both internal and external threads.

**face cord** A measurement of firewood. A face cord is 4' high x 8' long, but only as deep as the length of the pieces. A face cord may be 4' x 8', but only 16" deep, and thus contain only one-third of the wood volume of a standard cord.

**faced insulation** Any batt insulation with a moisture barrier on one or both sides. The barrier may be paper, plastic, or foil.

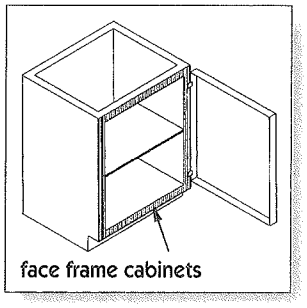
**faced plywood** Plywood that is faced with plastic, metal, or any material other than wood.

**faced wall** A wall with facing and backing bonded so that both act together under load.

**face edge** **1.** The best of the two narrow faces on a rectangular piece of lumber. **2.** The edge from which other edges are measured or *trued*.

**face feed** The application of a filler metal in a brazed or soldered joint.

**face frame cabinets** Cabinets with a hardwood frame on the face of the cabinet that masks the raw edges of the sides, adds rigidity to the cabinet and provides a strong base for attaching hinges.


face frame cabinets

**face glazing** The compound applied with a glazing knife after a light has been bedded, set, and fastened in a rabbeted sash.

**face grain** The grain on the face of a plywood panel. The face grain should always be placed at right angles to the supports when applying it to a roof or subfloor.

**face joint** A visible joint on the surface of a masonry wall.

**face line** The reference line that a mason first sets and then follows when building walls.

**face mark** A mark made on the face of a piece of lumber, usually in pencil or crayon, near the edge or end of the piece that identifies the work face of a planed timber.

**face measure** The measurement of the area of a board or panel. Face measure is not the same as board measure, except when the piece being measured is 1" thick.

**face milling** Cutting done on the wide, exposed surface of a piece of lumber in order to produce a design.

**face mix** A concrete mix bonded to the exposed surface of a cast stone building unit.

**face mold** **1.** A template used in ornamental woodworking to mark the boards from which pieces will be cut. **2.** A device used to examine the shape of wood and stone faces and surfaces.

# F

**face nailing** Nailing perpendicular to the face of wood and through the face of the material.

**face oiling** A light coating of oil on the face of concrete panels to aid in removing the forms after the concrete sets.

**faceplate** Any protective and/or decorative plate such as an *escutcheon.*

**face putty (front putty)** Putty used on the exposed surface of window glass.

**face side** The better wide side of a rectangular piece of lumber.

**face stock** *See* **face veneer.**

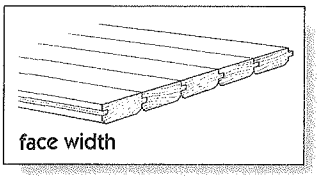
**face string (finish string)** An exterior string, usually of better material or finish, placed over the rough string in the construction of a staircase.

**face velocity** The speed at which air passes through a forced-air system register.

**face veneer** Those veneers of higher grade and quality that are used for the faces of plywood panels, especially in the sanded grades. Face veneer is selected for decorative qualities rather than for strength.

**face wall** The front wall of a structure.

**face width** The width of the face of a piece of dressed lumber. In tongued or lapped lumber, the face width does not include the width of the tongue or lap.


face width

**facia** *See* **fascia.**

**facilities planning** The process of identifying the needs of facility users in order to create a project design that meets those needs.

**facility** In project work, this term usually refers to the constructed environment, e.g., buildings, structures, infrastructure, plant, and equipment.*

**facility audit** **1.** An assessment of the physical condition and functional performance of an organization's facilities. **2.** A review of activities at a facility or location, the purpose of which is to identify the improper storage, handling, or disposal of hazardous materials or waste.

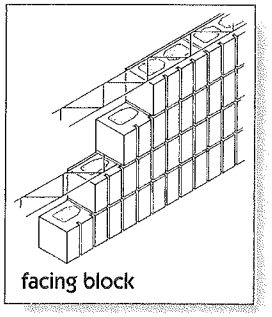
**facility engineer** An engineer who provides technical expertise to ensure the optimal operation of a facility's plants, grounds and offices. Responsibilities include maintaining and improving the efficiency of existing equipment and systems while overseeing the installation of new equipment and systems.

**facility management system (FMS)** An electronic control system that helps facility managers maximize a facility's performance.

**facility manager** A professional who coordinates the planning, design, and management of a facility, including its systems, equipment, and furniture. A facility manager helps an organization meet its long-term strategic and operational objectives while daily maintaining a safe, efficient working environment.

**facing (facework)** Any material used to cover a rough or inferior surface, in order to provide a finished and more attractive appearance.

**facing block** A concrete masonry unit having a decorative exterior finish.


facing block

**facing brick** *See* **face brick.**

**factored load** *See* **design ultimate load.**

**factor of safety** **1.** Stress factor of safety: the ratio of the ultimate strength, or yield point, of a material to the design working stress. **2.** Load factor of safety: the ratio of ultimate load, moment, or shear of a structural member to the working load, moment, or shear, respectively, assumed in design.

**factory-built** A reference to a construction, usually a dwelling, that is built, or at least partially preassembled, in a factory rather than *on site.* Most factory-built units are constructed in two or more modules, often complete with plumbing, wiring, etc. The modules are delivered to a building site and assembled there. Finish work is then performed. Factory-built houses are generally less expensive to build and quicker to erect because of savings gained through mass production and factory efficiencies.

**factory edge** The original, uncut edge of a roofing shingle.

**factory-filled particleboard** Particleboard that has had its edges filled with plastic during manufacture.

**factory finished** A product that has been coated or stained as part of the manufacturing process.

**factory lumber** A broad category of lumber that includes stock of various grades and species intended for remanufacturing into items such as furniture, doors, windows, moldings, and boxes.

**factory primed** A product to which an initial undercoat of paint has been applied.

**factory select** A grade of shop lumber containing 70% or more of No. 1 door stock, but having other defects, such as pitch or bark pockets, beyond the restrictions allowed in the No. 1 grade of lumber.

**Fahrenheit (F)** Temperature scale on which the freezing and boiling points of water are 32° and 212°, respectively.

**failing wedge** A V-shaped piece of steel, aluminum, or plastic that is driven

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into the back cut when felling a tree. The purpose is to keep the saw from binding, and to help control the direction of the fall.

**fail soft** A state of compromised operation, as opposed to complete disability, following equipment failure.

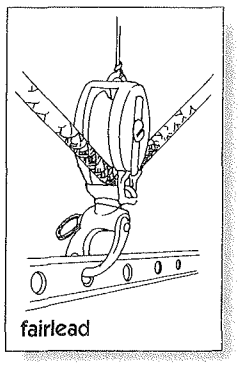
**failure** A deficiency of a structural element that makes it unable to continue the load-bearing function for which it was originally designed.

**failure to perform** When an owner or contractor, or both, does not perform each and all of his respective obligations in the construction contract.

**fair face concrete** A concrete surface that, on completion of the forming process, requires no further (concrete) treatment other than curing. *See also* **architectural concrete**.

**Fair Labor Standards Act (FLSA)** An act of the Congress of the United States enacted in 1936, and the subject of numerous amendments to the present day. Commonly referred to as the Minimum Wage Law, it establishes a minimum wage for all workers with the exception of agricultural workers, and additionally provides a maximum of a 40-hour work week for straight time pay for employees earning hourly wages.

**fairlead** A device such as a ring or a block of wood with a hole in it, through which cable or rope is led for alignment.


fairlead

**fair market value** A price that is fair and reasonable in light of current conditions in the marketplace.

**fall** The slope in a channel, conduit, or pipe, stated either as a percentage or in inches per feet.

**falldown** Those lumber or plywood items of a lesser grade or quality that are produced as an adjunct to the processing of a higher quality stock.

**fallout shelter** A room or structure intended for shelter from the effects of radiation caused by nuclear explosions.

**false attic** An architectural addition, built above the main cornice of a structure, that conceals the roof rafters but has no rooms or windows.

**false ceiling** A ceiling suspended a foot or more below the actual ceiling to provide space for and easy access to wiring and ducts, or to alter the dimensions of a room. *See also* **suspended ceiling**.

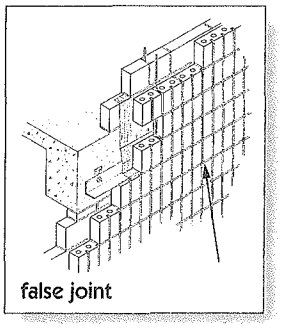
**false door** A non-operable door placed in a wall for architectural appearance.

**false front** A front wall that extends beyond the sidewalls and/or above the roof of a building to create a more imposing façade.

**false header** In masonry, a header that does not connect two walls together; for example, when using half brick.

**false heartwood** Dark innerwood that has been colored by disease or fungi so that it resembles heartwood in color.

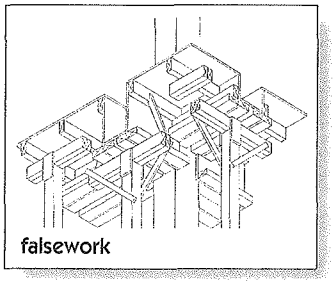
**false joint** A groove in a solid masonry block or stone that simulates the appearance of a joint.


false joint

**false rafter** A short extension added to a main rafter over a cornice.

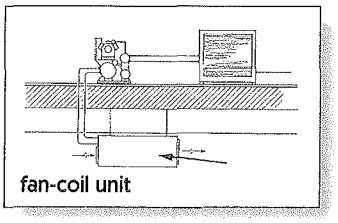
**false set** The rapid development of rigidity in a freshly mixed Portland cement paste, mortar, or concrete without the evolution of much heat. Rigidity can be dispelled and plasticity regained by further mixing without addition of water. *Premature stiffening, hesitation set, early stiffening,* and *rubber set* are terms referring to the same phenomenon, but *false set* is the preferred designation.

**falsework** The temporary structure erected to support work in the process of construction. Falsework consists of shoring or vertical posting formwork or beams and slabs, and lateral bracing. *See also* **centering**.


falsework

**fan brake horsepower (Bhp)** The horsepower output of a fan as measured at the pulley or belt. Bhp includes losses due to turbulence and other inefficiencies.

**fan-coil unit** An air-conditioning unit that houses an air filter, heating or cooling coil, and a centrifugal fan, and operates by moving air through an opening in the unit and across the coils.

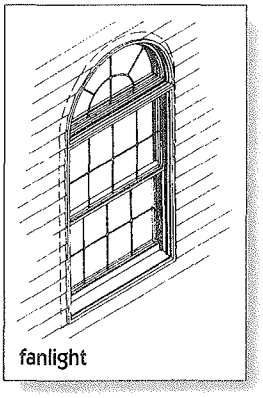

fan-coil unit

# F

**fancy butt** A shingle with the butt end machined in a pattern. Fancy butt shingles are usually used on sidewalls to form geometric designs in the shingle pattern.

**fan Fink truss** A form of Fink truss with subdiagonals that extend outward from a central point.

**fanlight** A semi-circular or semi-elliptical window built above the opening of a door or window. A fanlight often has triangular panes of glass, in between radiating bars or leads, and resembles the form of an open fan.


fanlight

**fanlight catch** The spring catch on a fanlight window or other hinged windows. The catch often has a cord attached for opening.

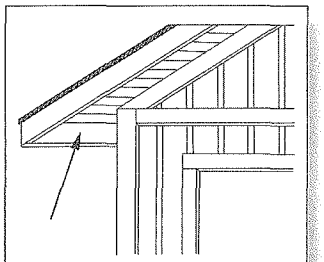
**fan pressure curve** The curve that represents the pressure developed by a fan operating at a fixed rpm at various air volumes.

**fan suction box** A specially designed 90° fitting installed at the fan inlet that reduces the inlet pressure loss created by system effect.

**fan surge** Turbulent flow caused when insufficient air enters the fan wheel to completely fill the space between the blades. Some of the air reverses its direction over a portion of the fan blade.

**fan truss** A truss with struts that radiate like the ribs of a fan, supported at their base by a common suspension member.

**fascia (facia)** **1.** A board used on the outside vertical face of a cornice. **2.** The board connecting the top of the siding with the bottom of a soffit. **3.** A board nailed across the ends of the rafters at the eaves. **4.** The edge beam of a bridge. **5.** A flat member or band at the surface of a building.


fascia

**fascia board** *See* **eaves fascia.**

**fascine** An assembly of live cuttings lashed together and allowed to set roots on banks to prevent surface erosion.

**fastener** Any mechanical device used to hold together two or more pieces, parts, members, etc.

**fast-pin hinge** A hinge with a pin fixed permanently in place.

**fast-to-light** A material that will not fade when exposed to direct sunlight.

**fast track construction** A building method in which construction is begun on a portion of the work for which the design is complete, while design on other portions of the work is underway.

**fat** **1.** Material accumulating on a trowel during smoothing. Fat is used to fill in small imperfections. **2.** Descriptive of a mortar containing a relatively high proportion of cement.

**fat area** *See* **fat spot.**

**fat board** A bricklayer's mortarboard.

**fat concrete** Concrete with a relatively large proportion of cement.

**fat edge** A ridge of paint at the bottom edge of a surface when too much paint has been applied or because the paint runs too freely.

**fatigue** The weakening of a material caused by repeated or alternating loads. Fatigue may result in cracks or complete failure.

**fatigue failure** The phenomenon of rupture that occurs when a material is subjected to repeated loadings at a stress substantially less than the ultimate tensile strength.

**fatigue life** **1.** The number of cycles of a specified loading that a given specimen can be subjected to before failure occurs. **2.** A measure of the useful life of similar specimens.

**fatigue strength** The maximum stress that can be sustained for a number of stress cycles without failure.

**fat lime (rich lime)** A quicklime or hydrated lime used in plastering and masonry obtained by burning a pure or nearly pure limestone source.

**fat mix (rich mix)** A mortar or concrete mix with a relatively high cement content. Fat mix is more easily spread and worked than a mix with the minimum amount of cement required for strength.

**fat mortar (rich mortar)** Mortar with a high percentage of cement. Fat mortar is sticky and adheres to a trowel.

**fat spot (fat area)** A thick spot in an area paved with bituminous concrete.

**fattening** The thickening of paint in a partially filled can that has been left standing over a period of time.

**faucet ear** The projection on a pipe or fitting bell, used to bolt it to another pipe or fitting.

**fault** **1.** A defect in an electrical system caused by poor insulation, imperfect connections, grounding, or shorting. **2.** A shifting along a plane in a rock formation that causes differential displacement.

**faulting** Differential vertical displacement of a slab or other member adjacent to a joint or crack.

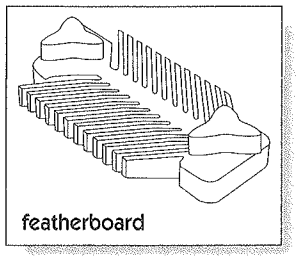
**faux bois** French term for "false wood," referring to simulated wood grain. Also called "graining."

**faying surface** The surface of a metal or wooden member joined closely to another member in such a way as to leave no space between them.

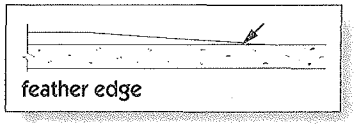
**feasibility study** A thorough study of a proposed construction project to evaluate its economic, financial, technical, functional, environmental, and cultural advisability.

**feather** To blend the edge or finish of new material smoothly into an existing surface.

**featherboard** A safety device used to prevent table saw kickback.


featherboard

**feather edge (featheredge)** The beveling or tapering of the edge of one surface or surface coating where it meets another.


feather edge

**featheredge rule** A straight-edged device used to shape and define angles in plastering.

**feathering strips** Strips of wood added to old wood shingles to make a level surface on which new roofing can be applied.

**feather joint** A joint between two squared, closely butted boards made by plowing a groove along the length of each and fitting them with a common tongue.

**feather tip** A shingle or shake with an extra thin end.

**feature lighting** Lighting used to emphasize a particular area.

**Federal Communications Commission (FCC)** A regulatory agency based in Washington, DC that was established by the Communications Act of 1934 to regulate broadcast communications (wire, radio, and television) in the United States.

**Federal employer identification number** A number assigned by the Internal Revenue Service to identify a business for tax purposes.

**Federal Hazardous Substances Act** The federal law that controls the use of hazardous constituents in consumer products.

**Federal Home Loan Mortgage Corporation** A government sponsored organization, nicknamed "Freddie Mac," that provides a secondary market for mortgages.

**Federal Housing Administration (FHA)** A division of the Department of Housing and Urban Development. The FHA works through lending agencies to provide mortgage insurance on private residences that meet the agency's minimum property standards. The FHA has also been charged with administering a number of special housing programs.

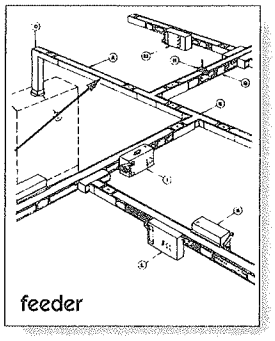
**Federal Mediation and Conciliation Service** An agency of the United States Department of Labor that acts as a mediator in the settlement of disputes as provided in the National Labor Relations Act of 1935 and the Labor Management Relations Act of 1947.

**Federal National Mortgage Association** A corporation that provides a secondary mortgage market for FHA-insured and VA-guaranteed home loans.

**federal style** The classic revival style of architecture in the U.S. from 1790 to 1830.

**fee** Remuneration for professional services.

**feeder** **1.** An electrical cable or group of electrical conductors that runs power from a larger central source to one or more secondary or branch-circuit distribution centers. **2.** A tributary to a reservoir or canal. **3.** A bolt or device that pushes material onto a crusher or conveyor.


feeder

**feed rate** The rate at which material can be fed to a machine, such as an edger or planer, without causing a jam.

**feed wheel** A material distributor or regulator in certain types of shotcrete equipment.

**feeler gauge** A gauge used to measure the thickness of a gap, consisting of a series of blades of graduated thicknesses.

**fee owned timber** Timber that is presently owned free and clear. The term *fee* comes from the legal phrases *fee simple* and *fee simple absolute*. A company's fee owned timber includes timber on land owned by the firm and also may include timber that is owned by the firm but is on land owned by another party.

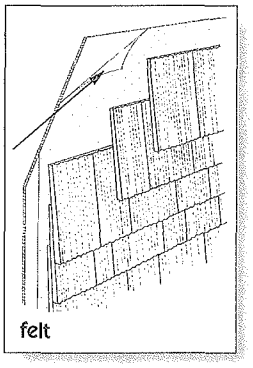
**fee simple** An enduring, inheritable interest in land that may be legally honored until the death of all potential heirs of the original owner, and that the owner is free to convey at any time.

**feldspar** Any of a group of igneous minerals chemically composed of calcium silicates, potassium silicates, or sodium-aluminum silicates and having a consistency softer than quartz.

# F

**fell** To cut down a tree. A faller fells a tree with a falling saw.

**felt** A fabric of matted compressed fibers, usually manufactured from cellulose fibers from wood, paper, or rags, or from glass fibers.


felt

**felt-and-gravel roofing** *See* **built-up roofing.**

**felt nail** *See* **clout nail.**

**felt paper** Paper sheathing used to insulate walls and to prevent infiltration of moisture.

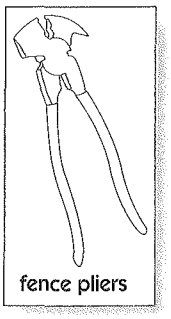
**female coupling** A coupling with internal threads on both ends.

**female thread** *See* **inside thread.**

**femerell** A ventilator, often louvered, used to draw smoke through a roof when a chimney is not provided.

**fence** A straight-edge guide mounted parallel to a saw blade to guide a cant as it passes through the saw.

**fence pliers** Heavy duty pliers used to cut thick wire. May also include a claw to remove pins and fasteners.


fence pliers

**fender** A protective bumper, sometimes of wood or old tires.

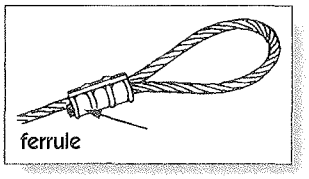
**fenestration** The layout and design of windows in a building.

**feng shui** An approach to interior design, based on Chinese ideals, that seeks to create harmonious surroundings, as in selecting light fixtures, arranging furniture or determining the siting of a house.

**ferrocement** A composite hydraulic structural material having thin sections consisting of cement mortar reinforced by a number of very closely spaced layers of steel wire mesh.

**ferrous metal** Metal in which the principal element is iron.

**ferrule** **1.** A tube or metallic sleeve, fitted with a screwed cap to the side of a pipe to provide access for maintenance. **2.** A metal sleeve or collar attached to the end of a short cable in making a choker. The ferrule fits into the bell of the choker. Also called a *nubbin*. **3.** Spacer tube used in hanging metal gutter to prevent deforming of the gutter when attached.


ferrule

**fertilizer** Any organic or inorganic material that acts as a nutrient.

**festoon** A decorative wood or metal garland that is carved in or applied to a surface.

**fiber** A thread-like structure of a plant that contributes to stiffness or strength.

**fiberboard** A general term referring to any of various panel products, such as particleboard, hardboard, chipboard, or other types formed by bonding wood fillers using heat and pressure.

**fibered plaster** Gypsum plaster reinforced with fibers of hair, glass, nylon, or sisal.

**fiberglass (fibrous glass, glass fiber)** Filaments of glass formed by pulling molten glass into random lengths that are either gathered in a wool-like mass or formed as continuous threads. The wool-like form is used as thermal and acoustical insulation. The thread-like form is used as reinforcing material and in textiles, glass fabrics, and electrical insulation.

**fiberglass reinforced plastic (FRP)** A coating of glass fibers and resins applied as a protective layer to plywood. The resulting composite is tough and scuff resistant. It is used to manufacture containers, cooling towers, concrete forms, and shower stalls.

**fiber optics** The transmission of light pulses through bundles of fine, transparent fibers. *See also* **fiber optic waveguides** *and* **optic fiber cable.**

**fiber optic waveguides** Fine, transparent fibers, usually thin filaments of glass or plastic, through which a light beam can be transmitted.

**fiber-reinforced concrete** *See* **concrete, fibrous.**

**fiber saturation point** The point of wood moisture content when the cell walls are completely saturated with water, but there is no water in the cell lumens and intercellular spaces.

**fiber stress** The longitudinal compressive or tensile stress in a structural member.

**fibrous** Resembling or composed of fibers.

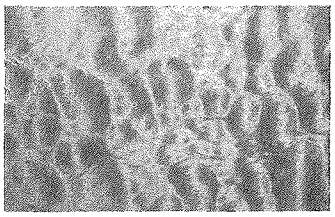
**fibrous concrete** Concrete with glass or other fibers added to increase tensile strength.

**fibrous glass duct** Ductwork constructed of fiberglass material.

**fibrous plaster** Cast plaster reinforced canvas, excelsior, or other fibrous material.

**FICA** A federal law that imposes a social security tax on employees, employers, and the self-employed.

**fiddleback grain** A rippling or undulating grain common to certain hardwoods, such as maple and sycamore. Pieces containing this grain pattern are often used on the backs of violins.



fiddleback grain

**fiducial mark** A standard reference point or line used as a base in surveying.

**field** **1.** In masonry, an expanse of brickwork between two openings or corners. **2.** A term used to designate a construction project site. **3.** Occupation such as a trade, profession, or specialty. **4.** An area of floor, wall, or ceiling that is covered with tile or other preformed shapes that did not require cutting, as opposed to those areas along a border or edge.

**field applied** **1.** The application of a material, such as paint, at a job site, as opposed to being applied at a factory. **2.** The construction or assembly of components in the field.

**field bending** Bending of reinforcing bars on the job rather than in a fabricating shop.

**field chipping** The reduction to pulp chips of slash or small trees using a portable chipper in the woods.

**field concrete** *See* **concrete, field.**

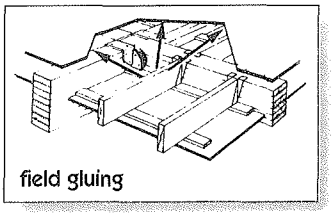
**field cost** Engineering and construction costs associated with the construction site rather than with the home office.*

**field-cured cylinders** Test cylinders cured nearly in the same manner as the concrete in the structure to indicate when supporting forms may be removed, additional construction loads may be imposed, or the structure may be placed in service.

**field drain** *See* **agricultural drain pipe.**

**field engineer** A representative of certain government agencies who oversees projects at the site. Also called a *project representative* or *field representative.*

**field gluing** A method of gluing plywood floors in which specially developed glues are applied to the top edges of floor joists. Plywood is then laid on the joists and nailed in place. The combination of gluing and nailing results in a stiffer floor construction and tends to minimize squeaks and nail-popping.



field gluing

**field house** A long structure used for indoor athletic events.

**field inspection** The reinspection of lumber or plywood in the field, usually at the buyer's location. A field inspection is requested by a buyer when he believes a delivered product to be inferior to that specified. *See also* **reinspection.**

**field man** A representative of a trade association who is available to answer questions regarding grades, usage, and characteristics of various species (in the case of wood products), as well as the products produced by his association. The field man may also conduct clinics and demonstrations and otherwise promote the association's products.

**field-molded sealant** A joint sealant in liquid or semi-solid form that can be molded to the desired shape as it is installed in the joint.

**field order** In construction, a written order passed to the contractor from the architect to effect a minor change in work, requiring no further adjustment to the contract sum or expected date of completion.

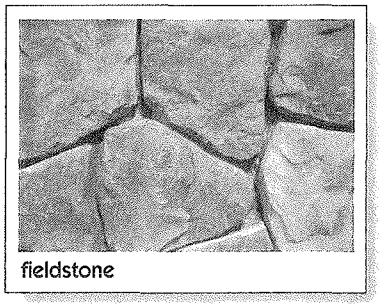
**field painting** The painting of structural steel or other metals after they have been erected and fastened.

**field representative** *See* **field engineer** *and* **project representative.**

**field rivet** A rivet driven in a field connection of structural steel.

**field sound transmission class (FSTC)** An onsite measurement of the ability of a specific construction element, such as a wall partition, to block sound.

**fieldstone** **1.** Loose stone removed from the soil. **2.** Flat slabs of stone suitable for use in dry wall masonry.



fieldstone

**field supervision** The site supervisory work performed by a designated individual.

**field testing** Examining concealed conditions of a structure through probes to provide information on existing conditions and possible deficiencies.

**field welding** Welding performed at the construction site, usually with gasoline-powered equipment.

**field work** Any work performed at a job site.

**fifths** The lowest of the common lumber grades normally exported from Scandinavia and Eastern Europe.

**fifth wheel** The swivel connection between highway-type tractors and semi-trailers.

**figure** The natural wood pattern that is created by growth rings, knots and other deviations from regular grain.

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# F

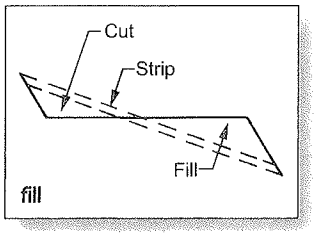
**figured glass** Translucent sheet glass rolled with a bas-relief pattern on one face, providing high but obscure light transmission, with the degree of obscurity depending on the pattern.

**filament** A fine wire used in an incandescent lamp. The form is designated by a letter: S, straight wire; E, coil; CC, coiled coil.

**file** A hand-held steel tool with teeth or raised oblique ridges, used for scraping, redressing, or smoothing metal or wood.

**filer (saw filer)** The person in a sawmill or logging operation who keeps the saws sharp.

**fill** **1.** The soil or other material used to raise the grade of a site area. **2.** A subfloor leveling material.



fill

**filled particleboard** Particleboard to which plastic material has been applied to fill gaps between particles on the edges or faces.

**filler** **1.** Finely divided inert material, such as pulverized limestone, silica, or colloidal substances sometimes added to Portland cement, paint or other materials to reduce shrinkage, improve workability, or act as an extender. **2.** Material used to fill an opening in a form.

**filler block** Concrete masonry units placed between joists or beams under a cast-in-place floor.

**filler coat** A coat of paint or varnish used as a primer.

**filler metal** Metal, added by a welding process, that has a melting point either approximately the same as or below the base metal.

**filler plate** A steel plate or shim used to fill any gap between columns or between a column and a roof member.

**fillet** **1.** A narrow band of wood between two flutes in a wood member. **2.** A flat, square molding separating other moldings. **3.** A concave junction formed where two surfaces meet. *See also* **chamfer strip.**

**fillet bead** Caulking or sealant bead that seals a right-angle joint.

**fillet weld** A weld of approximate triangular cross section, used to join two surfaces at approximate right angles to each other. The weld metal may be deposited in one pass or built up with multiple passes.

**filling piece** A piece inserted into another to form a continuous surface.

**fill insulation** **1.** Thermal insulation placed in prepared or natural cavities of a building. **2.** Any variety of loose insulation that is poured into place.


fill insulation

**fillister** On a window, a rabbet on the outer edge of a muntin that holds the glass in place.

**fillister head screw** A common machine screw with a slightly domed head and straight body.

**fill lighting** Lighting used in addition to a primary light that will fill in shadows and reduce contrast.

**fill packing** The portion of a cooling tower that provides heat transfer surface.

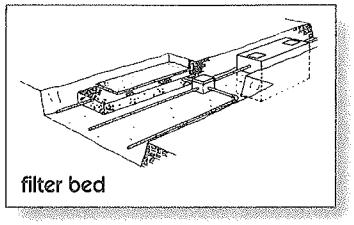
**fill-type insulation** *See* **fill insulation.**

**film glue** A thin sheet of paper or scrim that has been impregnated with a thermosetting resin, used to bond expensive decorative veneers without bleed-through or in hot-pressing nonporous laminates.

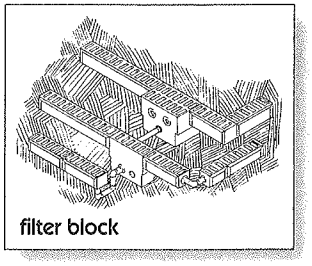
**film surfaced hardboard siding** Hardboard to which a thin, dry sheet of paper, coated on both sides with a phenol-formaldehyde resin adhesive, has been applied. Such coatings are often printed with grain patterns in imitation of actual veneers, and are used as an inexpensive substitute for the higher priced veneer panels.

**filter** **1.** A device to separate solids from air or liquids, such as a filter that removes dust from the air or impurities from water. **2.** Granular matter placed on an area to provide drainage while preventing the entry and flow of sediment and silt.

**filter bed** A bed of granular material used to filter water or sewage.

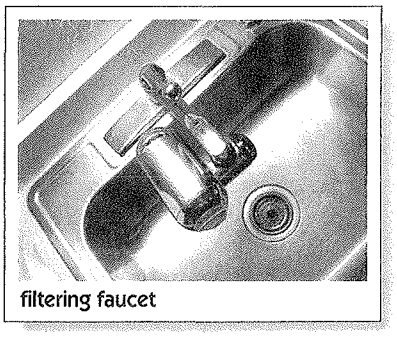

filter bed

**filter block** A hollow, vitrified clay masonry unit used for trickling filter floors in sewage treatment plants.


filter block

**filter fabric** Tough fabric used in excavation that screens out soil while allowing the passage of water. Also called engineering fabric.

**filtering faucet** A faucet that filters out particles to improve the taste, appearance, and safety of water.



filtering faucet

**fin** A narrow, linear projection on a formed concrete surface, resulting from mortar flowing out between spaces in the formwork.

**final acceptance** The formal acceptance of a contractor's completed construction project by the owner, upon notification from an architect that the job fulfills the contract requirements. Final acceptance is often accompanied by a final payment agreed upon in the contract.

**final completion** A term applied for a project that has been completed according to the terms and conditions set forth in the contract documents.

**final inspection** An architect's last review of a completed project before issuance of the final certificate for payment.

**final payment** The payment an owner awards to the contractor upon receipt of the final certificate for payment from the architect. Final payment usually covers the whole unpaid balance agreed to in the contract, plus or minus any amounts altered by change orders.

**final prestress** *See* **final stress.**

**final set** A degree of stiffening of a mixture of cement and water greater than initial set, generally stated as an empirical value indicating the time in hours and minutes required for a cement paste to stiffen sufficiently to resist an established penetration of a weighted test needle. *See also* **initial set.**

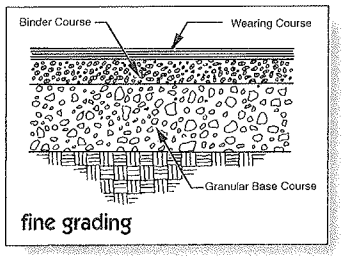
**final setting time** The time required for a freshly mixed cement paste, mortar, or concrete to achieve final set. *See also* **initial setting time.**

**final stress** **1.** In prestressed concrete, the stress that remains in a member after substantially all losses in stress have occurred. **2.** The stress in a member after all loads are applied.

**final waiver of liens** A document prepared and executed by the contractor at the conclusion of the project stating that all subcontractors and material suppliers have been paid in full and that no mechanic's or materialsmen's liens will be filed against the owner. Typically required to be filed with the owner as a condition of receiving the contractor's final payment or release of retention for the work he performed.

**fine aggregate** **1.** Aggregate passing the 3/8" (9.5-mm) sieve and almost entirely passing the No.4 (4.75-mm) sieve and predominantly retained on the No. 200 (75-micrometer) sieve. **2.** That portion of an aggregate passing the No. 4 (4.75-mm) sieve and predominantly retained on the No. 200 (75-micrometer) sieve. *See also* **aggregate** *and* **sand.**

**fine grading** The final grading of ground to prepare for seeding, planting, or paving.




fine grading

**fine-grained soil** Soil in which the smaller grain sizes predominate, such as fine sand, silt, and clay.

**fineness** A measure of particle size.

**fineness modulus** A factor obtained by adding the total percentages by weight of an aggregate sample retained on each of a specified series of sieves, and dividing the sum by 100. In the U.S. the standard sieve sizes are No. 100 (150 micrometer), No.50 (300 micrometer), No.30 (600 micrometer), No.16 (1.18 mm), No.8 (2.36 mm) and No.4 (4.75 mm), and 3/8" (9.5 mm), 3/4" (19 mm), 1-1/2" (38.1 mm), 3" (75 mm), and 6" (150 mm).

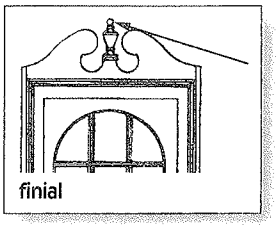
**fines** **1.** Soil that passes through a No. 200 sieve. **2.** Fine-milled chips used in the production of particleboard. Fines are larger than sander dust or wood flour and are used on the faces of particleboard panels, with coarser chips used as the core of the board. **3.** An undesirable by-product of cutting wafers and strands for waferboard and oriented strand board.

**fine stuff** A finish coat plaster made of pure lime and water.

**finger guard** A strip of soft rubber, vinyl, or neoprene applied to door frames to prevent injury to hands or fingers that get caught between the door and frame.

**finger joint** A method of joining two pieces of lumber end to end by sawing into the end of each piece a set of projecting "fingers" that interlock. When the pieces are pushed together, these form a strong glue joint.

**finial** A decoration on the point of a spire, pinnacle, or conical roof.



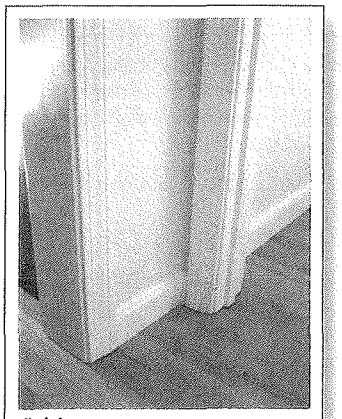
finial

# F

**finish** **1.** The texture of a surface after compacting and finishing operations have been performed. **2.** A high-quality piece of lumber graded for appearance and often used for interior trim or cabinet work.

**finish builders' hardware** Visible, functional hardware that has a finished appearance, including such features as hinges, locks, catches, pulls, and knobs.

**finish carpentry** Carpentry that involves the installation of finish woods, (and trim made of plastic or molded polyurethane materials) to provide a finished appearance to installed doors, windows, stairs, and other features of a building's interior. Elements include casing, baseboard, railings, mantels, louvers, paneling, and shelving.



finish carpentry

**finish carpentry (joinery)** The wood finish to a building, such as moldings, doors, and windows.

**finish casing** The finish trim around a casing.

**finish coat** **1.** Final thin coat of shotcrete preparatory to hand finishing. **2.** An exposed coat of plaster and stucco.

**finished grade** The top surface of an area after construction is completed, such as the top of a road, lawn, or walk.

**finished size** The final size of any completed object including trim.

**finisher** A tradesman who applies the final treatment to a concrete surface, including patching voids and smoothing.

**finish floor** The wearing surface of a floor.

**finish flooring** The material used to make the wearing surface of a floor, such as hardwood, tile, or terrazzo.

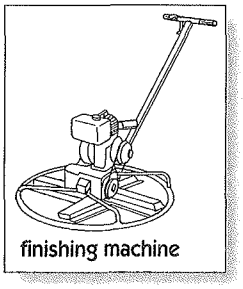
**finish grade** *See* **finished grade.**

**finish grinding** **1.** The final grinding of clinker into cement, with calcium sulfate in the form of gypsum or anhydrite generally being added. **2.** The final grinding operation required for a finished concrete surface, such as bump cutting of pavement, fin removal from structural concrete, or terrazzo floor grinding.

**finish hardware** *See* **finish builders' hardware.**

**finishing** Leveling, smoothing, compacting, and otherwise treating surfaces of fresh or recently placed concrete or mortar to produce the desired appearance and service. *See also* **float** *and* **trowel.**

**finishing machine** A power-operated machine used to give the desired surface texture to a concrete slab.



finishing machine

**finishing nail** A slender nail, with a narrow head, that may be driven entirely into a wood surface, leaving a small hole that can be filled with putty or a similar compound.



finishing nail

**finish sag** A defect in hardboard.

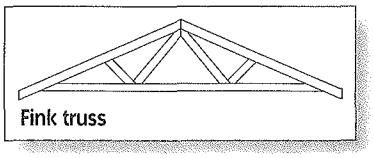
**finish size** *See* **finished size.**

**finish skip** A defect in hardboard.

**finish string** *See* **face string.**

**finish work** *See* **finish carpentry.**

**Fink truss (Belgian truss, French truss)** A symmetrical truss, formed by three triangles, commonly used in supporting large, sloping roofs.



Fink truss

**fir** **1.** A form of softwood indigenous to temperate zones, used principally for interior trim and framing. Varieties include Douglas fir, silver fir, balsam fir, and white fir. **2.** Although used most often to refer to Douglas fir, which is also a pseudo-fir, a general term for any of a number of species of conifers, including the true firs.

**fir & larch** A mixture of Douglas fir and western larch, sold as either individual species or as one species grouping. The two species are intermixed because they have similar characteristics and are used in similar ways.

**fire alarm system** An electrical system, installed within a home, industrial plant, or office building that sounds a loud blast or bell when smoke and flames are detected. Certain alarms are engineered to trigger sprinkler systems for added protection.

**fire area** An area in a building enclosed by fire-resistant walls, fire-resistant floor/ceiling assemblies, and/or exterior walls with all penetrations properly protected.

**fireback (chimney back)** **1.** The heat-resistant back wall of a fireplace, built of masonry, cast metal or wrought metal, that withstands flames and radiates heat into the area served. **2.** A fire-resistant attachment to the back wall of a fireplace that keeps the masonry from absorbing too much heat.

**fireblock** *See* **fire stop.**

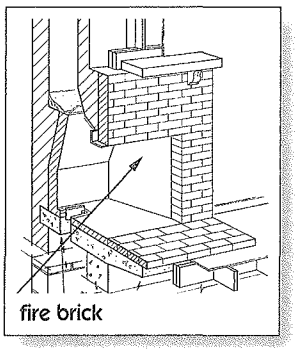
**fireblocking** Installed building materials designed to resist spread of fire in concealed spaces to other areas of a building.

**fireboard (chimney board, summer piece)** A device used to close or cover the opening of a fireplace when it is not in service.

**fire box** In a chimney, the metal box that contains the fire.

**firebreak** **1.** A strategic space between buildings, clusters of buildings, or sections of a city that helps to keep fires from leaping or spreading to surrounding areas before they can be contained. **2.** Any doors, walls, floors, or other interior structures engineered to go inside a building.

**fire brick** A flame-resistant, refractory ceramic brick used in fireplaces, chimneys, and incinerators.


fire brick

**fire cement** A cement, such as calcium aluminate cement, used in mortars for laying refractory brick.

**fire clay** An earthy or stony mineral aggregate having as the essential constituent hydrous silicates of aluminum with or without free silica. Fire clay is plastic when sufficiently pulverized and wetted, rigid when subsequently dried, and of suitable refractoriness for use in commercial refractory products.

**fire control damper** An automatic damper used to close a duct if a fire is detected.

**fire cut** A sloping cut on the end of a wood beam or joist supported on a masonry wall. If, somewhere along its length, the joist or beam burns through, injury to the wall is minimized.

**fire damper** *See* **fire control damper.**

**fire detection system** A series of sensors and interconnected monitoring equipment that detect the effects of a fire and activate an alarm system.

**fire division wall** A wall that subdivides one or more floors of a building to discourage the spread of fire.

**fire door** **1.** A highly fire-resistant door system, usually equipped with an automatic closing mechanism, that provides a certain designated degree of fire protection when it is closed. **2.** The opening in a furnace or a boiler through which fuel is added.

**fire-door rating** A system of evaluating the endurance and fire resistance of door, window, or shutter assemblies, according to standards set by Underwriters' Laboratories, Inc., or other recognized safety authorities. Ratings of A through F are assigned in descending order of their effectiveness against fire.

**fired strength** The compressive or flexural strength of refractory concrete, determined upon cooling after first firing to a specified temperature for a specified time.

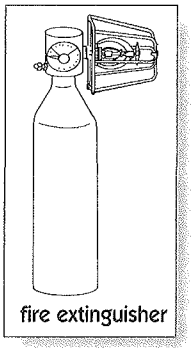
**fired unit weight** The unit weight of refractory concrete, upon cooling, after having been exposed to a specified firing temperature for a specified time.

**fire endurance** **1.** The length of time a wall, floor/ceiling assembly, or roof/ceiling assembly will resist a standard fire without exceeding specified heat transmission, fire penetration, or limitations on structural components. **2.** The length of time a structural member, such as a column or beam will resist a standard fire without exceeding specified temperature limits or collapse. **3.** The length of time a door, window, or shutter assembly will resist a standard fire without exceeding specified deformation limits.

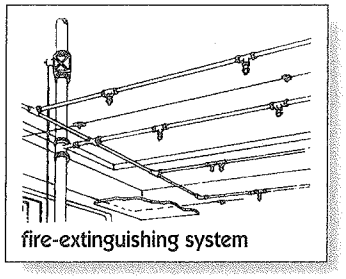
**fire escape** A continuous, unobstructed route of escape from a building in case of fire, sometimes located on the outside of an exterior wall.

**fire exit bolt** *See* **panic exit device.**

**fire extinguisher** A portable device for immediate use in suppressing a fire. There are four classes of fires: A, B, C or D. A single device is designed for use on one or more classes.


fire extinguisher

**fire-extinguishing system** An installation of automatic sprinklers, foam distribution system, fire hoses, and/or portable fire extinguishers designed for extinguishing a fire in an area.


fire-extinguishing system

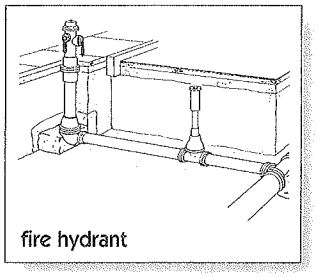
**fire frame** A cast-iron housing installed in a fireplace opening to reduce its size.

**fire hazard** The relative danger that a fire will start and spread, that smoke or toxic gases will be generated, or that an explosion will occur, endangering the occupants of a building or area.

# F

**fire-hazard classification** A designation of high, ordinary, or low assigned to a building, based on its potential susceptibility to fire, judged by its contents, functions, and the flame-spread rating of its inner furnishings and finishes.

**fire hydrant** A supply outlet from a water main, for use in fire fighting.


fire hydrant

**fire limits** The boundary of an area where the relative danger exists that a fire will start and spread or that an explosion will occur, endangering the lives of the occupants of the building.

**fire load (fire loading)** The amount of flammable contents or finishes within a building per unit of floor area, stated either in pounds per square foot or Btus per square foot.

**fire management panel** A fire alarm control unit consisting of multiple single zone fire alarm control modules, a telephone module, an HVAC module, and an audio communications module.

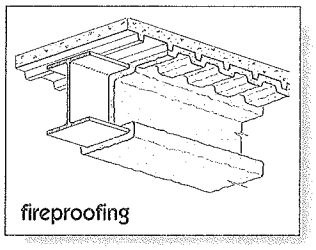
**fire partition** An interior partition that does not fully qualify as a fire wall, but has a fire endurance rating of not less than two hours.

**fireplace** A non-combustible chamber or open recess for confining a fire consisting of a hearth and chimney.

**fireplace throat** The opening between a fireplace's smoke chamber and the top of the firebox.

**fireproof** **1.** Descriptive of materials, devices, or structures with such high resistance to flame that they are practically unburnable. **2.** To treat a material with chemicals in order to make it fire-resistant.

**fireproofing** The use of fire-resistant materials for the protection of structural members to insure structural integrity in the event of fire.


fireproofing

**fireproof wood** Chemically treated wood that is fire resistive. No wood can be completely fireproof, but wood can be treated so that it is highly resistant to heat and flame and very difficult to ignite under ordinary circumstances.

**fire protection** The practice of minimizing the probable loss of life or property resulting from fire, by fire-safe design and construction, the use of detection and suppression systems, establishment of adequate fire fighting services, and training building occupants in fire safety and emergency evacuation.

**fire-protection rating** *See* **fire endurance.**

**fire-protection sprinkler system** An automatic fire-suppression system, commonly heat-activated, that sounds an alarm and deluges an area with water from overhead sprinklers when the heat of a fire melts a fusible link.

**fire-protection sprinkler valve** A valve, normally open, that is used to control the flow of water in a sprinkler system.

**fire-rated system** Wall, floor, or roof construction using specific materials and designs that have been tested and rated for conformance to fire safety criteria, such as the flame spread rate.

**fire resistance** **1.** The property of a material or assembly to withstand fire, characterized by the ability to confine a fire and/or to continue to perform a given structural function. **2.** The property of a material or assembly that makes it so resistant to fire that, for a specified time and under conditions of a standard heat intensity, it will not fail structurally and will not permit the side away from the fire to become hotter than a specified temperature.

**fire-resistance rating** *See* **fire endurance.**

**fire-resistant door** A door designed to confine fire to one part of a structure, keeping it from spreading through an entire building. It may be a solid-core wooden door, or one sheathed in metal, depending on the intended location. Doors are rated for the projected time they could be expected to perform their function during a fire. Most building codes require that the door between living quarters and a garage be fire resistant.

**fire-resistant material** A material that will not ignite and burn when exposed to heat or flame; a noncombustible material.

**fire-resistive** Capable of resisting the effects of fire to some degree.

**fire-resistive construction** Construction in which the floors, walls, roof, and other components are built exclusively of noncombustible materials, with fire-endurance ratings equal to or greater than those mandated by law.

**fire-resistive wall** A wall having the fire-resistance rating required by a building code or in accordance with underwriters' recommendations.

**fire retardant** **1.** A chemical applied to lumber or other wood products to slow combustion and flame spread. **2.** A chemical used to fight forest fires, often by dropping it from an airplane or helicopter.

**fire-retardant finish** Paint composed in part of noncombustible substances such

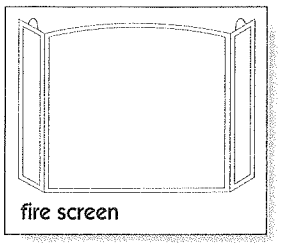
as silicones, chlorinated waxes and resins, and antimony oxide, used to protect combustible surfaces, inhibiting the rapid spread of flames.

**fire-retardant wood** Wood chemically impregnated or otherwise treated so that the fire hazard has been reduced.

**fire-retarding glazing** *See* **wire glass.**

**fire road** A road built to provide access to an area in case of fire.

**fire screen** A screen set in front of a fireplace to retain flying sparks or embers.



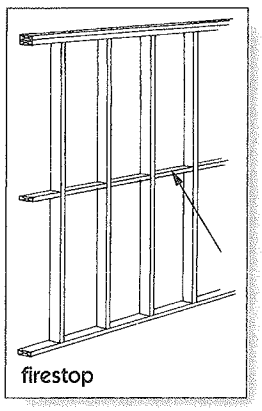
fire screen

**fire separation** A floor or wall, with any penetrations properly protected, having the fire endurance required by authorities and acting to retard fire spread in a building.

**fire shutter** A complete metal shutter assembly with the fire endurance required by code. The rating depends on the location and nature of the opening.

**firestat** A fixed thermostat in an air-conditioning system, preset at a temperature required by code or other authorities, usually 125°F (52°C).

**firestop** **1.** A short piece of wood, usually a 2" x 4" or 2" x 6", placed horizontally between the studs of a wall. Firestops are equal in width to the studs. They are usually placed halfway up the height of the wall to slow the spread of fire by limiting drafts in space between the sheathing on the two sides of the wall. Building codes usually do not require firestops in walls that are less than 8' high. **2.** Masonry units placed in wood framed walls.



firestop

**fire tower** A vertical enclosure, with a stairway, having the fire endurance rating required by code and used for egress and as a base for fire fighting.

**fire tube boiler** Boilers in which flue gas flows through the tubes and water surrounds the tubes.

**fire wall** An interior or exterior wall that runs from the foundation of a building to the roof or above, constructed to stop the spread of fire.

**fire window** A window assembly with the fire endurance rating required by code for the location of the opening.

**fir fixed** Unplaned lumber held in place by nails only.

**firing** The controlled-heat treatment in a kiln or furnace, of ceramic or brick ware.

**firmer chisel** A long, narrow carpenter's chisel used for mortising.

**firmer gouge** A long, narrow carpenter's gouge used for cutting grooves.

**firmwood** The solid wood in a log suitable for manufacture into wood products or chips.

**first coat** The initial application of mortar, known as *base coat* in two-coat work, and *scratch coat* in three-coat work.

**first floor** **1.** In the U.S., the floor of a building at or closest to grade. **2.** In Europe, the floor of a building above the *ground floor.*

**first in, first out (FIFO)** A type of accounting for inventory in which items purchased first are assumed to be the first to be sold. An accountant will compute the cost and profit on the oldest or first in the inventory. *See also* **last in, first out (LIFO).**

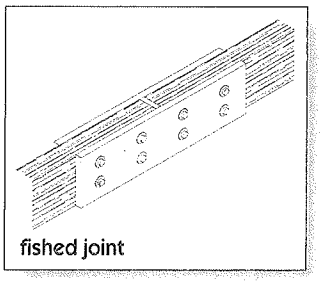
**first mortgage** The mortgage or security in a property that takes precedence over all other mortgages on the property.

**firsts and seconds** The highest standard grades of hardwood lumber.

**fish beam** Two beams attached end to end to form a single built-up beam with fishplates securing the opposite sides of the joint.

**fish-bellied** Descriptive of a beam or truss that has its bottom flange or chord convex and sagging downward.

**fished joint** A butted timber joint made using fishplates.



fished joint

# F

**fisheye** A spot, approximately 1/4" (6.4 mm) in diameter, in a finish plaster coat caused by a piece of lumpy lime.

**fishing wire** *See* **snake** *and* **fish tape**.

**fishplate** A wood or metal plate fastened to the sides of two beams or rails to splice the two ends together.

**fish scale** A fancy-butt shingle pattern with the exposed portion of the shingle rounded. When used as siding, the overall effect is the pattern of fish scales.

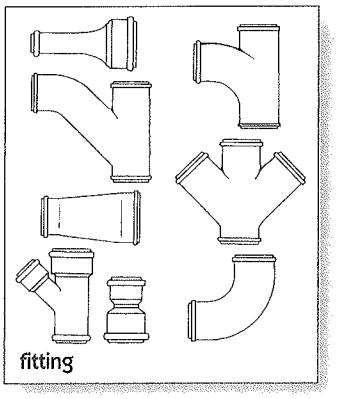
**fishtail** A wedge-shaped piece of wood used as part of the support form between tapered pans in concrete joist construction.

**fishtail bolt** A bolt with a split end anchored in concrete.

**fish tape** *See* **snake**.

**fitch** A thin, long-handled paintbrush used especially for touching up recessed areas.

**fitting** **1.** A standardized part of a piping system used for attaching sections of pipe together, such as a coupling, elbow, bend, cross, or tee. **2.** The process of installing floor coverings around walks, doors, and other obstacles or projections. **3.** In electrical wiring, a component, such as a bushing or locknut, that serves a mechanical purpose rather than an electrical function.


fitting

**fitting-up** Erecting a structure by partially bolting the members before aligning and completing the connections.

**fitting-up bolt** A temporary bolt used to secure structural members before they are permanently connected.

**fit-up** The construction necessary within the demising walls of a leased space, including partitions, finishes, fixtures, lighting, power, equipment, etc. allowing the space to be used for its leased purpose.

**five-quarter (5/4)** *See* **quarter measure**.

**fixed assets** Assets, such as real property, that are not readily converted to cash.

**fixed-bar grille** A grille with preset, nonadjustable bars, used to cover return and exhaust openings in air-conditioning systems.

**fixed beam** A structural beam with fixed, as opposed to hinged, connections.

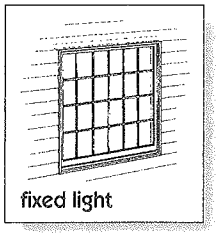
**fixed costs** These costs can be defined in two different ways. In total, fixed costs remain the same as volume changes. On a per unit basis, fixed costs decline as volume increases. Examples include office rent, administrative salaries, insurance, and office supplies.

**fixed date** A calendar date (associated with a plan) that cannot be moved or changed during the schedule.*

**fixed-end** The anchored end of a beam, strut, or girder.

**fixed fee** A fixed amount specified in a contract to compensate a contractor for all materials and services required to complete the project.

**fixed light** A window or portion of a window that does not open. Also referred to as *fixed sash*.


fixed light

**fixed limit of construction cost** A maximum amount to be paid for a construction job as specified in the agreement between owner and architect.

**fixed plate heat exchanger** A static device that transfers sensible heat through plates separating a warm air stream from a cold air stream.

**fixed-price contract** A type of contract in which the contractor agrees to construct a project for an established price, agreed in advance.

**fixed project overhead costs** Direct overhead costs that are not affected by time.

**fixed rate mortgage** A mortgage on which the interest rate remains the same through the period of the loan.

**fixed retaining wall** A retaining wall supported both at its top and bottom.

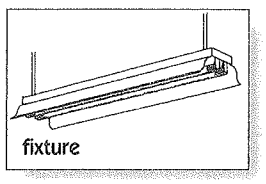
**fixed sash** *See* **fixed light**.

**fixed solar collection systems** Systems mounted to the ground or roof at an angle optimal to receive direct sunlight. Although immovable, these systems are often favored for their simplicity and lower cost versus tracking-type systems.

**fixed transom** A glass light or panel that is built above a door and cannot be opened.

**fixing** The installation of glass panels in a ceiling, wall, or partition. Fixing is distinct from glazing, which covers most other uses, such as the installation of glass in windows, doors, and showcases.

**fixture** **1.** An electrical device, such as a luminaire, attached to a wall or ceiling. **2.** An article that becomes part of real property by virtue of being merged or affixed to it, although it was originally a distinct item of personal property.


fixture

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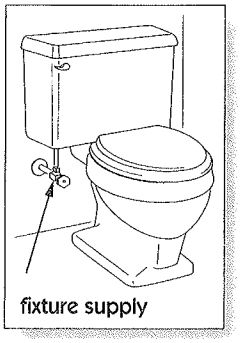
**fixture branch** A pipe connecting and servicing two or more plumbing fixtures.

**fixture drain** A drain that leads from the trap of a fixture to another drainpipe.

**fixture joint** An electrical connection formed by twisting two conductors together and then folding them over.

**fixtures** Tangible goods that are permanently attached to, or embedded in, real property so that they are considered to be part of the real property.

**fixture supply** The pipe connecting a plumbing fixture to a supply line.

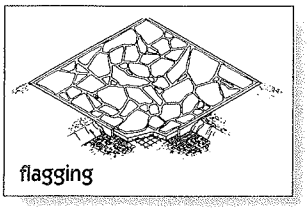

fixture supply

**fixture unit** A measure of the rate at which various plumbing fixtures discharge into a drainage system, stated in units of cubic volume per minute.

**fixture-unit flow rate** The total number of gallons discharged per minute from a single plumbing fixture, divided by 7.5 to provide the flow rate of that fixture in cubic feet per minute.

**fixture whip** A flexible wiring system used between the junction box and lighting fixture.

**flagging** **1.** A walk or patio paved with flagstones. **2.** The process of setting flagstones. *See also* **flagstone**.


flagging

**flagman** A person who directs vehicular traffic by means of flags or signs.

**flagstone** A flat, irregular-shaped stone, usually 1" to 4" thick, used as pedestrian paving or flooring. Flagstones are set in mortar or aggregate outdoors and in mortar indoors.

**flake board (flakeboard)** A building board composed of wood particles or flakes solidified with a binder. *See also* **particleboard** *and* **waferboard.**

**flaking** A peeling of paint caused by loss of adhesion and/or cohesion.

**flame arrestor** A mesh or perforated metal safety device used in a flammable storage can for protection from exterior ignition.

**flame cleaning** A method of cleaning mill scale, moisture, paint, and dirt from steel by applying a hot flame.

**flame cutting** Cutting metal with an oxyacetylene torch.

**flame ionization detector** An ionization detector that uses hydrogen flame to generate ions.

**flameproof** Able to resist the spread of flame and not easily ignited, but having less fire resistance than fire-retardant substances.

**flame-retardant** Treated to resist flame spread and ignition.

**flame retention burner** A residential oil burner designed with the flame near the burner's mouth, which improves efficiency.

**flame-spread rating** A numerical value given to a material designating its resistance to flaming combustion. Materials can have a rating of 100, as in untreated lumber, to 0, as in asbestos sheets.

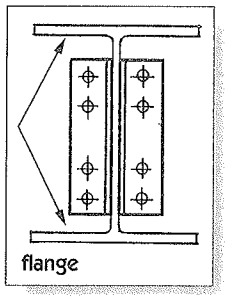
**flame treating** A process by which inert thermoplastic materials and objects are prepared to receive paints, adhesives, lacquers, and inks by immersion in open flame, causing surface oxidation.

**flammability** A material's capacity to burn.

**flammable** Capable of being ignited easily, burning intensely, or having a rapid rate of flame spread.

**flanch (flaunch)** To broaden the top of a chimney stack and to cant the edges to direct water away from the flue.

**flange** **1.** A projecting ring, ridge, or collar placed on a pipe or shaft to strengthen, prevent sliding, or accommodate attachments. **2.** The longitudinal part of a beam, or other structural member, that resists tension and compression.


flange

**flange angle** An angle shape used as one of the parts making up the flange of a built-up girder.

**flange brace** A brace that provides lateral support to the flange of a beam, joist girder, or column.

**flange cut** A cut-out in a flange of a beam or girder to accommodate attachment or passage of another structural element.

**flange union** A method of connecting threaded pipe using a pair of flanges screwed onto the ends of the pipe and bolted together.

**flanking transmission** Transmission of sound by paths around, rather than through, a building component.

**flapper** The moving part of the flush valve in a toilet that allows water to leave the tank during the flush cycle.

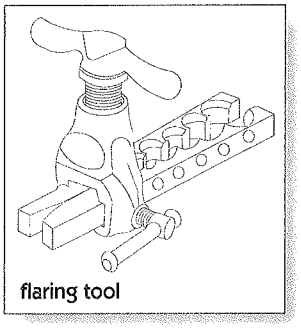
**flap trap (flap valve)** A hinged flap within a plumbing system that restricts water flow to one direction, preventing backflow.

# F

**flare fitting** A soft-tube connector made by flaring the end of the tube to provide a mechanical seal.

**flare header** In masonry, a header that is darker than the rest of the wall.

**flaring tool** A tool used to flare the end of a pipe for a fitting. *See also* **flare fitting.**


flaring tool

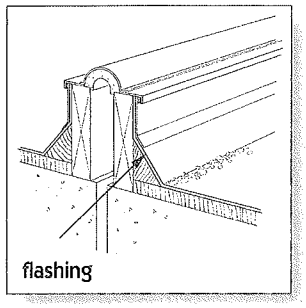
**flash** **1.** To make a joint weathertight using flashing. **2.** An intentional or accidental color variation on the surface of a brick. **3.** A variation in paint color resulting from variable wall absorption. **4.** The conversion of condensate into steam.

**flash chamber** A tank placed between the expansion valve and evaporator in a refrigeration system to separate and bypass any flash gas formed in the valve.

**flash coat** A light coat of shotcrete used to cover minor blemishes on a concrete surface.

**flash cove** A simple baseboard formed by running the edge of a resilient sheet flooring up the wall for several inches.

**flashing** A thin, impervious sheet of material placed in construction to prevent water penetration or direct the flow of water. Flashing is used especially at roof hips and valleys, roof penetrations, joints between a roof and a vertical wall, and in masonry walls to direct the flow of water and moisture.


flashing

**flashing block** A concrete masonry unit with a slot cast in one face to receive and hold one edge of a flashing.

**flashing board** A board to which one edge of a flashing is fastened.

**flashing cement** A mixture of solvent and bitumen, reinforced with inorganic glass or other fibers, and applied with a trowel.

**flashing ring** A collar encircling a pipe where it passes through a wall or floor, the purpose of which is to seal the opening.

**flash point** **1.** The minimum temperature at which a combustible liquid will give off sufficient vapor to produce a combustible mixture when mixed with air and ignited. Defined flash points are for specific enclosure conditions and ignition energy. **2.** The temperature at which a substance will spontaneously ignite.

**flash set (quick set, grab set)** The rapid development of rigidity in a freshly mixed Portland cement paste, mortar, or concrete, usually with the evolution of considerable heat. This rigidity cannot be dispelled, nor can the plasticity be regained, by further mixing without addition of water.

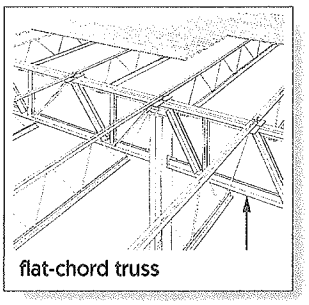
**flash welding** A welding process that joins metals with the heat produced by the resistance to an electric current between the surfaces of the metals, followed by application of pressure.

**flat** **1.** Descriptive of a structural element having no slope, such as a flat roof. **2.** One floor of a multilevel building, or full-floor apartment. **3.** Descriptive of low gloss paint, used either as an undercoat or as a final coat. **4.** A thin iron or steel bar with a rectangular cross section.

**flat applicator** A flat pad of sponge-like material with an attached handle used to paint shingles and other difficult surfaces.

**flat arch** An arch with slight curvature.

**flat-chord truss** A truss with the top and bottom chords nearly flat and parallel.


flat-chord truss

**flat coat** An intermediate coat of paint applied between the primer and finish coat.

**flat enamel brush** A brush used to apply smooth films of enamel on woodwork, about 2" to 3" (5 to 7.5 cm) wide with flagged and tapered bristles.

**flat face** Pipe flanges with the entire face of the flange faced straight across. These flanges use a full face gasket. Commonly employed for pressures less than 125 lbs.

**flat file** A flat tool used to file metal.

**flat glass** *See* **window glass, late glass, float glass,** *and* **rolled glass.**

**flat grain** Lumber cut with the grain running at a 45° angle or less on the board surface.

**flathead** **1.** A screw or bolt with a flat top surface and a conical bearing surface. **2.** A rivet with a flattened head.

**flathead rivet** *See* **flathead (2.).**

**flat jack** A hydraulic jack made of light-gauge metal welded into a flat

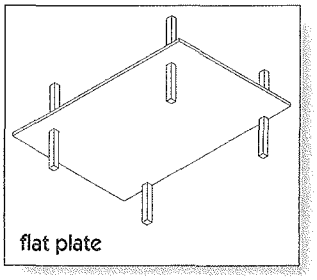
rectangular shape that expands under hydraulic pressure.

**flat molding** A thin, flat molding used only for interior and exterior finish work.

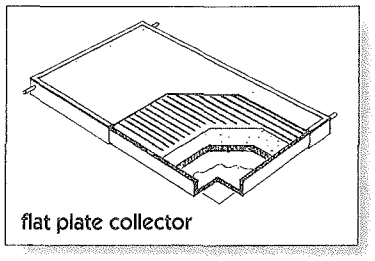
**flat paint** A paint that dries to a low gloss or flat finish.

**flat piece of aggregate** One in which the ratio of the width to the thickness of its circumscribing rectangular prism is greater than a specified value. *See also* **elongated piece of aggregate.**

**flat plate** A flat slab without column capitals or drop panels. *See* also **flat slab.**


flat plate

**flat plate collector** A panel of metal or other suitable material used to convert sunlight into heat. Flat plate collectors are usually a flat black color and transfer the collected heat to circulating air or water.


flat plate collector

**flat pointing (flat joint pointing)** **1.** The process of finishing mortar in the joints of brickwork by applying it flush with the masonry surface, using a flat trowel. **2.** A flush masonry joint with a narrow groove in the center of the joint for ornamentation.

**flat rolled** Steel plates, sheets or strips manufactured by rolling the steel through flat rollers.

**flat roof** A roof with only enough pitch to allow drainage.

**flat sawing** Sawing logs with parallel cuts, a conversion method that wastes less timber than others.

**flat seam** A seam between two joined sheets of metal, formed by turning up, folding, flattening, and finally soldering the edges.

**flat skylight** A skylight installed in a horizontal position, slanted only enough to permit rainwater runoff.

**flat slab** A concrete slab reinforced in two or more directions, generally with drop panels at supports, but without beams or girders. *See also* **flat plate.**

**flat spot** A spot on a glossy painted surface that fails to absorb the paint properly, usually because of a porous place on the undercoat, resulting in a flat finish that flaws the appearance of the surface.

**flatting agent** A paint or coating additive that reduces gloss.

**flat varnish (matte varnish)** A varnish that dries to a finish with low gloss or no gloss.

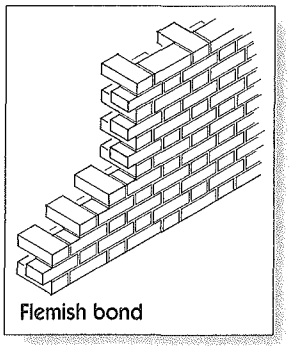
**flat wall brush** A paint brush, usually 4" to 6" (10 to 15 cm) wide, with long stiff bristles that are often synthetic.

**flatwork** A general term that refers to any concrete slab that requires finishing, such as a walkway or floor.

**flaunch** *See* **flanch.**

**fleck** A small spot or mark in wood, usually caused by wood rays or other irregular growth characteristics.

**Flemish bond** A brick wall laid up with alternate headers and stretchers in each course. Headers in the next course are centered over the stretchers in the course below.


Flemish bond

**Flemish diagonal bond** Alternating headers and stretchers in a course, followed by a course of stretchers.

**Flemish double-stretcher bond** A configuration of a header alternated with two stretchers.

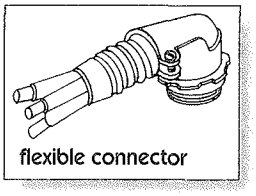
**Flemish garden bond** A configuration of a header alternated with three stretchers.

**fleur-de-lis** The French royal lily adapted to ornamentation in late Gothic architecture.

**flex (Greenfield)** *See* **flexible metal conduit.**

**flexible conduit** *See* **flexible metal conduit, flexible metallic hose, flexible nonmetallic tubing,** *and* **flexible seamless tubing.**

**flexible connector** **1.** In ductwork, an airtight connection of nonmetallic materials installed between ducts or between a duct and fan to isolate vibration and noise. **2.** A connector in a piping system that reduces vibration along the pipes and compensates for misalignment. **3.** An electrical connection that permits movement from expansion, contraction, vibration, and/or rotation.


flexible connector

# F

**flexible coupling** A mechanical connection between rotating parts that adapts to misalignment, such as a universal joint.

**flexible membrane liner (FML)** A liner used to contain liquids or run-off in soil or on the soil surface.

**flexible metal conduit** A flexible raceway of circular cross section for pulling electric cables through.

**flexible metallic hose** Hose made from a continuous interlocking coil of metal with packing wound in the grooves, used for fluids at low pressure.

**flexible-metal roofing** Roof coverings of flat sheet metal, such as copper, galvanized iron, or aluminum.

**flexible mounting** A flexible support for machinery to reduce vibration between the machinery, its foundation or slab. Flexible mountings are usually made of rubber, neoprene, steel springs, or a combination of these.

**flexible nonmetallic tubing (loom)** A flexible tubing with a smooth interior and a wall of nonconducting, fibrous material, used as a mechanical protection for electric conductors.

**flexible pavement** A pavement structure that maintains intimate contact with and distributes loads to the subgrade and depends on aggregate interlock, particle friction, and cohesion for stability. Cementing agents, where used, are generally bituminous materials, as contrasted to Portland cement in the case of rigid pavement. *See also* **rigid pavement**.

**flexible seamless tubing** A seamless, welded, or soldered metal tube widely used for volatile gases and gases under pressure.

**flexural bond** In prestressed concrete, the stress between the concrete and the tendon that results from external loads.

**flexural rigidity** A measure of stiffness of a member, indicated by the product of the modulus of elasticity and moment of inertia divided by the length of the member.

**flexural strength** A property of a material or structural member that indicates its ability to resist failure in bending. *See also* **modulus of rupture**.

**flier** A simple stair tread with parallel sides and a straight flight.

**flight** A run of steps without intermediate landings.

**flight header** A horizontal structural member used to support stair strings at a floor or platform.

**flight rise** The vertical distance between two levels connected by a flight of stairs.

**flight run** The horizontal distance between top and bottom risers in a flight of stairs.

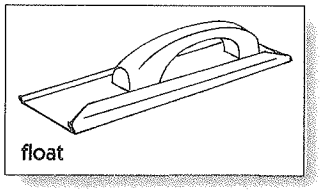
**flint** A variety of chert. *See also* **chert**.

**flitch** **1.** A log, sawn on two or more sides, from which veneer is sliced. **2.** Thin layers of veneer sliced from a cross section of a log, as opposed to turning the log on a lathe and peeling from the outer edge in a continuous ribbon. Flitch veneers are often kept in order as they are sliced from a log. This provides a pattern to the veneer after it is laid up in panels. Panels that are laid up with matching flitches are said to have a flitch pattern. **3.** A product cut from a log by sawing on two sides and leaving two rounded sides, often used for joinery.

**flitch beam (flitch girder, sandwich beam)** A beam built up by two or more pieces bolted together, sometimes with a steel plate in the middle. The pieces, or flitches, are cut from a squared log sawn up the middle. The outer faces of the log are placed together, with their ends reversed to equalize their strength.

**flitch plate** The steel plate pressed between components of a flitch beam.

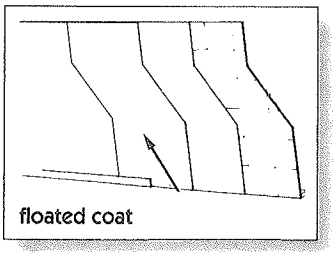
**float** **1.** A tool, usually of wood, aluminum, magnesium, rubber, or sponge, used in concrete or tile finishing operations to impart a relatively even but still open texture to an unformed fresh concrete surface.* **2.** To rest by a dozer blade's own weight or to be held from digging by upward pressure of a load of dirt against its mold board. **3.** A body floating on water, which opens a valve in a water tank when the water level falls. **4.** A tool used to polish marble. **5.** In manufacturing, the amount of material in a system or process, at a given point in time, that is not being directly employed or worked upon. **6.** In projects, the amount of time that an activity may slip in its start and completion before becoming critical.


float

**float ball** *See* **float (3.)**.

**float coat** A finish coat of cement paste applied with a float.

**floated coat (topping coat)** A layer of plaster applied to a surface with a float, usually the intermediate coat between the scratch coat and the finish coat.


floated coat

**float finish** A rather rough concrete surface texture obtained by finishing with a float.

**float glass** A high quality, flat glass sheet with smooth surfaces, manufactured by floating molten glass on a bed of molten metal at a temperature high enough for the glass to flow smoothly.

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**floating** The operation of finishing a fresh concrete or mortar surface by use of a float, preceding troweling when that is the final finish.

**floating floor** A floor used in sound-insulating construction. The finish floor assembly is isolated from the structural floor by a resilient underlayment or by resilient mounting devices for machinery. The construction isolates machinery from the building frame. *See also* **laminate flooring.**

**floating foundation** A reinforced concrete slab designed to move with the surface of the ground without structural damage.

**floating rule** A long straightedge used as a float.

**floating wood floor** A floating wood floor constructed on a layer of resilient material that isolates it from the building structure.

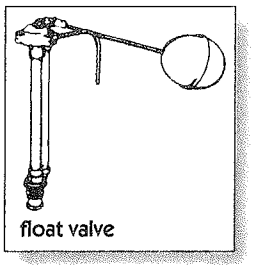
**float rod** In a toilet, the threaded rod that links the ballcock and float.

**float scaffold** A large platform supported by ropes from overhead.

**floatstone** A stone used in bricklaying to rub the rough spots and ax marks from curved work.

**float trap** A steam trap regulated by a float in the condensate chamber.

**float valve (float-controlled valve)** A valve controlled by a float in a chamber, such as the float valve in a tank for a water closet.


float valve

**floccuation** A process used to remove extremely fine particles from water.

**flood coat** The top layer of bitumen poured over a built-up roof, which may have gravel or slag added as a protective layer. *See* **flow coat.**

**flooding** The stratification of different colored pigments in a film of paint.

**flood-level rim** The edge of a plumbing fixture or receptacle over which water will flow if the device is full.

**floodlight** **1.** A projector type of luminaire designed to light an area or object to a level of illumination higher than the surrounding illumination. **2.** A metal housing containing one or more lamps used to illuminate a stage uniformly.

**floodlighting** Providing illumination of an area or object at a level greater than the surrounding, ambient lighting. Space discovered during alterations within an existing building that was formerly believed to be "lost" or nonexistent.

**flood plain** A land area that may be subject to flooding. Used in plot plans and to determine suitability for construction and insurability.

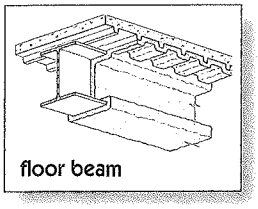
**floor** **1.** The surface within a room upon which one walks. **2.** The horizontal division between two stories of a building, formed by assembled structural components or a continuous mass, such as a flat concrete slab.

**floor arch** A flat arch used as a floor.

**floor/area ratio** The ratio of the total floor area of a building to the area of the building lot.

**floor batten** A batten attached to a concrete subfloor, to be used as a nailer for a wood-finish floor.

**floor beam** Any beam that supports the floor of a building or the deck of a bridge.


floor beam

**floorboard** One of the boards or planks used to form the finished floor.

**floor box** A metal electrical outlet box providing outlets from conduits in or under the floor.

**floor brick** A brick selected as a floor finish because of its smooth, dense texture and resistance to abrasion.

**floor cavity** In the science of lighting, the area formed by the workplane, the floor, and the walls between the two.

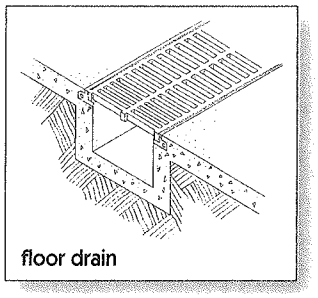
**floor clamp** A clamp used to force floor boards together while nailing them to joists.

**floor clearance** The distance between the bottom of a door and the finished floor or threshold.

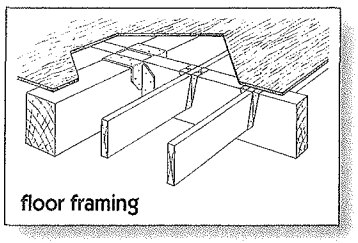
**floor clip** *See* **sleeper clip.**

**floor closer** A device installed in a recess in the floor below a door used to regulate the opening and closing swing of the door.

**floor drain** A fixture set into a floor, used to drain water into a plumbing drainage system.


floor drain

**floor framing** Structural supports for floor systems, including joists, bridging, and subflooring.


floor framing

# F

**floor furring** Wood furring used to raise a finished floor above the subfloor and provide a space for piping or conduit.

**floor guide** A groove in a floor or hardware mounted on a floor, used as a guide for a sliding door.

**floor hanger** *See* **stirrup (2.)**.

**floor hatch** A unit with a hinged panel, providing access through a floor.

**floor hole** An opening in a floor, roof, or platform measuring less than 12" in its least dimension, so that a person cannot fall through. *See also* **floor opening**.

**flooring** **1.** A tongued and grooved piece of lumber used in constructing a floor. The basic size of flooring is 1" x 4", although other sizes are used. Flooring is sold mostly in superior and prime grades, and is produced either as vertical grain or flat grain. **2.** Any finished floor material.

**flooring cement** *See* **Keene's cement**.

**flooring nail** A steel nail with a deformed shank, often helically threaded, having a countersunk head and a short diamond-shaped point.

**flooring saw** A handsaw with teeth on both edges and a blade that tapers to a narrow point, used to cut holes in wood floors.

**floor joist** Any light beam that supports a floor.

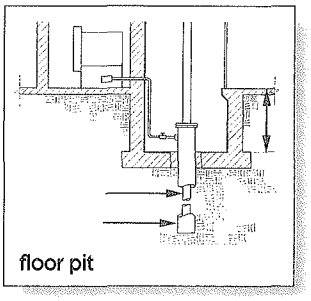
**floor light** A heavy glass pane in a floor that transmits light to the room below.

**floor load** The live load for which a floor has been designed, selected from a building code, or developed from an estimate of expected storage, equipment weights, and/or activity.

**floor opening** A hole or opening in a floor, roof, or platform that measures 12" or more in its least dimension, wide enough to permit a person to fall through. *See also* **floor hole**.

**floor panel** A prefabricated section of floor, consisting of finish floor, subfloor, and joists.

**floor pit** Any deep recess in a floor used to provide access to machinery, such as an elevator pit.

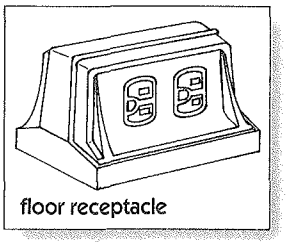

floor pit

**floor plan** A drawing showing the outline of a floor, or part of a floor, interior and exterior walls, doors, windows, and details such as floor openings and curbs. Each floor of a building has its own floor plan.

**floor plate** **1.** A metal plate set into a floor, sometimes fitted with slots to which equipment may be fastened. **2.** A steel plate with a raised pattern on the surface that helps prevent accidents due to slipping.

**floor plug** *See* **floor receptacle**.

**floor receptacle** An electric outlet set flush with the floor or mounted in a short pedestal at floor level.

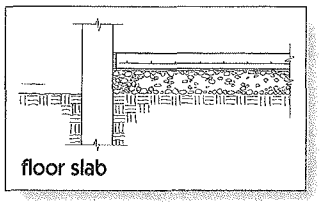

floor receptacle

**floor register** A register set flush with the floor that allows the passage of air.

**floor sander** A power sander used for finishing floors.

**floor sealer** A liquid sealer applied with a brush, sprayer, or squeegee to seal floor surfaces, such as concrete or wood.

**floor slab** A structural slab, usually concrete, used as a floor or a subfloor.


floor slab

**floor sleeve** A short tube set into and penetrating a floor.

**floor span** **1.** The distance, in inches, between the centers of floor joists in a floor system. **2.** The span covered by floor joists between supports.

**floor stilt** A device attached to the bottom of a door frame to keep it above the finished floor.

**floor stop** A door stop mounted on the floor.

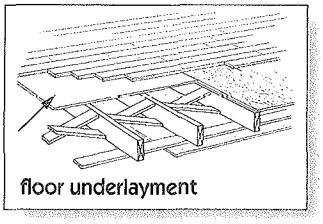
**floor system** The entire system of components that makes up a floor, including joists, subfloor, finish floor, etc.

**floor tile** **1.** Modular units used as finish flooring. Floor tile may be comprised of resilient (asphalt, vinyl, rubber, or cork), ceramic, or masonry materials. **2.** Structural units used for floor or roof slab construction.

**floor truss** A manufactured truss used as a floor joist.

**floor-type heater (floor furnace)** An air-heating unit mounted below a floor grille or grate. Warm air rises from the center of the grille and cold air returns at the perimeter of the grille.

**floor underlayment** Particleboard, plywood, waferboard, or similar products used on a subfloor to provide a smooth surface on which to lay the finish floor. *See also* **carpet underlayment**.


floor underlayment

**floor varnish** A tough, durable varnish used on floors.

**flow** **1.** Time-dependent irrecoverable deformation. *See* **rheology.** **2.** A measure of the consistency of freshly mixed concrete, mortar, or cement paste in terms of the increase in diameter of a molded, truncated cone specimen after liming a specified number of times. *See also* **flow table.**

**flow brazing** A brazing technique that brings metal to brazing temperature by pouring a molten filler metal over it.

**flow coat** A paint coating achieved by immersing an object in streams of paint and draining off the excess.

**flow cone (flow factor)** **1.** A device for measurement of grout consistency in which a predetermined volume of grout is permitted to escape through a precisely sized orifice. The time of efflux (flow factor) is used to determine the consistency. **2.** The mold used to prepare a specimen for the flow test.

**flow control valve** A cylindrical pressure-compensating valve that regulates the flow of water. Rated in gpm or gpd.

**flow-downs** Clauses from a prime contractor's contract with the government that are incorporated into the prime's subcontracts.

**flow factor** *See* **flow cone.**

**flow form features** Water features in a building that are designed to maintain comfortable levels of humidity and acoustics, as well as be aesthetically pleasing.

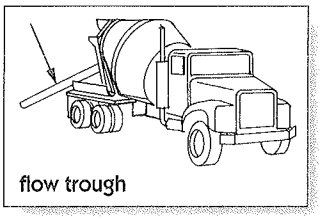
**flow pressure** The pressure at or near an orifice during full fluid flow.

**flow promoter** A substance added to a surface coating, such as paint, to enhance the brushability, flow, and leveling properties.

**flow reducer** A water-conserving mechanism attached downstream from a building's water shut-off valve that reduces the amount of water flow received from the street.

**flow table** A jigging device used in making flow tests for consistency of cement paste, mortar, or concrete. *See also* **flow (2.).**

**flow trough** A sloping trough used to convey concrete by gravity flow from a transit mix truck, or a receiving hopper to the point of placement. *See also* **chute.**


flow trough

**flow welding** A welding technique that brings metal to welding temperature by pouring a molten filler metal over it.

**flue** **1.** A noncombustible and heat-resistant passage in a chimney used to convey products of combustion from a furnace fireplace or boiler to the atmosphere. **2.** The chimney itself, if there is a single passage.

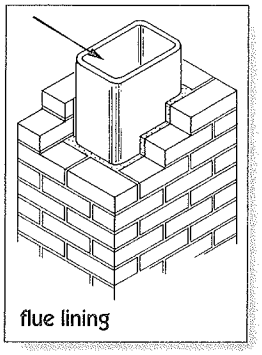
**flue collar** The part of a fuel-burning appliance that attaches to a draft hood or vent connector.

**flue damper** An automatic door in a furnace or boiler's flue that closes when the burner is off, reducing heat loss.

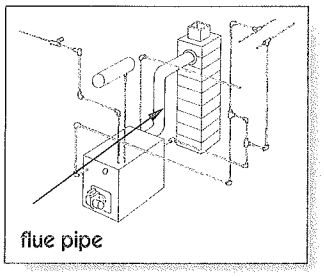
**flue effect** *See* **chimney effect.**

**flue grouping** The consolidation of multiple flues in one chimney or stack to limit the number of vertical shafts through a structure.

**flue lining (chimney lining)** The lining of a chimney flue composed of heat-resistant firebrick or other fireclay materials, which prevents fire, smoke, and gases from escaping the flue to contaminate surroundings.


flue lining

**flue pipe** A tight duct that conveys products of combustion to a chimney or flue.


flue pipe

**fluid-applied air barrier** A rolled or sprayed-on air barrier application to prevent air leakage and moisture accumulation in walls. Flashing, tape, and fasteners are not needed.

**fluid-filled column** A hollow column, usually rectangular, filled with liquid to increase its fire endurance. A series of such columns may be connected to an expansion tank to increase circulation and endurance.

**fluidifier** An admixture employed in grout to decrease the flow factor without changing water content.

**fluing** Expanding or splaying, as in the construction of a window, by building the face of a jamb at an oblique angle to the wall in which it is set, enlarging the opening on one or both sides.

**flume** A channel made of wood, metal, or concrete and used for drainage purposes on a grade, trestle, or bridge.

# F

**fluorescence** Visible light generated and emitted from a substance such as a phosphor by absorbing radiation of shorter wavelengths.

**fluorescent lamp** A low-pressure mercury electric-discharge lamp in which a phosphor coating on the inside of the tube transforms some of the ultraviolet energy generated by the discharge into visible light.

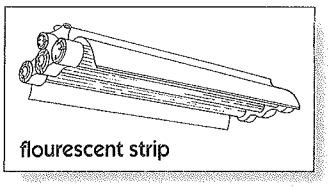
**fluorescent lighting fixture** A luminaire designed for fluorescent lamps.

**fluorescent pigments** Pigments that absorb ultraviolet radiant energy and convert it to brilliant, visible light.

**fluorescent reflector lamp** A fluorescent lamp with the coating on only a part of its cross section so that the light produced will be directed.

**fluorescent snaking** The visible twisting of the arc in a new fluorescent lamp, usually corrected by turning the appliance on and off several times.

**fluorescent strip** A luminaire in which fluorescent lamps are mounted on a wiring channel containing the ballast and lamp sockets. Usually reflectors or lenses are not used.


flourescent strip

**fluorescent U-lamp** The tubular fluorescent lamp bent at 180° through its center, forming a U-shape.

**Fluorinated Ethylene Propylene (FEP)** A soft plastic copolymer with relatively low tensile strength, high chemical resistance, and low coefficient of friction. Applications include coatings and protective linings, chemical and medical equipment, extruded insulation and glazing film for solar panels. A common brand name is Teflon®.

**fluosilicate** Magnesium or zinc silica-fluoride used to prepare aqueous solutions sometimes applied to concrete as surface-hardening agents.

**flush** **1.** Having a surface or face even with the adjacent surface. **2.** To send a quantity of water down a pipe to clean, fill, or empty it.

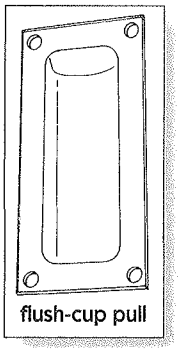
**flush ball** *See* **flapper.**

**flush bolt** A door bolt or other bolt mounted on a surface.

**flush bolt backset** The distance between the center line of a door bolt and the vertical center line of the door's leading edge.

**flush bushing** In plumbing, a bushing without a shoulder and engineered to fit flush into the fitting with which it connects.

**flush-cup pull** A door pull for a sliding door. The pull is mortised flush into the door and has a curved recess serving as a finger grip.

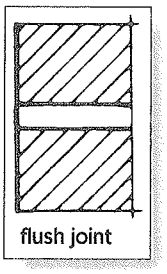

flush-cup pull

**flush door** A door with flush surfaces and concealed structural parts.

**flush glazing** Glazing in which glass is set in a channel, which may be formed by a rabbet and stops, in a frame. The glazing, formed or a compound, is flush with the frame at the top of the channel.

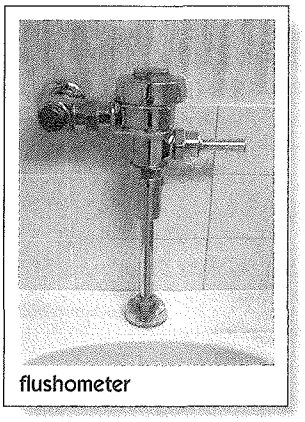
**flush-head rivet** A rivet with a countersunk head.

**flush joint** Any joint with its surface flush with the adjacent surfaces.


flush joint

**flush molding** Any molding that is flush with the surface on which it sits.

**flushometer (flushometer valve)** A flushing valve, designed for use without a flush tank or cistern, that is activated by direct water pressure to deliver a certain quantity of water for flushing needs.


flushometer

**flush-out** A set period after a building is constructed and before it is occupied that allows time for VOCs to release and materials to dry.

**flush panel** A panel in which the exposed surface is in the same plane as the exposed surfaces of the surrounding frame.

**flush paneled door** A door with one or both surfaces in the same planes as the surfaces of the rails and stiles.

**flush pipe** A straight pipe that carries flushing water from a cistern or other

main source to plumbing fixtures, such as toilets, equipped with a flushing function.

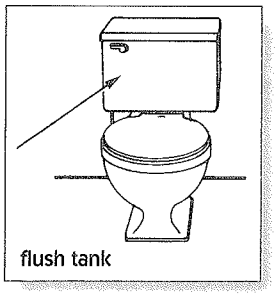
**flush plate** In electricity, the metal or plastic cover that shields the flush wiring device in a wiring box and provides covering for an outlet or switch, with holes cut into its face to accommodate switch handles and plugs.

**flush ring** A door pull mortised into a door, having a pulling ring that folds flat into a recess when not in use.

**flush soffit** The smooth, visible underside of a flight of spandrel steps.

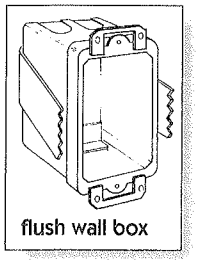
**flush switch** An electrical switch installed in a flush wall box in such a way that only its front face is exposed to view.

**flush tank** A tank that holds water for flushing one or more plumbing fixtures.


flush tank

**flush valve** A valve installed in the bottom of a toilet tank to discharge the water needed to flush the fixture.

**flush wall box** A wall box that houses an electric device and is embedded in a wall, floor, or ceiling with its exposed face in the same plane as the surrounding surface.


flush wall box

**flush water** *See* **wash water.**

**flute** In architecture, one of multiple grooves or channels of semi-circular to semi-elliptical sections, used to decorate and to embellish members, such as the shafts of columns.

**flux** **1.** A substance that facilitates the fusion of metals and helps prevent surface oxidation during welding, brazing, and soldering. **2.** A liquefied bituminous substance used to soften other bituminous materials.

**flux-cored arc welding** A welding process that produces coalescence by the heating of an arc between the materials being welded and a continuous electrode of filler metal.

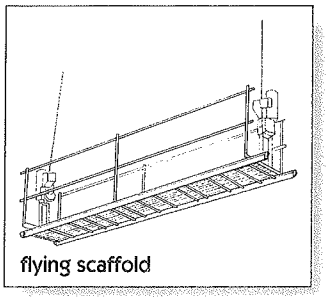
**fly ash** The finely divided residue resulting from the combustion of coal which is transported from the fire box through the boiler by flue gases. Fly ash is a common additive to concrete to improve strength, workability, and waterproof qualities.

**flying bond** A masonry bond formed by laying occasional headers at random intervals.

**flying buttress** A masonry structure that transfers the horizontal thrust of a roof or vault to a detached pier or buttress, usually sloping slightly towards the pier or buttress.

**flying form** A system that can be used repetitively and moved in large sections not requiring disassembly.

**flying scaffold** Staging suspended by ropes or cables from outrigger beams attached at the top of a structure.


flying scaffold

**flying shore** A horizontal member that provides temporary support between two walls.

**fly rafter** A gable-end rafter on a roof overhang that runs parallel to the common rafters and is supported by the lookout rafter.

**flywheel effect** The tendency of a building to retain heat due to its mass-thermal-inertia.

**foam backer board** Foam plastic used in siding applications.

**foam concrete** A lightweight, cellular concrete made by infusing an unhardened concrete mixture with prepared foam or by generating gases within the mixture.

**foam core** The center of a plywood *sandwich panel*, consisting of plastic foam between wood veneers. The foam may be introduced in a liquid form that is forced under pressure into a space between the wood veneer skins, or the skins may be applied to a rigid plastic foam board.

**foamed concrete (foam concrete)** *See* **concrete, foamed.**

**foamed polystyrene** A foamed plastic, weighing about 1 lb. per cu.ft. (0.016 g/cc), which has a high insulation value, is low in cost, and is grease-resistant.

**foam glass (cellular glass, expanded glass)** A thermal insulation made by foaming glass with hydrogen sulfide. Foam glass has a closed cell structure and is a low fire hazard material. It is manufactured in the form of block or board with a density of 9 to 10 lb. per cu. ft. (14 to 16 kg per cu m).

**foaming adjuvant** A surfactant that forms a fast-draining foam to increase contact of the spray with plant surfaces, to insulate the plant surface, and to decrease the rate of evaporation.

**foaming agent** A substance incorporated into plastic mixtures of concrete, rubber, gypsum, or other materials that helps to produce a light foamy consistency by releasing gases into the mixture.

# F

**foam-in-place insulation** A plastic foam employed for thermal insulation, prepared by mixing an insulation substance with a foaming agent just before it is poured or sprayed with a gun into the enclosed receptacle cavities.

**foam suppressant** In pesticides, an additive that suppresses surface foam and entrained air to allow for faster tank refilling while reducing the risk of exposure to toxic chemicals in the pesticidal foam.

**fog** The visibility and path of the effluent air stream exiting a cooling tower and remaining close to the ground.

**fog curing** **1.** The storage of concrete in a moist room in which the desired high humidity is achieved by the atomization of fresh water. *See also* **moist room.** **2.** The application of atomized fresh water to concrete, stucco, mortar, or plaster.

**fog room** *See* **moist room.**

**fog sealed** Descriptive of surfaces lightly treated with asphalt without a mineral cover.

**foil** **1.** In masonry, one of multiple circular or nearly circular holes, set tangent to the inside of a larger arc, that meet each other in pointed cusps around the arc's inner perimeter. **2.** A metal formed into thin sheets by rolling.

**foil-backed gypsum board** A gypsum board with aluminum foil on one face. The foil acts as a vapor barrier.

**foil-backed insulation** Insulation that has a heat-reflecting foil on one side.

**folded plate** **1.** A framing assembly composed of sloping slabs in a hipped or gabled arrangement. **2.** A prismatic shell with an open polygonal section.

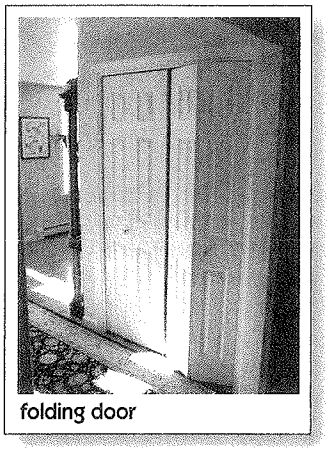
**folded-plate construction** A type of construction used with span roofs. Thin, flat elements of concrete, steel, or timber are connected rigidly at angles to each other, similar to accordion folds, to form members with deep cross sections.

**folded plate roof** A roofing system consisting of sloping plates in a repetitive gable arrangement, usually a combination of plywood skins and lumber trusses. A folded plate roof permits a large, clear floor area.

**folded seam** Joint between sheets of metal where the edges are crimped together and folded flat.

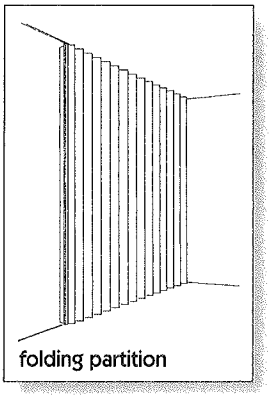
**folding casement** **1.** One of two casements with rabbeted masting stiles, installed in a single frame with a mullion. **2.** One of several casements hinged together in a way that permits them to open and fold in a limited space.

**folding door** An assembly of two or more vertical panels hinged together so they can open or close in a confined space. A floor- or ceiling-mounted track is usually provided as a guide.



folding door

**folding partition** **1.** Large panels hung from a ceiling track, sometimes supported also by a floor track, which form a solid partition when closed, but stack together when the partition is maneuvered into an open position. **2.** A partition, faced with fabric and hung from a ceiling track, that folds up flexibly when opened like the pleated balloons of an accordion.



folding partition

**folding rule** A rule made of lengths that are joined by pivots so it can be folded when not in use.

**folding stair** *See* **disappearing stair.**

**foliated joint** A joint made between two boards by fitting their rabbeted edges together, forming a continuous surface on either face.

**follower** A pile affixed member that allows the pile to be countersunk.

**foot** **1.** The bottom or base of an object. **2.** A unit of measurement of length in the English system. **3.** A projection on a cylindrical roller used to compact a layer of earth fill.

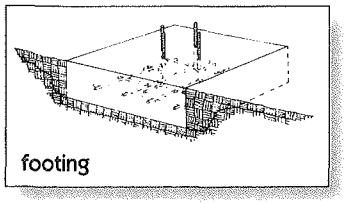
**foot block** A mat of concrete, steel, or timber used to distribute a vertical load from a post or column over an area of supporting soil.

**foot bolt** A spring-operated bolt fastened to the lower part of a door and controlled with pressure of the foot.

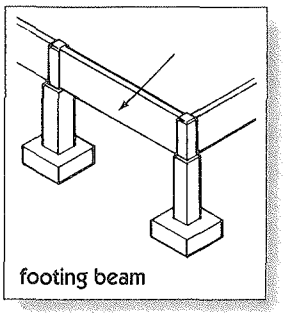
**footcandle** The common U.S. unit of measurement of the illuminance on a surface. One footcandle is equal to one lumen per sq. ft. The international unit of measurement is the lux. One footcandle is equal to 10.76 lux.

**foot cut** *See* **seat cut.**

**footing** That portion of the foundation of a structure that spreads and transmits the load directly to the soil.

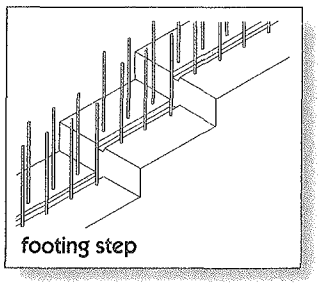



**footing beam** **1.** A reinforced concrete beam connecting pile caps or spread footings to distribute horizontal loads caused by eccentric loading. **2.** The tie beam in a roof system. *See also* **grade beam.**




**footing course** A broad course of masonry at the foot of a wall, which helps prevent the wall from settling.

**footing step** A change in elevation of a strip footing.




**footing stop** In concrete work, a temporary board used to close up concrete until work can resume.

**footlambert** A quantitative unit for measuring the amount of reflected light. The footcandles striking a diffusing surface multiplied by the reflectance of the surface equals the luminance in footlamberts.

**foot lift** A simple device operated by foot to lift and position drywall for installation.

**foot-meter rod** A surveyor's rod graduated in feet and tenths on one side, and meters and hundredths on the other.

**footpiece** An item of ductwork in a heating, air-conditioning, or ventilating system that serves to change the direction of the airflow.

**footplate** A timber used in wood frame construction to disperse heavily concentrated structural loads among a number of supporting members, as a plate installed below a row of wall studs.

**foot-pound** A unit measure of work or energy in the English System, equal to the force in pounds multiplied by the distance in feet through which it acts.

**footprint** The area that falls directly beneath and shares the same perimeter as a structure.

**footstall (plinth)** The base of a pier or pillar, characterized by a particular architectural order or treatment.

**force, compression** A force acting on a body, tending to compress the body. (Pushing action).

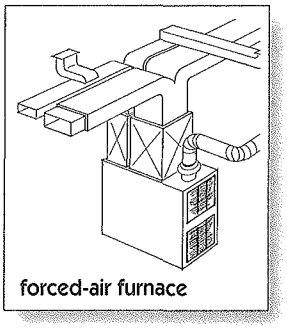
**force, shear** A force acting on a body which tends to slide one portion of the body against the other side of the body. (Sliding action).

**force, tension** A force acting on a body tending to elongate the body (Pulling action).

**force, torsion** A force acting on a body that tends to twist the body. (Twisting action).

**force account** Work ordered on a construction project without an existing agreement on its cost, and performed with the understanding that the contractor will bill the owner according to the cost of labor, materials, and equipment, plus a certain percentage for overhead and profit.

**forced-air furnace** A warm-air furnace, outfitted with a blower, that heats an area by transmitting air through the furnace and connecting ducts.




**forced circulation** The circulation of a fluid by mechanical means, as by a pump or fan.

**forced convection** Heat transfer produced by the forced circulation of air, water, etc.

**forced draft** A draft of air that is mixed with fuel before the mixture is fed into the combustion chamber of a furnace or boiler.

**forced-draft boiler** A boiler equipped with a power-driven fan that feeds air into the burner and boiler and expels smoke, gases, and ash through the chimney.

**force majeure** An unexpected or unanticipated event that, if it occurs, can provide the owner or contractor, or both, a legitimate reason to delay the project, cease work, or cancel the contract without penalty. A force majeure clause in a construction contract attempts to define those events. Such events may be, for example, natural disasters deemed "acts of God," unanticipated government mandates, civil disturbances, and so forth.

# F

**forebay** A settling basin or plunge pool constructed at the incoming discharge points of a stormwater system to allow sediment to settle from incoming stormwater in a location that facilitates maintenance.

**forecast** **1.** An estimate and prediction of future conditions and events based on information and knowledge available at the time of the forecast. **2.** When in respect to resource requirements, considering future conditions and events, it is a synonym for an estimate.*

**foreclosure** The legal transfer of a property deed or title to a bank or other creditor because of the owner's failure to pay the mortgage, whereupon the owner loses the right to the property.

**foreclosure sale** The optional right of the mortgagee or lending institution to sell mortgaged property if the mortgagor fails to make payment, applying proceeds from the sale toward the outstanding debt.

**forepoling** In heavy construction and excavation, horizontal boards driven into the crown of a tunnel heading to establish a safety roof for heading work.

**forest land** As defined by the U.S. Forest Service, forest land is land at least 10% stocked with live trees, or land formerly having such a tree cover and not currently developed for nonforest use. The minimum area of forest land recognized is one acre.

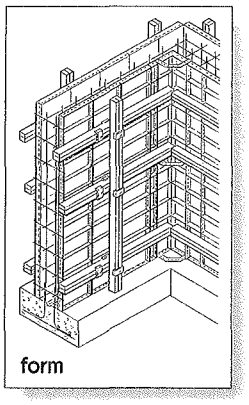
**Forest Stewardship Council (FSC)** An international organization formed in 1993 that is concerned with ecological, social, and economic aspects of the forest management practices used to produce wood products. In order to earn Forest Stewardship Council certification, a wood product must meet certain criteria as it moves from the logging site through to the end-user.

**forging** A piece of metal worked into a desired shape by one or more processes, including pressing, rolling, hammering, and upsetting.

**forked tenon** A joint formed by a tenon cut into a long rail and inserted into an open mortise.

**forklift truck** A self-powered vehicle equipped with strong prongs, or forks, that can be raised or lowered. A forklift truck is used to move objects, especially material on pallets, from one location and/or level to another.

**form** A temporary structure or mold for the support of concrete while it is setting and gaining sufficient strength to be self-supporting. *See also* **formwork**.


form

**formaldehyde** A toxic, colorless, pungent-smelling chemical used to manufacture building materials and products, such as glue in fiberboard. Sources of formaldehyde include building materials (such as cabinetry); smoking; household products; and the use of unvented, fuel-burning appliances, such as fork lifts, gas stoves, and kerosene space heaters.

**form anchor** A device used to secure formwork to previously placed concrete of adequate strength. The device is normally embedded in the concrete during placement.

**format** In construction, the standard arrangement of a project manual as set by the A.I.A. with bidding information, contract forms, conditions of the contract, and 16 subdivisions of specifications.

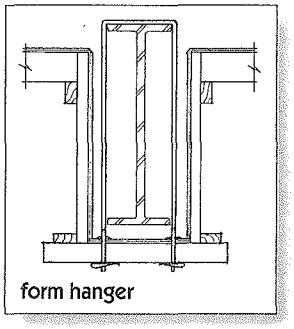
**form board** A board or sheet of wood used in formwork.

**form clamp** Clamp that holds concrete forms in place.

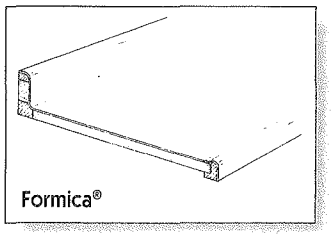
**form coating** A liquid applied to interior formwork surfaces for a specific purpose, usually to promote easy release from the concrete, to preserve the form material, or to retard the set of the near-surface matrix for preparation of exposed-aggregate finishes.

**formed plywood** Curved plywood, prepared by a special pressing technique using rigid forming dies. *See also* **molded plywood**.

**form hanger** A device used to support formwork from a structural framework. The dead load of forms, weight of concrete, and construction and impact must be supported.


form hanger

**Formica®** The trade name for high-pressure laminated plastic material used where heat-, chemical-, and water-resistant surfaces are needed; for example, for wall coverings, as veneer for plywood panels, and for kitchen and bath cabinet and counter tops.


Formica®

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**forming** A process of shaping metal by a mechanical process other than machining, forging, or casting.

**form insulation** Thermal insulation, equipped with an airtight seal, that is applied to the exterior of concrete forms. Used to preserve the heat of hydration at required levels so that concrete can set properly in cold weather.

**form lining** Selected materials used to line the face of formwork in order to impart a smooth or patterned finish to the concrete surface, to absorb moisture from the concrete, or to apply a set-retarding chemical to the formed surface.

**form nail** *See* **double-headed nail.**

**form oil** Oil applied to the interior surface of formwork to promote easy release from the concrete when forms are removed.

**form ply** Plywood commonly used for constructing forms.

**form pressure** Lateral pressure acting on vertical or inclined formed surfaces, resulting from the fluid-like behavior of the unhardened concrete.

**form release agent** *See* **release agent.**

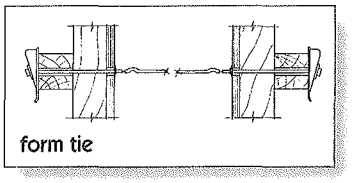
**form scabbing** The inadvertent removal of the surface of concrete as a result of adhesion to the form.

**form spreader** *See* **spreader.**

**form stop** A wooden piece used in concrete formwork to regulate or limit the flow of concrete at the end of a work day. Also used to create drops and special openings.

**form stripping agent** *See* **release agent.**

**form tie** A tensile unit adapted to prevent concrete forms from spreading due to the fluid pressure of freshly placed, unhardened concrete.


form tie

**formwork** The total system of support for freshly placed concrete, including the mold or sheathing that contacts the concrete, as well as all supporting members, hardware, and necessary bracing.

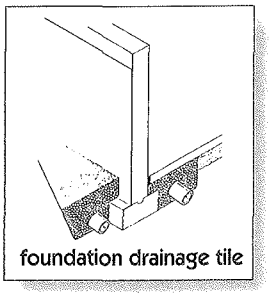
**forty** A standard unit of measurement used in surveying and describing units of forest land, equivalent to 40 acres, or 1/16th of a square mile.

**forward-curved fan** Centrifugal fan with blades that curve forward in the direction of the wheel rotation.

**foundation** The entire masonry substructure below the first floor or frame of a building, including the footing upon which the building rests.

**foundation bolt** *See* **anchor bolt.**

**foundation drainage tile** Tile or piping, either porous or set with open joints, used to collect subsurface water or for the dispersion of effluent.


foundation drainage tile

**foundation engineering** The category of engineering concerned with evaluating the ability of a locus to support a given structural load, and with designing the substructure or transition member needed to support the construction.

**foundation vent** Vent openings in a foundation wall that allow for exchange of air and reduce moisture.

**foundation wall** That part of the foundation of a building forming a retaining wall for the portion of the building that is below grade.

**fourths** A common grade of lumber exported from Scandinavia and Eastern Europe.

**four-way reinforcement** *See* **reinforcement, four-way.**

**four-way switch** A switch used in a wiring layout to allow a circuit to be turned on or off from more than two places. Two three-way switches are used, and the remainder are four-way.

**foxtail** *See* **foxtail wedge.**

**foxtail saw** *See* **dovetail saw.**

**foxtail wedge** A small wedge used to spread the split end of a bolt in a hole or the split end of a tenon in a mortise to secure the bolt or tenon.

**foyer** A subordinate space between an entrance and the main interior of a theater, hotel, house or apartment.

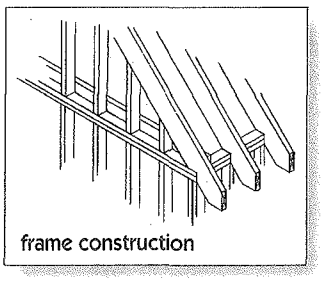
**fracture load** *See* **breaking load.**

**frame** An assembly of vertical and horizontal structural members.

**frame building** *See* **framed building.**

**frame clearance** The clearance between a door and the door frame.

**frame construction** A construction system in which the structural parts are wood or dependent on a wood framework for support. *See also* **framing.**


frame construction

# F

**framed building** A type of building construction in which vertical loads are carried to the ground on a frame.

**framed door** Any door with a stiff frame made up of a top rail, lock rail, bottom rail, lock stile, and hanging stile.

**framed floor** *See* **double floor.**

**framed ground** One of the vertical wood members fastened around an opening to which a door casing is attached, usually built with a tenon joint between the head and doorjambs.

**framed joist** A joist that is specially cut or notched in order to be joined securely with other joists or timbers.

**framed partition (trussed partition)** A partition made by covering framing of studs, braces, and struts that form a truss.

**frame gasket** A strip of flexible material applied to the stop of a door frame to ensure tight closure.

**frame-high** A term used in masonry to denote a height equal to the top of a door or window frame or to the lintel of an opening.

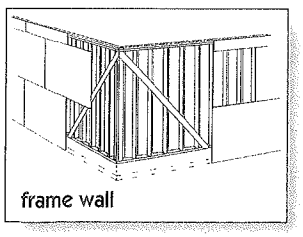
**frame house** A house of frame construction, usually with exterior walls sheathed and covered with wood siding.

**frame inspection** An inspection of the structural integrity and code compliance of a home.

**frame pulley** A pulley installed in a window frame to carry a sash chord.

**framer** A carpenter who erects the wood frame of a home, including walls, trusses, rafters, decking, and floor systems.

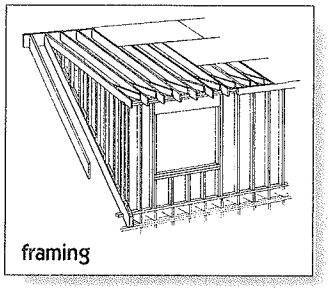
**frame wall** A wall of frame construction.



frame wall

**framework** A network of structural members or components joined to form a structure, such as a truss or multi-level building.

**framing** **1.** Structural timbers assembled into a given construction system. **2.** Any construction work involving and incorporating a frame, as around a window or door opening. **3.** The unfinished structure, or underlying rough timbers of a building, including walls, roofs, and floors. *See also* **balloon framing** *and* **platform framing.**

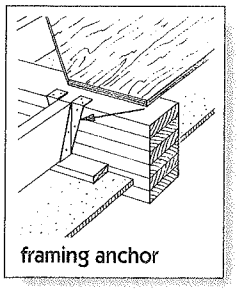


framing

**framing, balloon** A system of framing a building in which all vertical structural elements of the bearing walls and partitions consist of single pieces extending from the top of the soleplate to the roofplate and to which all floor joists are fastened. *See also* **framing.**

**framing, platform** A system of framing a building in which floor joists of each story rest on the top plates of the story below or on the foundation sill for the first story, and the bearing walls and partitions rest on the subfloor of each story. *See also* **framing.**

**framing anchor** A sheet metal device used to join light wood members such as studs, joists, and rafters.



framing anchor

**framing plan** A drawing of each floor of a building showing exact locations of framing members and their connections. May include wall elevations and details.

**framing square** *See* **carpenter's square.**

**framing table** *See* **rafter table.**

**f rating** The measurement of stress (symbolized by the letter *f*) in a piece of lumber. Generally, the higher the *f* rating, the stronger the piece of lumber.

**free air** Air that is at normal atmospheric pressure.

**freeboard** **1.** The distance between the design or normal water level and the top or overflow of a tank, dam or vessel. **2.** The vertical clearance between design flood elevation and the lowest horizontal member of the first floor of a building.

**free cooling** Cooling without the use of mechanical refrigeration.

**free fall** **1.** Descent of freshly mixed concrete into forms without drop chutes or other means of confinement. **2.** The distance the concrete falls.

**free float** A term used in project management, planning, and scheduling methods such as PERT and CPM. The free float of an activity is the amount by which the completion of that activity can be deferred without delaying the start of the following activities or affecting any other activity in the network.

**free haul** The distance a cubic yard of excavated material may be transported without incurring a hauling charge.

**freehold** A tenure of property that an owner may hold in fee simple, fee tail or for life. The term also refers to the property held under freehold.

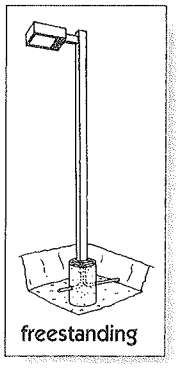
**free lime** Calcium oxide (CaO) as in clinker and cement that has not combined with $SiO_2$, $Al_2O_3$ or $Fe_2O_3$ during the burning process, because of

underburning, insufficient grinding of the raw mix, or the presence of traces of inhibitors.

**free moisture** Moisture having essentially the properties of pure water not absorbed by aggregate in a test sample or a stock pile. *See also* **surface moisture.**

**free on board (FOB)** Refers to the point to which the seller will deliver goods without charge to the buyer. Additional freight or other charges connected with transporting or handling the product become the responsibility of the buyer.

**freestanding** Said of a structural element that is fixed at its base and not braced at any upper level.


freestanding

**free-tab shingles** Shingles that come without factory-applied strips or adhesive.

**free water** Water that is able to move freely through the soil by the force of gravity, as opposed to capillary or hygroscopic action. *See also* **free moisture** *and* **surface moisture.**

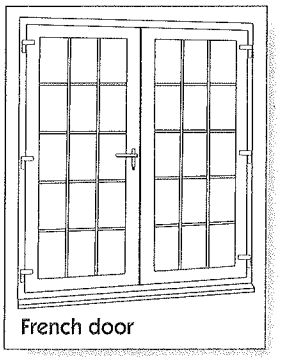
**freezeback** A roofing condition that occurs when water is forced back under the shingles by ice that has thawed and then refrozen.

**freezer** A room or cabinet mechanically refrigerated to maintain a temperature of about 10°F (-12°C) used for food storage.

**freeze-stat** A thermostat set to stop the fans before freezing air temperature is sensed.

**freeze-thaw** The cycle from freezing to thawing often detrimental to construction materials such as concrete. Air entrainment of concrete to be exposed to the elements is helpful in preventing damage from freeze-thaw cycles.

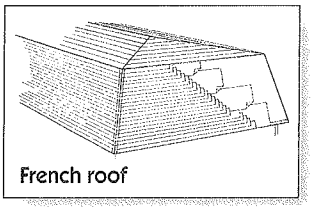
**French door (casement door, door window)** A door, or pair of doors, with glass panes constituting all or nearly all of its surface area. *See also* **French window.**


French door

**French drain** A drainage ditch containing loose stone covered with earth.

**Frenchman** A kitchen knife with the end bent over, used with a jointing rule for pointing mortar joints.

**French roof** A mansard roof with nearly perpendicular sides.


French roof

**French window** A doorway with a single full-glazed door or a pair of such doors, hinged at the jamb. *See also* **French door.**

**Freon®** The trade name of a fluorocarbon refrigerant that is nontoxic but is being phased out because it is believed to deplete the stratospheric ozone layer.

**frequency** A measure of oscillations per second, applied to the current or voltage of AC electrical circuits, sound waves or vibrating solid objects, and stated in hertz (HZ) or cycles per second (CPS).

**frequency division multiplexing** Splitting a channel's frequency band into narrower bands and allocating them to different sources.

**frequency modulation** A method of modifying a sound wave signal to relay information.

**fresh-air inlet** **1.** A connection to a building drain, located above the drain trap and leading to the atmosphere. **2.** An outside air vent for an HVAC system.

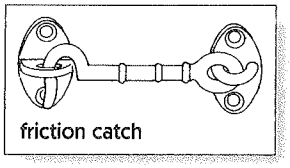
**fret** A form of architectural ornamentation, consisting of elongated rectangles that are painted, curved, or raised in an elaborate pattern of fillets, bands, and ringlets; frequently made up of continuous lines crafted in repeating rectangular shapes.

**fretwork** Ornamental openwork or relief consisting of bands of interlocking geometric patterns of contrasting light and dark elements.

**friable** Descriptive of a material that can be easily pulverized or crumbled in the hand.

**friction** The resistance to relative motion, sliding or rolling, between two surfaces in contact. May produce heat.

**friction catch** Any catch held in position by friction when engaged with its strike.


friction catch

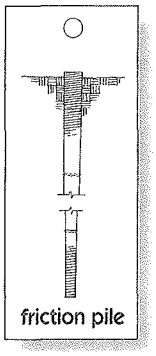
# F

**friction head** In hydraulics, the energy lost by friction in a pipe. This may include losses at elbows and bends.

**friction hinge** A hinge that uses internal friction to hold a door or window in a selected position.

**friction loss** The stress loss in a prestressing tendon resulting from friction between the tendon and duct or other device during stressing.

**friction pile (floating pile foundation)** A load-bearing pile that receives its principal vertical support from skin friction between the surface of the buried pile and the surrounding soil.




**friction ring** A seal component that employs friction to provide an airtight seal.

**friction shoe** A friction device used to hold a sash in any open position. The shoe position may be adjustable or preset.

**friction tape** An insulating tape used by electricians, made of a fibrous base impregnated with a moisture-resisting compound that will stick to itself but not to most other materials.

**friction welding** A process by which thermoplastic materials are softened and welded together with heat produced by friction.

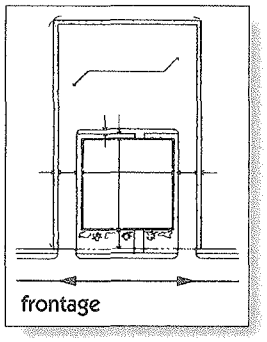
**frieze** A horizontal exterior trim member positioned between the siding of a structure and its soffit.

**fringe benefits** Compensation paid to a worker in addition to his or her wages. Usually consists of paid vacation and sick time, pension, health insurance, and so forth.

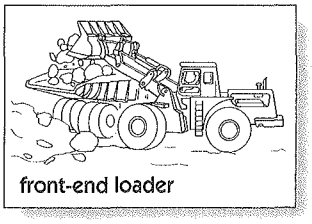
**frit** A batch material of sand, soda, and limestone that is used in glass manufacture.

**frog** A depression in the bed surface of a masonry unit that is sometimes called a panel and provides a key for the mortar at the joint.

**frontage** The length of a property line or building line along the street or beachfront that forms its boundary line on one side.




**front-end loader** A machine with a bucket fixed to its front end, having a lift-arm assembly that raises and lowers the bucket. A front-end loader is used in earth moving and loading operations and in rehandling stockpiled materials.




**front hearth (outer hearth)** The part of a hearth that occupies the room served by a fireplace, skirting the front of the fireplace opening.

**frontispiece** The architecturally adorned front wall or bay of a building or edifice. Also, an ornamental porch or pediment.

**front putty** *See* **face putty**.

**frost action** **1.** The loosening, spalling, and/or lifting process caused by alternate freezing and thawing of moisture in a material. **2.** The effects of freezing and thawing on materials and the resultant structural damage.

**frost boil** **1.** An imperfection on a concrete surface caused by the freezing of trapped moisture that swells and crumbles the affected concrete. **2.** The softening of soil caused by melting and release of subsurface water during a thaw.

**frost cracks** Splits or cracks in the trunk of a tree, caused by extreme cold. Such cracks are defects in lumber manufactured from this timber.

**frost heave** The lifting of a soil surface or pavement due to the freezing of moisture in the underlying soil.

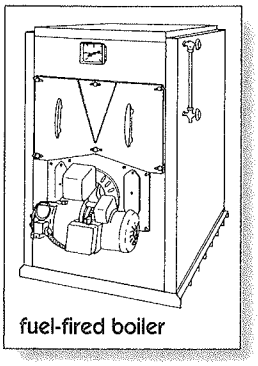
**frost line** The depth to which frost penetrates the ground. This depth varies from one part of the country to another. Footings should be placed below the frost line to prevent shifting.

**frostproof closet** A water-closet bowl that retains no standing water. The trap and the valve for its water supply are located below the frost line.

**fudge (slang)** To depart from the design drawing for sake of appearance.

**fuel cell** Cell that uses hydrogen as a fuel source through a catalytic process, producing electricity and giving off heat and small amounts of hot water as by-products. The heat can be captured for space heating needs, and the electricity generated can provide for power needs (referred to as co-generation).

**fuel-fired boiler** An automatic, self-contained mechanical unit or system that produces heat by burning solid, liquid, or gaseous fuels.


fuel-fired boiler

**fuel load** The total amount of potential fuel for a fire in a given structure or area.

**fugitive dye** A dye whose color fades in a few days to neutral on exposure, usually to ultraviolet rays in sunlight. Fugitive dye is often used to temporarily color membrane-curing compounds so that coverage of the concrete surface can be observed.

**full** A reference to lumber that is slightly oversize.

**full bond** A masonry bond in which all bricks are laid as headers.

**Fuller faucet** A faucet in which a rubber ball is forced into the inlet to stop the flow.

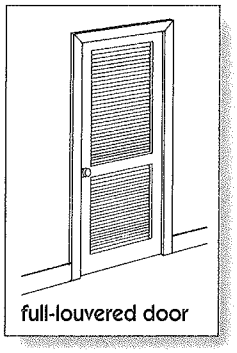
**Fuller's curve (Fuller-Thompson ideal grading curve)** An empirical curve for gradation of aggregates. The curve is designed by fitting either a parabola or an ellipse to a tangent at the point where the aggregate fraction is one-tenth of the maximum size fraction. *See also* **grading curve**.

**full-face respirator** A respirator that covers the whole face with a protective shield.

**full-flush door** A door made of two sheets of steel assembled in hollow-metal construction with a top and bottom either flush or closed off with end panels, and seams that are visible only on the edge of the door.

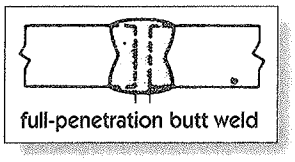
**full glass door** A door with glass in the area between rails and stiles except for dividing mullions. The glass is usually heat treated or tempered.

**full-louvered door** A door with louvers filling the entire area between rails and stiles.


full-louvered door

**full mortar bedding** Mortar applied to the entire thickness of a masonry unit. Used in foundations and other load-bearing construction.

**full-penetration butt weld** A butt weld with a depth equal to the thickness of the smaller of the two members between which it lies.

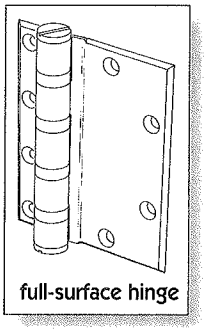

full-penetration butt weld

**full pitch** A roof pitch whose rise is equal to the width of the span of the roof.

**full size** Said of a drawing depicting an object at true size: not scaled.

**full splice** A splice that will transmit the full strength of the joined members.

**full-surface hinge** A hinge that may be installed on the surface of a door and jamb without need of mortising.


full-surface hinge

**fully welded seamless door** A door having all joints on its faces and edges fully welded and ground smooth, so as to conceal the joints.

**functional obsolescence** **1.** An inadequacy caused by outmoded design, dated construction materials or over- or under-sized areas, all of which cause excessive operating costs. **2.** In appraisal, the decline in the value of property due to changes in the style, design, technology, floor plan, and so on, of competing property.

**fungicide** A substance poisonous to fungi, used to prevent or retard the growth of fungi.

**furan** A colorless liquid compound used in mortars and grouts for its chemical resistance.

**furlong** A unit of measure equal to 220 yards or 1/8 of a mile.

**furnace** **1.** That part of a boiler or warm-air heating plant in which combustion takes place. **2.** A complete heating unit that transfers heat from burning fuel to a heating system.

**furnish** The raw material used to make reconstituted wood-based nonveneer panel products.

**furniture grade** Lumber of a quality and size suitable for the manufacture of furniture.

**furred** Provided with furring to leave an air space, as between a structural wall and plaster or between a subfloor and wood flooring.

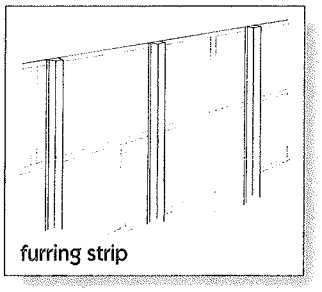
# F

**furring** **1.** Strips of wood or metal fastened to a wall or other surface to even it, to form an air space, to give the appearance of greater thickness, or for the application of an interior finish such as plaster. **2.** Lumber 1" in thickness (nominal) and less than 4" in width, frequently the product of resawing a wider piece. The most common sizes of furring are 1" x 2" and 1" x 3". *See also* **strip.**

**furring brick** A hollow brick carrying no superimposed load and used as lining, furring, or as a key for plastering on an interior wall.

**furring nail** A galvanized, low-carbon steel nail, having a flat head and a diamond point. The shank is provided with a spacer for fastening wire lath and spacing it from the nailer.

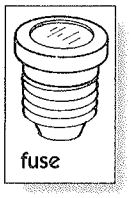
**furring strip** Wood or metal channels used for attaching gypsum or metal lath to masonry walls as a finish or for leveling purposes. *See also* **furring.**


furring strip

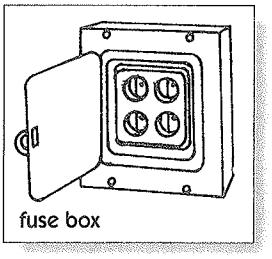
**furring tile** Tile designed for lining the inside of exterior masonry walls. It is not intended to support superimposed loads and has a scored face for the application of plaster.

**furrowing** The process of making furrows in the mortar bed with the tip of a trowel to speed up bricklaying by better distributing mortar.

**fuse** A protective device, made of a metal strip, wire or ribbon that guards against overcurrent in an electrical system. The device melts if too much current is generated and breaks the circuit.


fuse

**fuse box** A metal box with a hinged cover which houses fuses for electric circuits.


fuse box

**fuse puller** A tool used to pull out cartridge fuses.

**fusetron** A special fuse that will carry an overload of current for a short time without "blowing" or opening the circuit. A fusetron is used where a heavy load, such as the starting of a motor, may overload a circuit momentarily.

**fusible link** A metal link made of two parts held together by a low-melting-point alloy. When exposed to fire-condition temperatures, the link separates, allowing a door, damper, or device to be closed.

**fusible metal** An alloy with a low melting point used in high temperature detecting devices.

**fusible solder** An alloy, usually containing bismuth, having a melting point below that of tin-lead solder: 361°F (183°C).

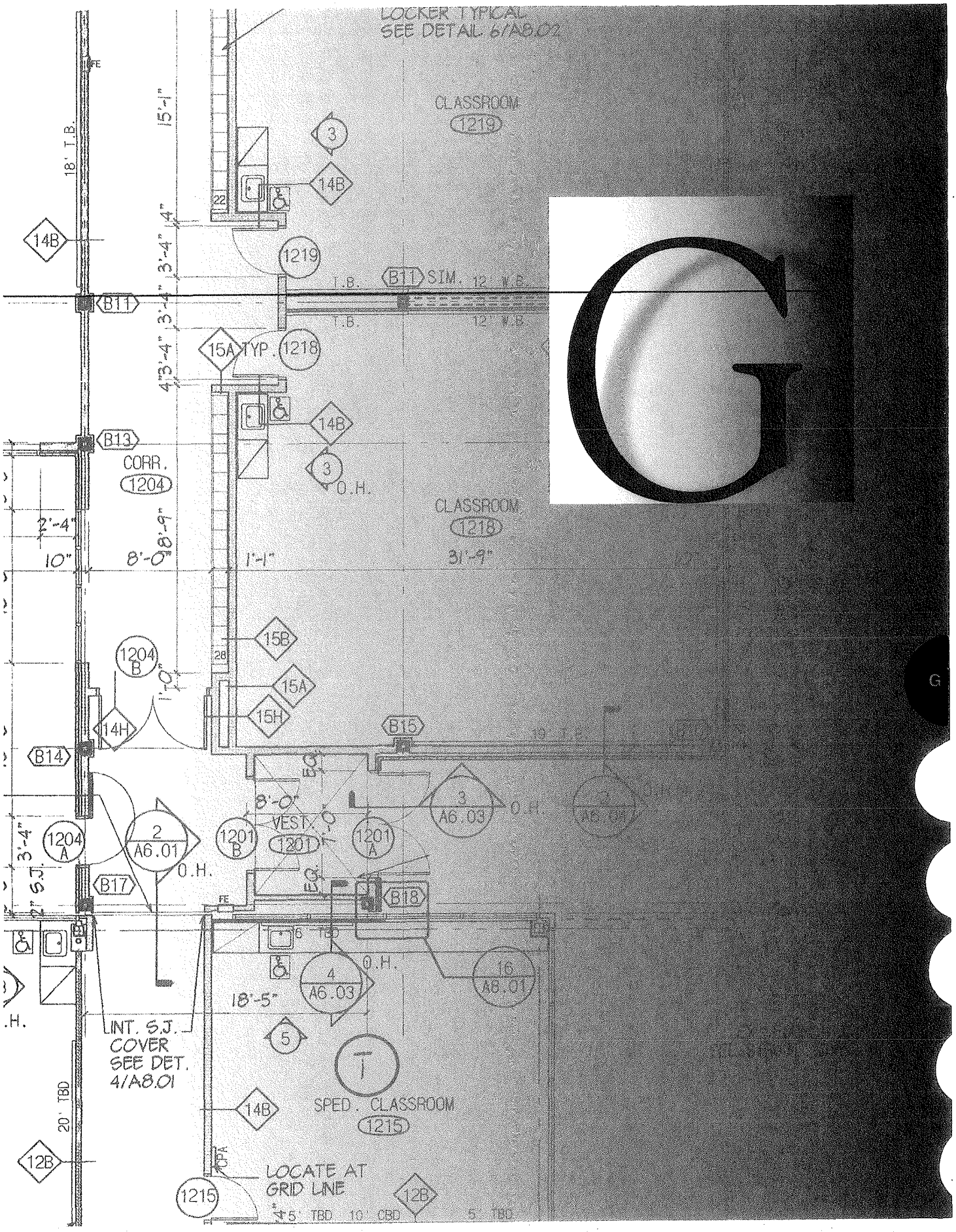
**fusible tape** *See* **joint tape.**

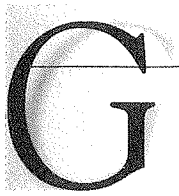
**fusiform rust** A type of blister rust disease, caused by the fungus, *Cronartium fusiform*. The disease attacks certain southern pine species. Similar rusts infect western pines.

**fusion** In welding, the melting and coalescence of a filler metal and base metal or two base metals.

**FUTA** A federal law that imposes an unemployment tax on employers.

**fuzzy grain** In surfacing lumber, a condition of the board surface in which some fibers are not completely severed in the surfacing process, giving it a fuzzy appearance.


LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
CLASSROOM
1216
SPED. CLASSROOM
1215
CORR.
1204
VEST.
1201
B11
B13
B14
B15
B17
B18
14B
15A TYP.
1218
15B
15A
15H
14H
12B
LOCATE AT
GRID LINE
INT. S.J.
COVER
SEE DET.
4/A8.01
O.H.
18' T.B.
20' TBD
15'-1"
3'-4"
4'3'-4"
2'-4"
10"
8'-0"
8'-9"
1'-1"
31'-9"
8'-0"
18'-5"
G



# Abbreviations

*The abbreviations listed below are commonly used in the construction industry.*

**g** gram, gravity, gauge, girth

**G** gas

**ga** gauge

**gal** gallon

**galv** galvanized

**GAO** The U.S. Government Accountability Office

**GATT** General Agreement on Tariffs and Trade

**GB** glass block

**GC** general contractor

**GCF** greatest common factor

**gen** general

**GFCI** ground-fault circuit-interrupter

**GI** galvanized iron

**gl** glass, glazing

**GM** grade marked

**GMV** gram molecular volume

**GOB** general obligation bonds

**Goth** Gothic

**gov/govt** government

**gpd** gallons per day

**gpf** gallons per flush

**gph** gallons per hour

**gpm** gallons per minute

**GPS** global positioning system

**gr** grade, gravity, gross, grains

**G/R** grooved roofing

**gran** granular

**gr fl** ground floor

**gr fl ar** ground floor area

**grnd** ground

**gr wt** gross weight

**G/S** grade-stamped

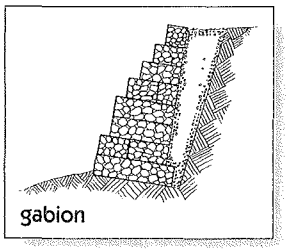
**GT** gross ton

**gtd** guaranteed

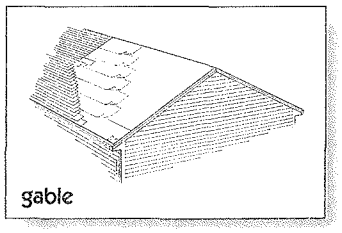
**gup** grading under pavement

**GYP** gypsum

**gabion** A large compartmentalized container, usually cylindrical or rectangular, often fabricated from galvanized steel hexagonal wire mesh. When filled with stone it is used in the construction of foundations, dams, erosion breaks, etc.

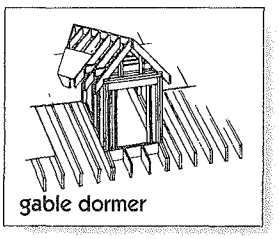

gabion

**gable** The portion of the end of a building that extends from the eaves to the peak or ridge of the roof. The gable's shape is determined by the type of building on which it is used: triangular in a building with a simple ridged roof, or semi-octagonal in a building with a gambrel roof.


gable

**gableboard** A board covering the timbers that extend over the gable end of a gable roof.

**gable dormer** A dormer that protrudes horizontally outward from a sloping roof and has its own gabled ends, whose base meets that of the sloping roof.


gable dormer

**gable end** An end wall with a gable.

**gable molding** The molding used as finish for a gable end of a roof.

**gable post** A short post into which the gableboards are fitted at the peak of a gable.

**gable roof** A ridged roof having one or two gabled ends.

**gable shoulder** The projection created by the gable springer at the foot of a gable.

**gable springer** The projecting stone under the loosest kneeler at the foot of a gable coping.

**gable vents** Vent openings mounted in the top of a gable of a house to allow the exchange of air in the attic.

**gable wall** A wall whose upper portion is a gable.

**gable window** A window built into or shaped like a gable.

**gaffering** *See* **galleting**.

**gage** *See* **gauge**.

**gag process** The use of a gag press to bend structural shapes.

**gain** **1.** The mortise or notch in a piece of wood into which a piece of wood, hinge, or other hardware fits. **2.** An increase in transmission signal power from one point to another, expressed in decibels. **3.** An increase in the volume of sound of a radio.

**gaine** A pedestal, square in shape but with one end tapered downward, used primarily for decoration.

**gallery** **1.** A long enclosure that functions as a corridor inside or outside a building or between different buildings. **2.** The elevated (usually the highest) designated seating section in an auditorium, theater, church, etc. **3.** A room or building in which artistic works are exhibited.

**gallery apartment house** An apartment house whose individual units can be entered from an exterior corridor on each floor.

**gallet** A chip of rock, stone, or masonry.

**galleting (gaffering)** The use of chips of rock, stone, or masonry to fill the joints of rough masonry, either for appearance or to minimize the required amount of mortar.

**gallon** A standard liquid measure: The British imperial gallon contains 10 lbs. of water; the American gallon contains 8.33 lbs. of water.

**gallon per minute (gpm)** A unit measure of flow. Equals a flow rate of one gallon in one minute.

**gallows bracket** A triangular wall bracket often used for the support of shelving.

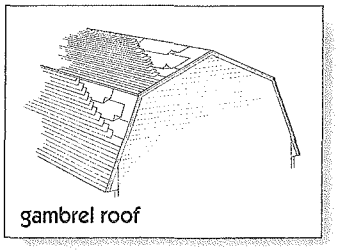
**galvanic corrosion** The electrochemical action that occurs as a result of the contact of dissimilar metals in the presence of an electrolyte.

**galvanize** The process of protectively coating iron or steel with zinc, either by immersion or electroplating (electrogalvanizing).

**galvanized iron** Zinc-coated iron sheet metal.

**galvanized pipe** Zinc-coated steel or wrought-iron pipe.

**gambrel roof** A roof whose slope on each side is interrupted by an obtuse angle that forms two pitches on each side, the lower slope being steeper than the upper.


gambrel roof

**gandy dancer** A slang term for a railroad worker who performs earth and tracklaying work.

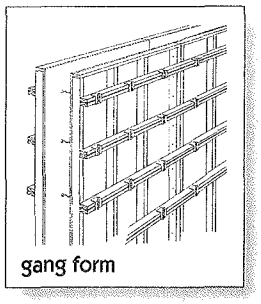
# G

**gandy stick** Railroad slang for a tamping rod.

**gang** A working technique in which several machines and/or apparatuses are controlled by a single force and combined in such a way as to function as a single unit.

**gang boarding roof ladder** *See* **cat ladder.**

**gang form** Prefabricated form panels connected together to produce large reusable units. Gang forms are usually lifted by crane or rolled to the next location.


gang form

**gang nail** A multi-tooth connector made of steel that is used to fasten heavy timbers. Most commonly used in roof truss and flooring construction.

**gang saw** A number of toothed steel ribbons, fitted in a sash or frame, operating together.

**gang sawing** A method of stone-cutting that made possible the use of stone as a veneer on buildings.

**gangway** A temporary planked path that runs up to a building or over an unfinished portion thereof before the exterior steps are constructed. The gangway provides a passageway for men and materials on the construction site.

**ganister** A mixture of ground quartz and a bonding material, such as fire clay, used primarily for fireproofing, as around the hearths of furnaces.

**gantry** A framework or overhead structure of beams or timbers used as a working platform or as a means to support equipment.

**gantry crane** A revolving crane situated atop a heavy framework that moves along the ground on tracks.

**gantt chart** A time-scaled bar chart named after Henry L. Gantt.*

**GAO** The U.S. General Accountability Office, which, under the direction of the Comptroller General of the United States, has jurisdiction over bid protests. The GAO is an arm of the Congress.

**gap-filling glue** A type of glue used in applications where close-contact glue is inadequate because of the poor fit between the surfaces to be joined.

**gap grading** A particle-size distribution of aggregate that is practically or completely void of certain intermediate sizes.

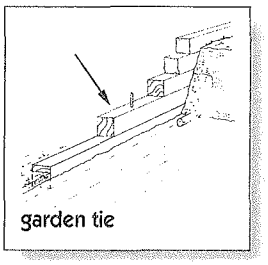
**garbage disposal unit** An electrically motorized device that grinds waste food and mixes it with water before disposing of it through standard plumbing drainage pipes.

**garden apartment** **1.** A two- or three-story suburban, multiple dwelling that emphasizes patios, balconies, walks, or even communal gardens to create or promote the illusion of privacy. **2.** A ground-floor apartment having access to an adjacent outdoor space or garden.

**garden city** A residential development with significant plantings and trees composed largely of single-family, detached houses and providing vehicular parking.

**garden house** In a garden, a small gazebo or other shelter.

**garden tie** Usually, a railroad tie or similar timber used in landscaping.


garden tie

**garden tile** Molded structural ceramic units used in a garden or on a patio as stepping stones.

**garden wall bond** Usually, ornamental brickwork that is only a single brick thick and is composed mostly of stretchers showing a fair face on each side.

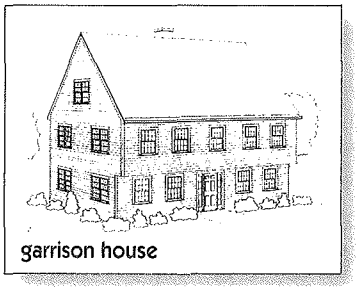
**gargoyle** A waterspout, often with carvings of grotesque human, beast, or animal features, that projects from a roof gutter so as to drop rainwater clear of a wall, often through its open mouth.

**garnet** A silicate mineral with an isometric crystal structure. Garnet occurs in a variety of colors and is used as gemstones, abrasives, or gallers.

**garnet hinge** A T-shaped hinge with a longer leg that attaches to the door leaf and a shorter leg that attaches to the frame.

**garnet paper** A finishing and polishing paper covered with powdered garnet abrasive.

**garrison house** A style of house whose second story overhangs the face of the first story on one or more walls.

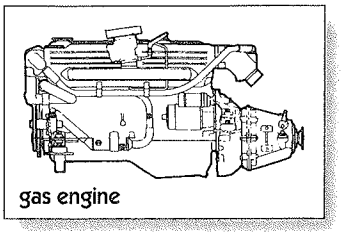

garrison house

**gas** A fluid (in the form of air) with neither independent shapes nor volume, that can expand indefinitely.

**gas concrete** A concrete whose light weight and insulating qualities are the result of cement alkalies and an aluminum powder admixture that reacts to generate hydrogen gas, and hence to produce voids in the unhardened mix.

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**gas engine** An internal-combustion engine that uses gas rather than gasoline as fuel.


gas engine

**gas filled lamp** A type of incandescent lamp with a bulb atmosphere consisting of an inert gas within which the filament operates.

**gas-fired** Heated by the burning of a gaseous fuel.

**gas flow meter** A device that measures the volume and/or velocity of flowing gases.

**gas furnace** A furnace that burns gas to produce heat.

**gasket** Any of a variety of seals made from resilient materials and placed between two joining parts (as between a door and its frame, an oil filter and its seat, pipe threads and their fitting, etc.) to prevent the leakage of air, water, gas, or fluid.

**gaskin** **1.** A ring of rope placed into the socket of a stoneware pipe joint before it is sealed with cement mortar. **2.** A type of inflatable ring for temporarily sealing a pipe joint.

**gas lateral** The trench where a home's gas-line service is located.

**gas main** The public's gas supply as piped from the providing utility company into a community.

**gas metal-arc welding** A method of welding that achieves coalescence by arc-heating between the work and a consumable electrode.

**gas meter** A mechanical device that measures and records in cubic feet the volume of gas passing a given point.

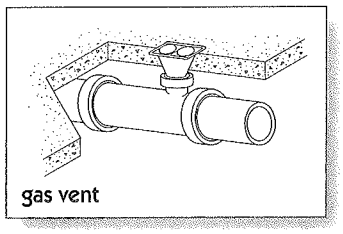
**gas-phase absorption** A natural process in which molecules of gas are physically attracted to and held at the surface of a solid.

**gas pliers** Rugged pliers having concave jaws with serrated faces for the efficient gripping of pipes.

**gas pocket** In a casting, a hole or void caused by the entrapment of air or gas that is produced during the solidification of the metal.

**gas refrigeration** A refrigeration system in which a gas flame is used to heat the refrigerant.

**gas vent** An exhaust pipe through which undesirable gaseous by-products of combustion are vented to the outside.


gas vent

**gas welding** Any of several welding methods in which a gas flame provides the heat necessary for coalescence and in which pressure and/or a filler metal may or may not be employed.

**gate** A usually hinged device of solid or open construction that is installed as part of a fence, wall, or similar barrier and that, when opened (either by swinging, sliding, or lifting), provides access through that barrier.

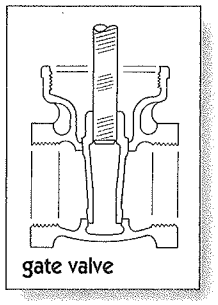
**gate hook (gudgeon)** A metal bar (usually one of a pair, spaced one directly above the other) whose pointed or threaded end is driven or screwed into a wooden post or secured in a masonry or brick gate pier, with exposed upright pin engaging the gate hinge, thus hanging the gate.

**gate house** A building that accommodates the gateway to a castle, manor house, estate, or other important building or place.

**gate operator** An electronically operated mechanism that, when activated, serves to open or close a gate.

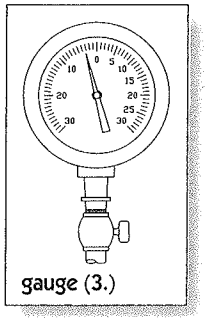
**gate pier (gate post)** A post of wood, brick, stone, or masonry on which a gate is hung or hinged, or against which it latches.

**gate valve** A valve utilizing a gate, usually wedge-shaped, that allows fluid flow when the gate is lifted from the seat. Gate valves have less resistance to flow than globe valves, and should always be used fully open or fully closed.


gate valve

**gathering** The bringing together of flues within a single stack.

**gauge (gage)** **1.** The numerically designated thickness of sheet metal. **2.** The designated diameter of a screw or wire, or the thickness of the wall of tubing. **3.** A measuring device for pressure or liquid level. **4.** The distance between rows of bolt or rivet holes in the same member. **5.** A wood or metal strip used as a thickness-control guide in bituminous or concrete paving operations. **6.** In plastering, a screed. **7.** The act of adding or the amount of gauging plaster needed to hasten the setting of common plaster. **8.** In laid roofing, the exposed length of a shingle, slate, or tile.


gauge (3.)

# G

**gauge board (gauging board)** A three-foot square on which plaster and tools are carried. **2.** A board used for mixing plaster, cement, or mortar. **3.** A carpenter's pitch board.

**gauge box (gauging box)** A container in which a batch of concrete, mortar, or plaster is measured and mixed.

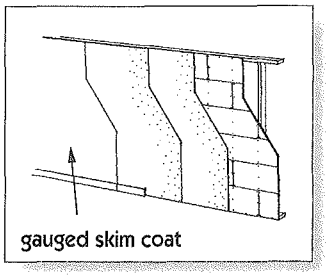
**gauged** A term that refers to a material that has been ground so as to produce particles of uniform shape and/or thickness.

**gauged arch** An arch constructed from bricks with a wedge shape that causes the joints to radiate from a common center.

**gauged brick** Brick that has been sawn, ground, or otherwise shaped to accurate dimensions for special applications.

**gauged mortar** **1.** Mortar made of cement, sand, and lime in specific proportions. **2.** Any plastering mortar that is mixed with plaster of Paris to hasten setting.

**gauged skim coat** A mixture of gauging plaster and lime putty applied very thinly as a final coat in plastering. The mixture is troweled to produce a smooth, hard finish.


gauged skim coat

**gauged stuff** **1.** A mixture of lime putty and gypsum plaster that is used as a finish coat in plastering. **2.** Gauged mortar.

**gauge glass** A glass tubular device or vertical cylindrical device, often graduated, that indicates the level or amount of liquid in a tank or vessel.

**gauge pile** *See* **guide pile.**

**gauge pressure** The inherent pressure of a gas or liquid, exclusive of the value of atmospheric pressure.

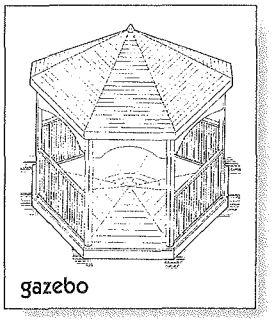
**gauge rod** A stick used for measuring the gauge in brickwork. If used to mark floor and sill levels, the rod is termed a *story rod*, or *story pole*.

**gauge stick** **1.** A dimensionally specific length of wood, metal, or other material used in measuring repetitive dimensions. **2.** In roofing, a template used to measure tiles for accurate cutting.

**gauging plaster** Plaster of Paris (gypsum plaster) that is usually mixed with lime putty to produce a quick-drying finish coat.

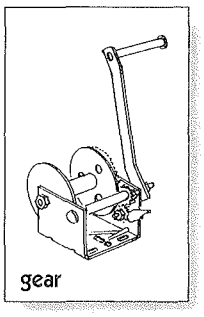
**gaul** A hollow place in a coat of plaster or mortar, usually the finish coat, caused by poor troweling.

**gazebo** A small, round, octagonal, or similarly shaped structure, usually roofed but open-sided, built in parks or large gardens to provide shelter or a place to view the surrounding area.


gazebo

**G-clamp (G-cramp)** A large G-shaped screw clamp often used in joining pieces of glued wood.

**gear** A toothed wheel, cone, cylinder, or other machined element that is designed to mesh with another similarly toothed element for purposes that include the transmission of power and the change of speed or direction.


gear

**gear jammer** A slang term for a truck driver.

**gefle standard** A measure of roundwood volume equal to 100 cubic feet. The measure is used principally in the export trade.

**gel** The colloidal state of a material.

**gelatin blasting** The strongest and highest-velocity, commercially available explosive. The material is manufactured by dissolving nitrocotton in nitroglycerin.

**gelatin molding** A method of manufacturing that utilizes a semi-rigid mold composed primarily of gelatin to produce complicated undercut fibrous plaster coatings.

**gel coat** A relatively thin, often pigmented layer of resin that is usually sprayed onto a waxed mold to form the attractive exterior surface of a reinforced plastic molding, such as a fiberglass boat.

**gemel (gimmer, gymmer, jammer)** Any two structural elements that go together as a pair.

**gemel window** A two-bayed window.

**General Agreement on Tariffs and Trade (GATT)** A specialized agency of the United Nations that seeks to ease the barriers of international trade.

**general & administrative costs (G&A)** The fixed cost incurred in the operation of a business. G&A costs are also associated with office, plant, equipment, staffing, and expenses thereof, maintained by a contractor for

general business operations. G&A costs are not specifically applicable to any given job or project.*

**general conditions** The portion of the contract document in which the rights, responsibilities, and relationships of the involved parties are itemized.

**general contract** In a single contract system, the documented agreement between the owner and the general contractor for all the construction for the entire job.

**general contractor** For an inclusive construction project, the primary contractor who oversees and is responsible for all the work performed on the site, and to whom any subcontractors on the same job are responsible.

**general diffuse lighting** Lighting from units that direct 40%–60% of their emitted light upward, and the remainder downward.

**general drawing** A drawing that illustrates structural cross-sections, main dimensions, elevation plans, substructural borings, and other basic details of a construction project.

**general foreman** The general contractor's on-site representative, often referred to as the *superintendent* on large construction projects. It is the responsibility of the general foreman to coordinate the work of various trades and to oversee all labor performed at the site.

**general industrial occupancy** The designation of a conventionally designed building that can be used for all but high-hazard types of manufacturing or production operations.

**general liability insurance** Insurance that protects a project and any adjacent properties from damage or loss as a result of an accident during the construction process.*

**general lighting** Lighting designed to produce a fairly consistent level of illumination over an entire area.

**general obligation bonds** Instruments of obligation that, by permission of the public through referendum, are issued to investors by a subdivision of government. These bonds promise incremental payment of principal and interest from revenues collected annually by the government. In return, funds are supplied by investors and are used to pay for the construction of publicly owned buildings or other public works projects.

**general partnership** An association of two or more people to conduct business for profit as co-owners. The participants in a general partnership, called *general partners*, share all aspects of the business including assets, profits/losses, liability, and management responsibility.

**general-purpose branch circuit** An electrical circuit that supplies a number of outlets.

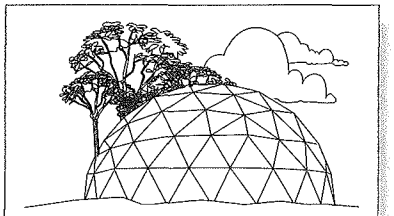
**general requirements** The designation or title of Division 1 (the first of 48) in the Construction Specifications Institute's MasterFormat system. General requirements usually include overhead items and equipment rentals.

**general terms and conditions** **1.** That part of a contract, purchase order, or specification that is not specific to the particular transaction but applies to all transactions. **2.** General definition of the legal relationships and responsibilities of the parties to the contract and how the contract is to be administered. They are usually standard for a corporation and/or project.*

**generator** **1.** A mechanical or electromechanical device that converts mechanical energy into electrical power, as an alternator producing alternating current or a dynamo producing direct current. **2.** A person, firm, or entity whose activities create a hazardous waste.

**generic** A term used to generally describe a material, product, assembly, or piece of equipment, as in the descriptive specification, rather than naming it by a specific trade name or source of manufacture or distribution.

**geodesic dome** A stable, dome-shaped structure fabricated from similar lightweight members connected to form a grid of interlocking polygons.



geodesic dome

**geodetic survey** A land survey, usually of vast areas, whose calculations incorporate consideration of the earth's curvature and can accurately specify points from which surveys can be controlled.

**geological map** A map showing the character and distribution of outcrops of strata or igneous rocks, including faults, antidives, and other sizable formations. Some such maps show only the solid outcrops, excluding the overlying drift.

**geometrical stair** A stair, either winding or spiral, that is built around a stairwell and returns on itself as it ascends, but does not employ newels at the turns and has no landings between floors.

**Georgian architecture** Neoclassical style of architecture that prevailed in 18th-century Great Britain. Characterized by orderly design, rectangular shapes, and symmetrical window placement.

**Georgia buggy** A slang term for an on-site concrete-carrying hopper with heavy rubber wheels.

**Georgia marble** A general descriptive term applied to sparkling, crystal, light grey, or white marble.

**Georgian siding** Thick glass into which steel wire mesh is incorporated as reinforcement.

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# G

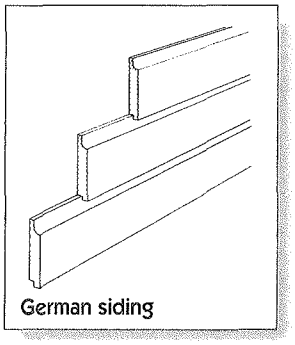
**Georgian window** A double-hung window.

**geotechnical engineering** A specialty in the field of civil engineering that focuses on geology and soil mechanics leading to the design of foundation structures.

**geotextiles** Synthetic fabrics that can be used to separate back filling materials to promote proper drainage. Commonly used in conjunction with high retaining walls and landscape design.

**geothermal heat** An energy-efficient heating system that uses subsurface ground temperatures to keep the system's water at a moderate temperature. Less energy is then required to heat the water enough to warm the building.

**German siding** A type of drop siding installed so that the grooved bottom edge of the board above fits over the concave top edge of the board below.


German siding

**gesso** A plaster base coat, for gilding or decorative painting, consisting of gypsum plaster, calcium carbonate, and glue.

**ghosting** Descriptive of a thin coat of paint that leaves a skimpy appearance.

**gib** A metal strap used to fasten two members together.

**gib-and-cotter joint** A joint in which a gib, drawn tightly and wedged with cotters, secures the joined members together.

**gig stick** *See* **radius rod.**

**gilding** **1.** The application of gilt (as gold leaf or flakes) to a surface. **2.** A surface ornamented with gilt.

**Gilmore needle** A device used to determine the setting time of hydraulic cement.

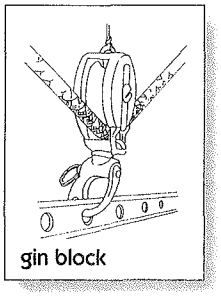
**gilsonite** A naturally occurring, hard, brittle form of asphalt that is mined and used in the manufacturing of floor tile, paving, roofing, and paint.

**gimlet** A small hand tool, of ancient origin, whose handle is perpendicular to a screw point, and that is used for boring small holes (less than 1/4") in wood.

**gimmer** *See* **gemel.**

**gin** A simple lifting device consisting of a vertical pole, tripod, or other frame.

**gin block** A simple tackle block, with a single pulley in a frame, having a hook on top for hanging.


gin block

**gingerbread** An ornate style of architecture, usually employed in exterior house trim, and common in the United States during the 19th century.

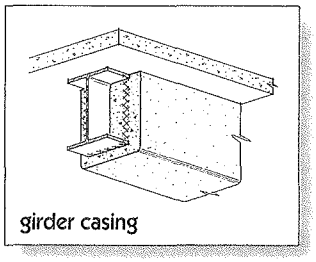
**ginnywink** A slang term for an A-frame derrick that has a fixed rear leg.

**gin pole** A cable-supported vertical pole used in conjunction with blocks and tackle for hoisting.

**girandole** A branched fixture or bracket for holding lamps or candles, either freestanding or protruding from a wall, often having a mirror behind it.

**girder** A large principal beam of steel, reinforced concrete, wood, or a combination of these, used to support other structural members at isolated points along its length.

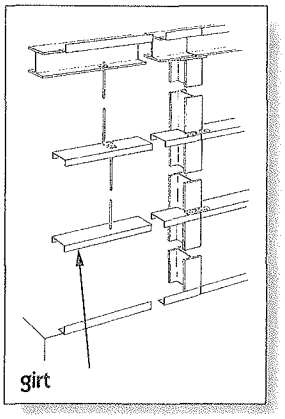
**girder casing** Material that encloses and protects (as from fire) the part of a girder extending below ceiling level.


girder casing

**girder post** Any support member, such as a post or column, for a girder.

**girdle** A horizontal band around the shaft of a column.

**girt (girth)** **1.** A horizontal member used as a stiffener between studs, columns, or posts at intermediate level. **2.** A rail or intermediate beam that receives the ends of floor joists on an outside wall.


girt

**girth** **1.** The circumference of any circular object. **2.** The distance around a column.

**girt strip** A board secured horizontally to studding to carry floor joists. *See also* **ledger board.**

**give-and-take lines** Straight equalizing lines used in calculating band areas and their boundaries.

**gland** **1.** In plumbing, a brass or copper ring that is compressed by a screwed fitting over a copper tube, and that deforms to become a seal between the two. **2.** In electrical work, a seal used to prevent water from entering the end of a cable.

**gland bolt** A bolt used to tighten or loosen an unthreaded gland.

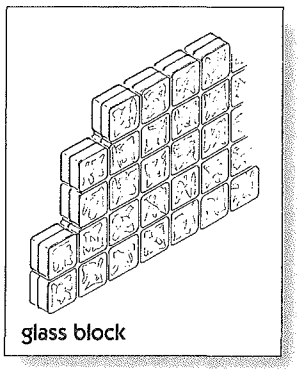
**gland joint** A joint on a metal soil pipe or hot water pipe that allows for thermal expansion.

**glare** Any unwanted brightness that brings discomfort or reduced visibility.

**glass** A hard, brittle, inorganic product, ordinarily transparent or translucent, made by the fusion of silica, flux, and a stabilizer, and cooled without crystallizing. Glass can be rolled, blown, cast, or pressed for a variety of uses.

**glass bead** *See* **glazing bead.**

**glass block** A hollow, translucent block of glass, often with molded patterns on either or both faces, that affords diffused light when used in non-load-bearing walls or partitions.



glass block

**glass cement** Any glue or other adhesive material that serves to bind glass to glass, or glass to another material.

**glass cloth** A wall covering made from woven vegetable fibers, especially arrowroot bark, that are laminated onto a paper backing.

**glass concrete** A concrete panel or slab into which are set a pattern of translucent glass lenses that allow the passage of light.

**glass cutter** A small hand tool having a pointed diamond tip or a sharp, small, hardened steel wheel that scores glass.

**glass door** A door fabricated without stiles or rails and consisting entirely of thick, heat-strengthened, or tempered glass.

**glass fiber (glass fibre)** *See* **fiberglass.**

**glass, obscure** Sheet glass that has been made translucent instead of transparent. It is sandblasted or molded to make the surfaces irregular.

**glasspaper** A fine sandpaper or polishing paper whose abrasive is powdered glass.

**glass pipe** A term defining both glass and glass-lined pipe used in process piping.

**glass seam** In limestone, a crack that has been cemented, annealed, and rendered structurally sound by the deposition of transparent calcite.

**glass, shatterproof** *See* **bulletproof glass.**

**glass size** The size to which a piece of glass is cut so as to glaze a given opening. Its length and width should be 1/8" less than the distance between the outside edges of the rebates.

**glass, stained** *See* **stained glass.**

**glass stop** **1.** A glazing bead. **2.** A fitting at the lower end of a patent glazing bar to prevent the pane from sliding down.

**glass, structural** Cast glass in squares or rectangles, 1"-2" thick, sometimes laid up between concrete ribs, frequently as tile. Larger units are made in hollow or vacuum blocks. The wide use of the product is in colored and polished sheets for interior wall surfacing.

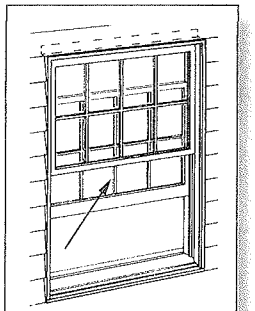
**glass tile** Transparent or translucent units installed in a roof surface that allow light to enter the room below.

**glass tower** A slang term for any type of small crane.

**glass, wire** Glass in which wire mesh is embedded to prevent shattering.

**glass wool** Spun fiberglass used mostly for thermal and acoustical insulation and as a filtering medium in air and water filters.

**glaze** **1.** To install glass panes in a window, door, or another part of a structure by applying putty or other material to hold the glass in place. **2.** A hard, thin, glossy ceramic coating on the surface of pottery, earthenware, ceramics, and similar goods. Usually called "enamel," a transparent solution that, when dry, provides tiles with a hard, shiny finish. Can be applied by either painting or dipping.



glaze

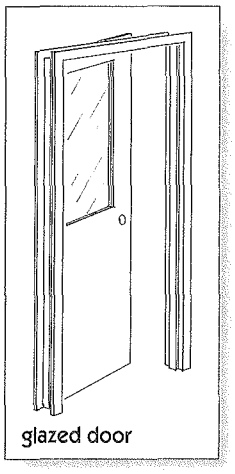
**glaze coat** **1.** The smooth top layer of asphalt in built-up roofing. **2.** A temporary, protective coat of bitumen applied to built-up roofing that is awaiting top-pouring and surfacing. **3.** In painting, the application of a nearly transparent coat that enhances and protects the coat below it.

**glazed brick** Brick or tile with a surface produced by fusing it with a glazing material.

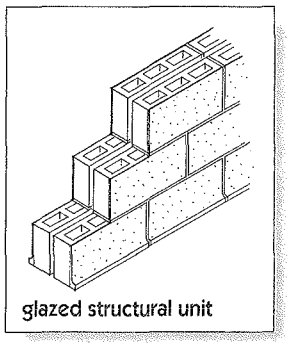
**glazed ceramic tiles** Tile with a glossy finish that derives its color from glaze rather than pigment.

# G

**glazed door** Any door with glass panes or panels and top and bottom rails.




**glazed structural unit** A hollow or solid unit with a smooth, glassy covering such as glazed tile.




**glazed tile** Ceramic or masonry tile with an impervious, glossy finish.

**glazement** A waterproof surfacing used on masonry that creates a smooth, durable finish.

**glazier** A person whose trade is to install glass in structures. The glazier removes old putty, cuts glass to fit the openings requiring it, and secures it there by whatever means are necessary or appropriate.

**glazier's chisel** A chisel-shaped putty knife used in setting glass.

**glazier's point (glazing brad, glazing point)** A small, thin, flat, three- or four-cornered piece of metal that is sometimes pushed part way into the outside edges of the rebate, and buried in the face putty around a pane of glass to hold it in place.

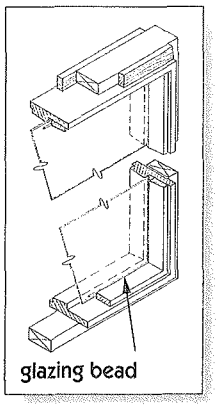
**glazier's putty** A glazing compound often made from a mixture of linseed oil and plaster of Paris, and sometimes including white lead.

**glazing** **1.** Fixing glass in an opening. **2.** The glass surface of an opening that has been glazed.

**glazing area** The surface area of glazed fenestration inside a conditioned space.

**glazing bar** A vertical or horizontal bar of wood or metal that subdivides a window and holds panes of glass.

**glazing bead (glass stop)** **1.** A narrow strip of wood, plastic, or metal fastened around a rebate and used to hold glass in a sash. **2.** At a glazed opening, removable trim that holds the glass in place.




**glazing brad** *See* **glazier's point.**

**glazing channel** A groove cut into a sash to hold glass.

**glazing clip** A metal clip used to hold glass in place in a metal frame during putty application.

**glazing color** A transparent wash applied over a ground coat of paint.

**glazing compound** Any putty or caulking compound used in glazing to seal the joint at the edges of the glass.

**glazing fillet** A narrow wood or plastic strip fastened to the rebate of a glazing bar and used instead of face putty to hold glass in place.

**glazing gasket** A narrow, sometimes grooved, prefabricated strip of material such as neoprene that offers a dry alternative to glazing compound in glazing operations. The gasket is impervious to moisture and temperature and is often used with large panes or sheets of glass.

**glazing molding** **1.** Molding that serves the same function as a *glazing fillet.* **2.** A *glass stop.*

**glazing point** *See* **glaziers point.**

**glazing size** *See* **glass size.**

**glazing spacer block** One of several blocks that support glass in its frame.

**glazing sprig** A small headless nail that holds a pane of glass in its wooden frame while putty hardens.

**glazing stop** *See* **glass stop.**

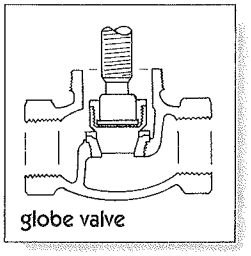
**glazing tape** A resilient tape used to seal glass into a frame, sash, or opening.

**global positioning system (GPS)** A global system of U.S. navigational satellites that locates precise points and coordinates on earth.

**global warming** An increase in the average temperature of the Earth's atmosphere, often used to refer to climatic changes due to increased emissions of greenhouse gases.

**globe (light globe)** **1.** A protective enclosure or covering over a light source. The globe is usually made of glass and can also serve to diffuse, redirect, or change the color of the light. **2.** An incandescent lamp.

**globe valve** A valve with a rounded body utilizing a manually raised or lowered disc that, when closed, seats so as to prevent fluid flow. Globe valves are ideal for throttling in a semi-closed position.


globe valve

**glory hole** **1.** In mining, a slang expression for a vertical pit whose mined material drops into a shaft below the bottom of the pit. **2.** A small shaft excavated to assess the quality of an ore.

**gloss** Surface luster, usually expressed in terms ranging from matte to high gloss.

**gloss gold** A high-quality gold with few pinholes and irregularities.

**glow lamp** A type of low-consumption electric discharge lamp whose light is produced close to the electrodes within an ionized gas. A glow lamp is often used as an indicating light.

**glue** A general term for any natural or synthetic viscous or gelatinous substance used as an adhesive to bind or join materials.

**glue bleedthrough** The seepage of glue through the face of open-pore wood.

**glue bond** A measure of how well articles are fastened together after being glued.

**glued floor system** A method of floor construction in which a plywood underlayment or other structural panel is both glued and nailed to the floor joists. This creates a stronger, stiffer floor less prone to squeaking than floors fastened only with nails.

**glue distemper** Inexpensive and easily-removed paint made from water, animal glue, whiting, and tinting pigments. *See also* **distemper.**

**glue gun** A hand tool for the application of bulk or cartridge-type adhesives.

**glue laminated (glu-lam)** The result of a process in which individual pieces of lumber or veneer are bonded together with adhesives to make a single piece in which the grain of all the constituent pieces is parallel.

**glue-laminated timber** Timber composed of wood layers, or laminations, glued together with the grains longitudinally parallel. Commonly used for columns, headers, posts, beams, and truss components.

**glue line** The layer of glue or adhesive between two pieces of lumber or veneer.

**glue nailed** A term applying to plywood joints and connections that have been both glued and nailed to produce the stiffest possible construction.

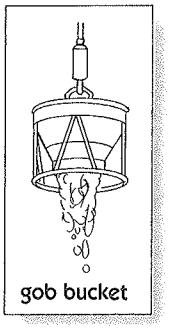
**glue-up** The process of spreading glue on the surfaces of veneers of similar sizes and pressing them together to form a sheet of plywood.

**glycol** Liquid with a very low freezing point that is miscible with water.

**glyph** **1.** An ornamental, usually vertical channel or groove, as in a column or freeze. **2.** A sculptured pictograph.

**gneiss** A coarse-grained metamorphic rock similar to granite and containing quartz, mica, feldspar, or other minerals. In construction terms, gneiss is classed as *trade granite*.

**gob bucket (concrete bucket)** On a crane, the bucket that is used to carry concrete.


gob bucket

**go-devil** **1.** A pipe-cleaning device inserted at the pump end of a pipeline and forced through the pipe by water pressure in order to clean it. **2.** In lumbering, a sled or skid-pan designed to keep the leading end of a log off the ground when skidding.

**going** The horizontal distance between two consecutive risers or stairs. The horizontal distance between the first and last riser of an entire flight is called the *going of the flight* or the run.

**going rod** A rod used in planning the going of a flight of steps.

**gold bronze** Powdered copper or copper alloy used for bronzing, or in the manufacture of gold or bronze paint.

**gold size** An oleo-resinous varnish that becomes sticky upon application, but hardens slowly, thus making an appropriate adhesive for attaching gold leaf to a surface.

**goliath crane** A heavy but portable crane, usually about 50-ton capacity, used for jobs requiring heavy lifting and for shop fabrication involving heavy steel.

**good one side (G1S)** A grade of sanded plywood with a higher grade of veneer on the face than on the back. G1S is used in applications where the appearance of only one side is important.

**good two sides (G2S)** The highest grade of sanded plywood. G2S is allowed to have inlays or neat wood patches and is used in applications where the appearance of both sides is important.

**gooseneck** **1.** In plumbing, a curved, sometimes flexible fitting connection or section of pipe. **2.** In HVAC, a screened, U-shaped intake or exhaust duct. **3.** The curved end of a handrail at the top of a stair. **4.** The curved connector from a tractor to a trailer.

**gothic** In architecture, the prevalent style in Western Europe from the 12th through the 15th century, whose characteristic features included flying buttresses, ribbed vaulting, pointed arches, and lavishly fenestrated walls.

# G

**gothic arch** A typically high, narrow arch with a pointed top and a jointed apex (as opposed to keystone).

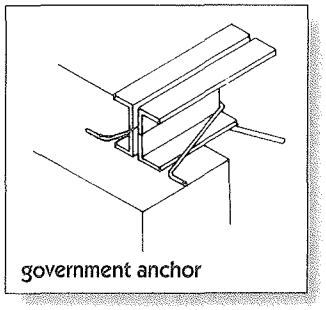
**gothic-arch window** A window topped with a pointed arch.

**gothic-head window** A window topped with a pointed arch.

**gouache** A type of thick, water-based, decorative paint.

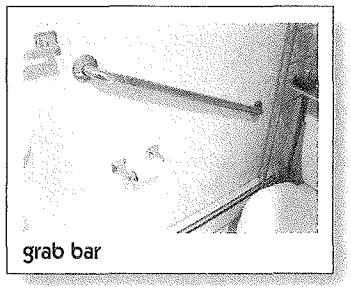
**gouge** A cutting chisel having a long, curved blade and used for hollowing out wood, or for making holes, channels, or grooves in wood or stone.

**government anchor** A V-shaped anchoring device usually fabricated from 1/2" round bar, and used in steelwork to secure a wall-bearing (or other) beam to masonry.


government anchor

**Gow caisson (Boston caisson, caisson pile)** A series of steel cylinders from 8'–16' high used to protect workers and equipment during deep excavation in soft earth. Each successive cylinder is 2' in diameter smaller than its predecessor, through which it is dropped or driven deeper into the surrounding soft clay or silt to prevent excessive loss of ground and to facilitate deep excavation. When excavation and construction are complete, the cylinders are withdrawn.

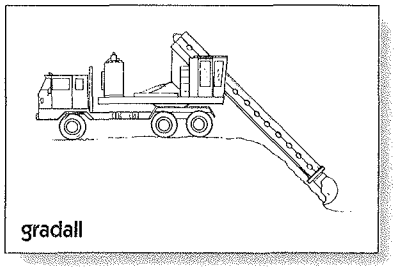
**grab bar** A short length of metal, glass, or plastic bar attached to a wall in a bathroom, near a toilet, in a shower, or above a bathtub to facilitate safe access.


grab bar

**grab bucket** A bucket-like device with hinged lower halves or "jaws" hydraulically or cable-operated from a crane or used for re-handling granular materials. *See also* **clamshell**.

**grab crane** A crane outfitted with a grab bucket.

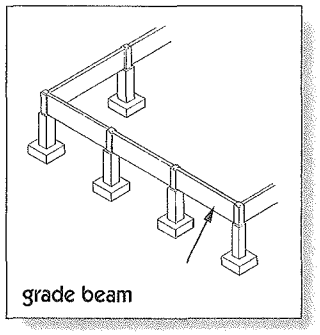
**gradall** A trade name for a wheel-mounted, articulated, hydraulic backhoe often used with a wide bucket for dressing earth slopes.


gradall

**gradation** An assessment, as determined through sieve analysis, of the amounts of particles of different sizes in a given sample of soil or aggregate.

**grade** **1.** The surface or level of the ground. **2.** A classification of quality as, for instance, in lumber. **3.** The existing or proposed ground level or elevation on a building site or around a building. **4.** The slope or rate of incline or decline of a road, expressed as a percent. **5.** A designation of a subfloor, either above grade, on grade, or below grade. **6.** In plumbing, the slope of installed pipe, expressed in the fall in inches per foot length of pipe. **7.** The classification of the durability of brick. **8.** Any surface prepared to accept paving, conduit, or rails.

**grade beam** A horizontal end-supported (as opposed to ground-supported) load-bearing foundation member that supports an exterior wall of a superstructure.

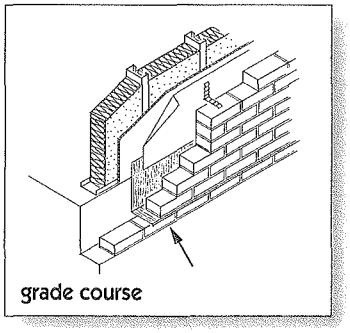

grade beam

**grade block** A type of concrete masonry unit from which the top course of a foundation wall is constructed and above which a masonry wall is constructed.

**grade boom** That portion of the foundation system that directly supports the exterior walls of the building.

**grade correction** A distance measured on a slope and corrected to a horizontal distance between vertical lines through its end points.

**grade course** The first course of brick, block, or stone, at grade level, usually waterproofed.

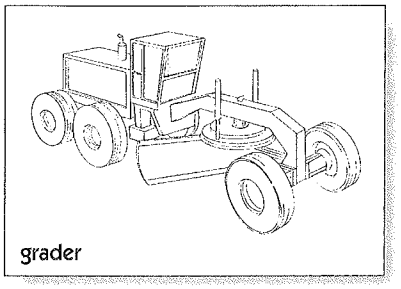

grade course

**graded aggregate** **1.** Aggregate having size ranging from coarse to graded sand. **2.** A fine aggregate (under 1/4") having a uniformly graded particle size.

**graded standard sand** Ottawa sand that has been subjected to accurate grading between No. 30 and No. 100 sieves and is used in testing hydraulic cements.

**grade line** **1.** A line of stakes with markings, each at an elevation relative to a common datum and from whose elevations a grade between their terminal points can be established. **2.** A strong string used to establish the top of a concrete pour or masonry course.

**grader** A multipurpose earthworking machine used mostly for leveling and crowning. A grader has a single blade, centrally located, that can be lifted from either end and angled so as to cast to either side.


grader

**grade stamp (grade mark)** A stamp on a manufactured piece of wood that designates it meets certain standards of quality as set forth by one of several standards organizations. Stamps for structural lumber, for instance, include information on species, moisture content and lumber grade.

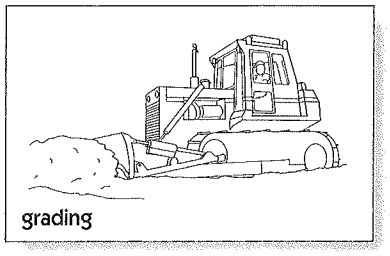
**grade stake** In earthwork, a stake that designates the specified level.

**grade strip** A thin wooden strip fastened to the inside of a concrete form to indicate the level to which concrete should be placed.

**gradient** **1.** The change in elevation of a surface, road, or pipe usually expressed in a percentage or in degrees. **2.** The rate of change of a variable such as temperature, flow, or pressure.

**gradienter** A micrometer, attached to a transit's telescope, that allows the angle of incline to be measured in terms of the angle's tangent instead of in degrees and minutes.

**grading** **1.** The act of altering the ground surface to a desired grade or contour by cutting, filling, leveling, and/or smoothing. **2.** Sorting aggregate by particle size. **3.** Classifying items by size, quality, or resistance.


grading

**grading curve** A line on a graph illustrating the percentages of a given sample of material that pass through each of a specific series of sieves.

**grading instrument** A surveyor's level having a telescope that can be adjusted upward or downward to lay out a required gradient.

**grading plan** A plan showing contours and grade elevations for existing and proposed ground surface elevations at a given site.

**grading rules** Quality criteria that determine the classification of lumber, plywood, or other wood products.

**gradual load** The gradual application of a load to the supporting members of a structure.

**graduated courses** Courses of roofing slates having diminishing gauges from the eaves to the roof.

**graduated payment mortgage (GPM)** A mortgage loan that starts with low payments that rise annually, enabling a borrower to pay off the loan in a shorter term than originally set.

**graffito** A plaster surface applied over a colored undercoat for decorative effect. While still soft, the surface is scored with a pattern so as to expose the contrasting undercoat.

**graft** **1.** The joining of a bud or scion of one plant or tree onto a part of a similar plant or tree. **2.** Extortion by the unscrupulous leverage of one's position or knowledge.

**grain** **1.** The directional arrangement of fibers in a piece of wood or woven fabric, or of the particulate constituents in stone or slate. **2.** The texture of a substance or pattern as determined by the size of the constituent particles. **3.** Any small, hard particle (like sand). **4.** A metric unit of weight; 7,000 grains equal one pound.

**graining** The process of simulating grain on painted or manmade surfaces using special tools such as graining combs to manipulate an applied coat of translucent stain or *graining color*.

**graining comb** A painting tool with teeth used to simulate grain on a painted or manmade surface.

**grain size** **1.** A size classification of mineral particles in soil or rock. **2.** One of the physical characteristics of a particle of soil, which relates to its mechanical properties.

**grain slope** The angle of the grain in a piece of wood, as determined from a hypothetical line parallel to its length.

**granatic finish** A granite-like face mix on precast concrete.

**grandfather clause** A clause that allows activities that were legal under an old law to continue under a superseding law.

**grandmaster key** **1.** A key that not only operates all the locks within a given group having its own master key, but several such groups. **2.** A master key of master keys.

**granny bar** A slang term for a large crowbar.

**granolithic concrete** A type of concrete made from a hard aggregate whose particle shape and surface texture render it conducive for wearing-surface finishes on floors.

# G

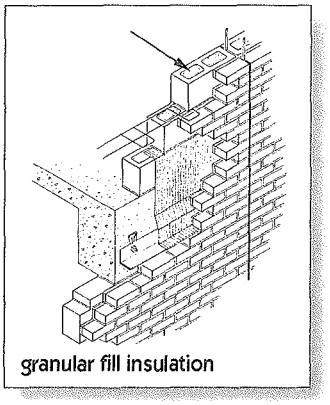
**granolithic finish** A concrete wearing surface, placed over a concrete slab, containing aggregate chips to improve its longevity.

**grantee** **1.** The party to whom a deed or similar document transfers property or property rights. **2.** The buyer.

**grantor** **1.** The party from whom a deed or similar document transfers property or property rights. **2.** The seller.

**granular** **1.** A technical term relating to the uniform size of grains or crystals in rock. **2.** Composed of grains.

**granular fill insulation** An insulation material, such as perlite or vermiculite, that can be easily placed or poured because it comes in the form of chunks, pellets, or modules.


granular fill insulation

**granular material** A sandy type of soil whose particles are coarser than cohesive material and do not stick together.

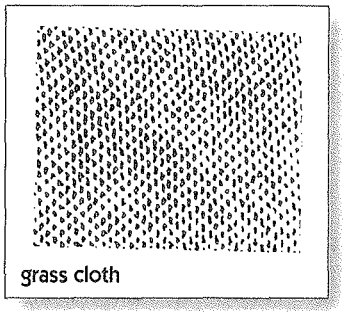
**graphics** Engineering or architectural drawings created with attention to mathematical rules, such as perspective or projection.

**graphite paint** A type of paint made from boiled linseed oil, powdered graphite, and a drier. Graphite paint is used to inhibit corrosion on metal surfaces.

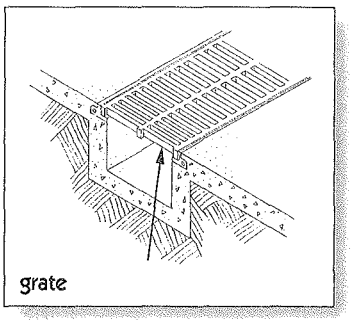
**grapple** An excavation or re-handling bucket on the end of a crane. *See also* **orangepeel bucket.**

**grappler** A pointed or wedge-shaped spike whose eye is left exposed after the spike is driven into a masonry joint, thus providing support for scaffold brackets.

**grass cloth** A wall covering made from woven vegetable fibers, especially arrowroot bark. The cloth is laminated onto a paper backing.


grass cloth

**grate** **1.** A type of screen made from sets of parallel bars placed across each other at right angles in approximately the same plane. A grate allows water to flow to drainage, while covering the area for pedestrian or vehicular traffic. **2.** A surface with openings to allow air to flow through while supporting a fuel bed, as in a coal furnace.

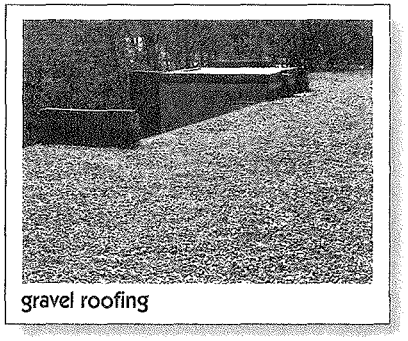

grate

**gravel** Coarse particles of rock that result from naturally occurring disintegration or that are produced by crushing weakly bound conglomerate. Gravel is retained on a No. 4 sieve.

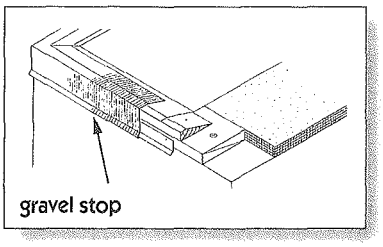
**gravel, bank run** Naturally occurring gravel deposits that are often located along rivers or lakes.

**gravel board** An easily replaceable board that is secured horizontally near the bottom edge of a wooden fence so as to prevent contact between the ground and the vertical boards, thus preventing rotting.

**gravel roofing** Roofing composed of several (built-up) layers of saturated or coated roofing felt, sealed and bonded with asphalt or coal-tar pitch that, for solar protection and insulation purposes, is then covered with a layer of gravel or slag. Usually used on flat or nearly flat roofs.


gravel roofing

**gravel stop** A metal strip or flange around the edge of a built-up roof. The stop prevents loose gravel or other surfacing material from falling off or being blown off a roof.


gravel stop

**gravity dam** A pyramid-shaped dam whose own weight resists the force of the water behind it.

**gravity-operated toilet** Any toilet that utilizes the natural downward pressure of water in the toilet tank to flush.

**gravity separator** A chamber in which oil rises and remains on the surface of wastewater until it is removed.

**gravity wall** A massive concrete retaining wall whose own weight prevents it from overturning.

**gravity water supply (gravity water, gravity system)** A water distribution system in which the supply source is located at an elevation higher than the use.

**gray paper** The rough textured, unsized paper that covers the back of regular gypsum board, or both face and back on backing board products.

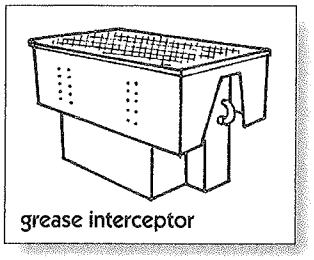
**gray scale** A series of achromatic samples that vary discretely from white to black.

**gray water** Wastewater recycled from appropriate sinks, showers, baths, and laundry, which can be used for watering plants, cooling HVAC equipment, and other purposes.

**grazing iron** **1.** In plumbing, a tool for finishing soldered joints. **2.** A glass-cutting device.

**grease extractor** A device installed in conjunction with a cooking exhaust system and employing grease-collecting baffles positioned so as to create a path of sharp turns through which the cooking exhaust is passed at high velocity. The grease, which is particulate and heavier than air, is collected on the baffles by centrifugal force, while the carrying air continues around the sharp turns on its way to being exhausted, thus becoming cleaner at each baffle.

**grease interceptor (grease trap)** A device installed between the kitchen drain and the building sewer to trap and retain fats and grease from kitchen waste lines.


grease interceptor

**grease monkey** **1.** A slang expression for a person who lubricates, refuels, and/or repairs equipment. **2.** A grease dauber who greases skids so that logs can be moved over them easily.

**grease trap** *See* **grease interceptor.**

**green** **1.** A term referring to unseasoned timber or to fresh, unhardened concrete, plaster, or paint. **2.** Term referring to environmentally and ecologically sustainable design and/or use.

**greenbelt** **1.** An elongated section of trees or other plantings that serves as a boundary of, or divider within, a community. **2.** Any large area of undeveloped land, including parks and farmland, that surrounds a community.

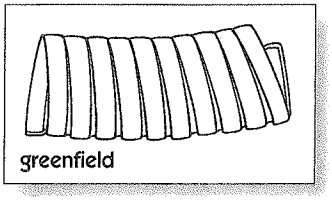
**green board** Moisture-resistant gypsum board distinguishable by the green color of its face paper. Green board is designed to be used in areas that are often damp, such as in bathrooms for tile backing.

**green brick** Molded clay block or brick before it has been fired in a kiln.

**green building** Design, construction, and product selection that minimizes a structure's impact on the natural environment.

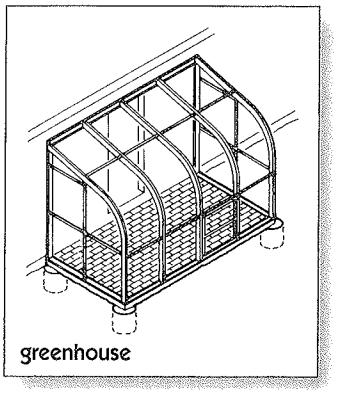
**green concrete** Concrete that has set but not hardened.

**greenfield** Flexible metal conduit for electrical wiring.


greenfield

**green glass** A type of glass whose green color results from impurities in its raw materials.

**greenhouse** A glass-enclosed space with a controlled environment for growing plants, vegetables, and fruits out of season.


greenhouse

**greenhouse effect** **1.** The conversion of the sun's rays into heat that is retained by the glass roof of a greenhouse. **2.** The steady, gradual rise in temperature of the earth's atmosphere due to heat that is retained by layers of ozone, carbon dioxide, and water vapor.

**Green Lights Program** A government program sponsored by the Environmental Protection Agency that is aimed at promoting energy efficiency through investment in energy-saving lighting.

**green lumber** Undried, unseasoned lumber.

**green manure** **1.** Crops (such as winter rye or alfalfa) that are plowed under to return nutrients into the soil. **2.** The plowed-under remains of a crop from which a harvest has been reaped.

**green mortar** Mortar that has dried but not set.

**green power** Refers to the production of electricity from environmentally friendly sources, including wind and solar power, photovoltaics, geothermal, biomass, hydrogen fuel cells, and so forth with the goal of reducing the use of fossil fuel and carbon dioxide generation.

**green process** Manufacturing products with consideration for the source of materials, energy-efficient manufacturing methods, use of recycled materials in packaging, and reclaiming manufacturing waste.

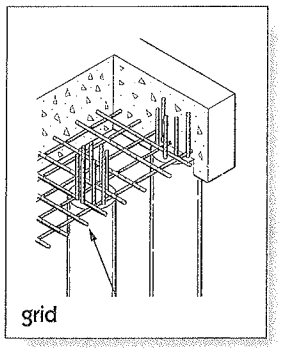
# G

**green products** Sustainable products that minimize the impact on the natural environment.

**green roof** Also called a *living roof*, a roof with a layer of soil and plantings that dissipates solar heat, provides good insulation, absorbs rainwater runoff, generates oxygen, and protects and therefore extends the life of the roofing material below. It can also give the roof space a garden-like appearance.

**greenwash** Term referring to companies that overstate their environmental practices in order to conceal unsound procedures and appear environmentally responsible to the public.

**grid** **1.** In surveying, a system of evenly spaced perpendicular reference lines with its intersections used to measure elevations. **2.** The structural layout of a given building. **3.** A system of crossed reinforcing bars used in concrete footings.


grid

**grid ceiling** **1.** A ceiling with apertures into which are built luminaries for lighting purposes. **2.** Any ceiling hung on a grid framework.

**grid foundation** A foundation consisting of several intersecting continuous footings loaded at the intersections. A grid foundation covers less than 75% of the area within its outer limits.

**gridiron** **1.** The plotting of city streets in rectangles. **2.** The framework above a stage from which lights and scenery can be hung.

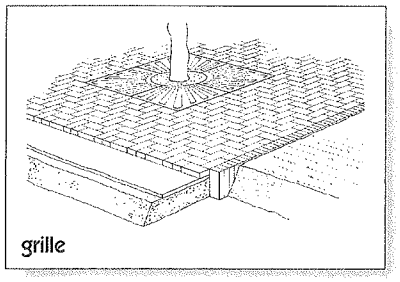
**grid line** Any line that is part of a reference pattern for surveying or a layout.

**griffe** An ornamental form, somewhat like a claw, extending from the torus of a column base and lying on the four corners of the plinth.

**griffith flaws** Natural microscopic flaws in plate glass that can increase in size when exposed to certain substances, thus compromising the glass.

**grillage** Steel or wooden beams used horizontally under a structure to distribute its load over its footing or underpinning.

**grille** **1.** Any grating or openwork barrier used to cover an opening in a wall, floor, paving, etc., for decoration, protection, or concealment. **2.** A louvered or perforated panel used to cover an air duct opening in a wall, ceiling, or floor. **3.** Any screen or grating that allows air into a ventilating duct.


grille

**grillwork** **1.** In construction, any heavy framework of timbers or beams used to support a load on soil instead of on a concrete foundation. **2.** Decorative metal or wood grating used as a divider or for aesthetic purposes.

**grind** **1.** To reduce in size by removing material by friction or crushing. **2.** To sharpen (as a tool) by abrasion.

**grinder** **1.** A device that sharpens or removes particles of material by abrasion. **2.** A machine or tool for finishing concrete surfaces by abrasion.

**grinder pump** A sewage pump that reduces solids and grinds and pumps material.

**grindstone** A flat sandstone wheel that is rotated to sharpen implements or to reduce the size of a material by abrasion or grinding.

**gringo blocks** Nailing anchors made of wood and inserted in masonry walls to provide for fastening of door or window jambs.

**grinning through** **1.** In plastering, a term to describe lathing that is discernable under plaster. **2.** In painting, a term to describe an undercoat that is showing through a topcoat.

**grip length (bond length)** The minimum length, expressed in bar diameters, of rebar necessary for anchorage in concrete. *See also* **bond length.**

**grisaille** **1.** A system of surface painting in various shades of gray so as to decorate or to suggest bas-relief. **2.** Uncolored, nontransparent glass in a stained glass window.

**grit** **1.** A granular abrasive used in making sandpaper or on grinding wheels to give a surface a nonslip finish. **2.** Particles of sand or gravel contained in sewage.

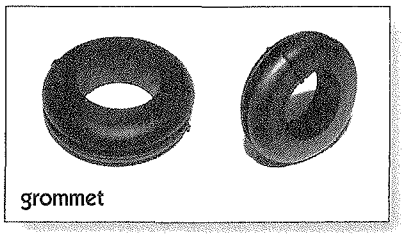
**grizzly** **1.** A screen or grate used to remove oversized particles during aggregate processing or loading. **2.** A gate or similar device on a chute.

**groin** **1.** In architecture, a ridge or curved line formed at the junction of two intersecting vaults. **2.** A structure built outward from a shore into water to direct erosion or to protect against it.

**groin centering** **1.** A method of supporting ribless groining during vaulting. **2.** In ribbed vaulting, the support of the stone ribs by timbers until construction is complete.

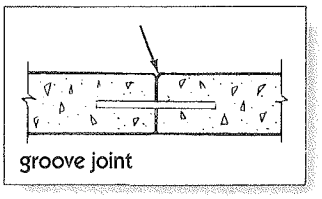
**grommet** A metal or plastic eyelet that provides a reinforced hole in a material, such as cloth or leather, that might otherwise tear from the stress

on the hole when a fastener or other device is passed through it or attached to it.

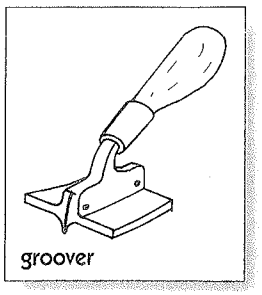

grommet

**groove** In carpentry, a narrow, longitudinal-channel cut in the edge or face of a wood member. The groove is called a *dado* when cut across the grain, and a *plow* when cut parallel to it.

**groove joint** A joint formed by the intentional creation of a groove in the surface of a wall, pavement, or floor slab for the purpose of controlling the direction of random cracking.


groove joint

**groover** A tool for creating grooved joints in unhardened concrete slabs.


groover

**groove weld** A weld between the existing preformed grooves in members being joined.

**gross area** **1.** The total area without deducting for holes or cut-outs. **2.** The whole or entire area of a roof. **3.** In shingles, the entire area of a shingle, including any parts that might have had to be cut out. **4.** The total enclosed floor area of a building.

**gross cross-sectional area** The total area of that portion of a concrete masonry unit that is perpendicular to the load, inclusive of any areas within its cells and reentrant spaces.

**gross floor area** The total area of all the floors of a building, including intermediately floored tiers, mezzanine, basements, etc., as measured from the exterior surfaces of the outside walls of the building.

**gross leasable area (GLA)** The total floor area designed for tenant occupancy and exclusive use on which rent is based.

**gross load** In heating, the net load to which allowances are added for pickup and piping losses.

**gross margin** The excess of net sales revenue over direct costs.

**gross output** The number of BTUs available at the outlet nozzle of a heating unit for continuously satisfying the gross load requirements of a boiler operating within code limitations.

**gross section** The total area of the cross section of a structural member as calculated without subtracting for any voids in that cross section.

**gross volume** **1.** The total volume within the revolving part of a drum concrete mixer. **2.** The total volume of the trough on an open-top concrete mixer.

**grotto** A natural or man-made cavern or cave.

**ground** **1.** The conducting connection between electrical equipment or an electrical circuit and the earth. **2.** A strip of wood that is fixed in a wall of concrete or masonry to provide a place for attaching wood trim or burring strips. **3.** A screed, strip of wood, or bead of metal fastened around an opening in a wall and acting as a thickness guide for plastering or as a fastener for trim. **4.** Any surface that is or will be plastered or painted. **5.** Any electrical reference point.

**ground area** The area computed by the exterior dimensions of the structure.

**ground beam** **1.** A reinforced concrete beam or heavy timber positioned horizontally at ground level to support a superstructure. **2.** A ground sill.

**ground brush** A round or oval paintbrush used to carry large quantities of paint.

**ground bus** An electrical bus to which individual equipment grounds are connected and which itself is grounded at one or more points.

**ground casing** In carpentry, a term for the blind casing of a window.

**ground coat** The base or undercoat of paint or enamel, often designed to be seen through the topcoat or glaze coat.

**ground course** A first horizontal course of masonry at ground level.

**ground cover** A planting of low plants that in time will spread to form a dense, often decorative mass. Ground cover is also used to prevent erosion.

**grounded** Descriptive of an object that is electrically connected to the earth or to another conducting body that is connected to the earth.

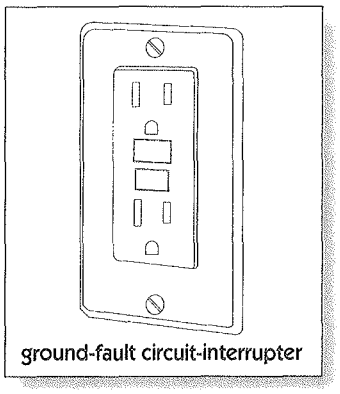
**grounded conductor** In an electrical system, a circuit conductor that is intentionally grounded, either solidly or through a device that limits current.

**grounded system** A system of electric conductors, at least one of which is intentionally grounded, either solidly or by means of a device that limits current.

**grounded work** Any joinery, such as a crown molding, attached to grounds. *See also* **ground (2.)**.

# G

**ground-fault circuit-interrupter** An electrical outlet fitted with code-required safety protection.

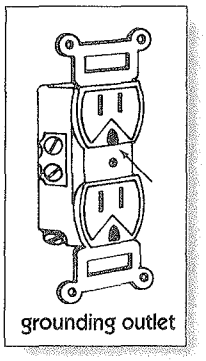

ground-fault circuit-interrupter

**ground floor** In a building, the floor closest to the level of the surrounding ground.

**ground glass** Glass having a light-diffusing surface produced by grinding with an abrasive.

**grounding electrode** A conductor that is firmly embedded in the earth, and can thus function to maintain ground potential on the conductors connected to it.

**grounding outlet** An electrical outlet whose polarity-type receptacle includes both the current-carrying contacts and a grounded contact that accepts an equipment-grounding conductor.


grounding outlet

**grounding plug** A receptacle plug comprising a male member that, when plugged into a live grounding outlet, provides a ground connection for an electric device.

**grounding rod** The rod that grounds an electrical panel.

**ground iron** Plumbing drain and waste lines installed under the floor of a basement.

**ground joint** **1.** In masonry, a close-fitting joint, usually without mortar. **2.** A closely fitted joint between machined metal surfaces.

**ground joist** Floor joists laid on sleepers, dwarf sills, or stones.

**ground key valve** A fluid-flow control valve containing a tapered plug with a hole bored into it. The keg-type handle requires only a one-quarter turn between its open and shut positions.

**ground line** The natural grade line or ground level from which excavation measurements are taken to determine excavation quantities.

**ground plan** The plan of a structure at ground level.

**ground plate** *See* **ground sill.**

**ground pressure** **1.** The weight of a machine or a piece of equipment divided by the area, in square inches, of the ground that supports it. **2.** Pressure exerted on a structural member by the adjacent soil or fill.

**ground sill (ground plate)** The bottom horizontal structural member of a framed building on or near the ground level.

**ground-source heat pump** A geothermal heating and cooling system that uses the moderating temperatures of the earth to heat or cool a home.

**ground station** *See* **earth station.**

**groundwater** **1.** Naturally occurring water that moves through the earth's crust, usually at a depth of several feet to several hundred feet below the earth's surface. **2.** Water contained in the soil below the level of standing water.

**groundwater recharge** The reintroduction of water into the ground, as from trenches beyond the construction area or through injection.

**groundwater table** The top elevation of groundwater at a given location and at a given time.

**ground wire** **1.** An electrical conductor leading directly or indirectly to the earth. **2.** Strong, small-gauge wire used in establishing line and grade, as in shotcrete work.

**groundwork** Batters used in roofing and siding as a base over which slate, tiles, and shingles are applied.

**group house (row house)** A single dwelling unit contained in a long, unbroken line of vertically identical houses connected by common walls.

**group vent** In plumbing, a branch vent connected to two or more traps.

**grouser** The cleat on a track shoe, such as the shoe on a bulldozer track, that is used to improve traction.

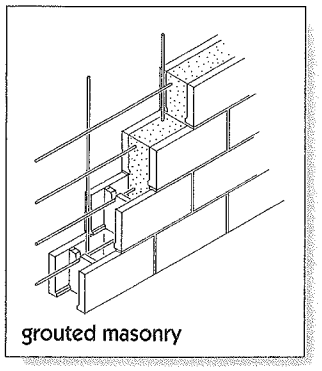
**grout** **1.** A hydrous mortar whose consistency allows it to be placed or pumped into small joints or cavities, as between pieces of ceramic clay, slate, and floor tile. **2.** Various mortar mixes used in foundation work to fill voids in soils, usually through successive injections through drilled holes.

**grout box** A cone-shaped sleeve in a concrete slab into which an anchor bolt for machinery can be grouted.

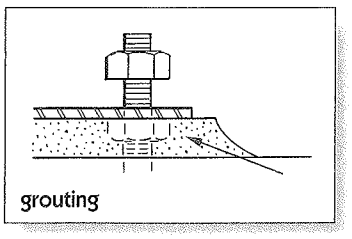
**grouted-aggregate concrete** Concrete that is produced by injecting grout into prepositioned coarse aggregate.

**grouted frame** An originally hollow-metal door frame whose vacant interior has been filled with some type of cement or mortar mixture.

**grouted masonry** **1.** Hollow masonry units with some or all of the cells filled with grout. **2.** Masonry comprising two or more wythes, the spaces between which are filled solidly with grout.


grouted masonry

**grouting** **1.** The placing of grout so as to fill voids, as between tiles and under structural columns and machine bases. **2.** The injection of grout to stabilize dams or mass fills, or to reinforce and strengthen decaying walls and foundations. **3.** The injection of grout to fill faults and crevices in rock formations.


grouting

**grout lift** The height of grout placed in masonry wall voids during a single placement.

**grout slope** The naturally occurring slope of hydrous grout after its injection into preplaced aggregate concrete.

**growth rate** A measurement of wood growth taken from the number of growth rings and used to rate strength.

**growth ring** A ring that designates the amount of a tree's growth in a single year.

**grub** In site work, the clearing of stumps, roots, trees, bushes, and undergrowth.

**grub axe (grub hoe, mattock)** A hand tool for shallow digging or root pulling. One end of the head of the tool has a transverse cutting blade, while the other end has a cutting blade like an axe. *See also* **mattock**.

**grub saw** A hand-operated saw used for cutting stone (such as marble) into usable slabs.

**grunt** A slang term for a common laborer or an apprentice lineman.

**guarantee (guaranty, warranty)** A legally enforceable assurance of quality or performance of a product or work, or of the duration of satisfactory performance.

**guaranteed maximum cost** The maximum amount above which an owner and contractor agree that cost for work performed (as calculated on the basis of labor, materials, overhead, and profit) will not escalate.

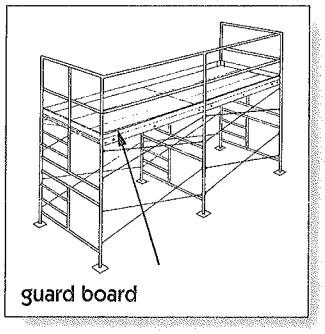
**guaranteed maximum cost contract** A contract for construction wherein the contractor's compensation is stated as a combination of accountable cost plus a fee, with guarantee by the contractor that the total compensation will be limited to a specific amount. This type of contract may also have possible optional provisions for additional financial reward to the contractor for performance that causes total compensation to be less than the guaranteed maximum amount.

**guarantor** A person or entity that is obligated under a guarantee.

**guaranty bond** A type of bond that is given to secure payment and performance. Each of the following four bonds are types of guaranty bonds: **1.** bid bond, **2.** labor and material payment bond, **3.** performance bond, and **4.** surety bond.

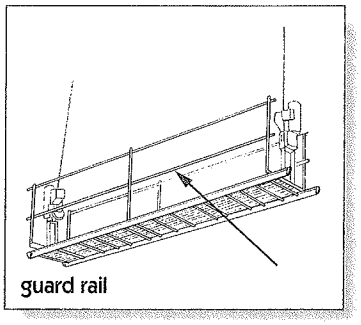
**guard** **1.** Any bars, railing, fence, or enclosure that serves as protection around moving parts of machinery or around an excavation, equipment, or materials. **2.** A security guard hired to maintain safety and security at a construction site.

**guard board** A raised board around the edge of a scaffold or gantry crane to keep men and tools from falling off.


guard board

**guarded front and strike** A lock designed and constructed with the front and strike protected, thus preventing the latch bolt from being "jimmied" through the crevice between the door and the jamb.

**guard rail** **1.** A horizontal rail of metal, wood, or cable fastened to intermittent uprights of metal, wood, or concrete around the edges of platforms or along the lane of a highway. **2.** The rail that separates traffic entering or exiting through side-by-side automatic doors.


guard rail

**gudgeon** **1.** A metal pin or dowel used for joining two adjacent stones, blocks, or slabs. **2.** A reinforced bushing or a block designated to absorb shock. **3.** On a hinge, the leaf that is fastened to an immovable member. **4.** The part of a gate hook fastened to the gate post.

# G

**guesstimate** An educated guess or approximation of the cost of a project made by the cost estimator, without having performed a detailed quantity takeoff. *See also* **educated guess.**

**guide bead** *See* **inside stop.**

**guide coat** A very thin coat of paint that serves to identify, through emphasis, various imperfections on the surface under it.

**guided-bend test** A test to determine the strength of a weld and the ductility of metallic materials.

**guide pile** A heavy square timber driven vertically near sheet piles that support an excavation, so as to carry the full earth pressure from the waters, or sometimes simply to guide the sheet piles.

**guide wire** **1.** A steel wire or cable used to guide the vertical movement of a stage curtain in a theater. **2.** A line or wire that guides the movement of a counterweight arbor. **3.** A wire placed along the edge of a roadway to be paved. A sensor on the pavement spreader adjusts the elevation of the pavement from the wire.

**guillotine** In woodworking or cabinetry, a trimming machine that can cut the two matching ends of a joint to any given angle.

**guinea** In surveying, a wooden marker that is first driven to grade, then topped with blue paint for identification during finish grading.

**guinea chaser** In surveying, a site worker who uncovers the blue-topped stakes and informs the blade operator whether fill should be added or removed.

**gullet** **1.** The concave gap between the teeth of a file or saw. **2.** The height of a saw tooth as measured from the base to the point. **3.** The space between tabs on a standard asphalt strip shingle.

**gum bloom** A hazy or lusterless area on a painted surface that results from the use of the wrong reducer.

**gumbo** Soil composed of fine-grained clays. When wet, the soil is highly plastic, very sticky, and has a soapy appearance. When dried, it develops large shrinkage cracks.

**gummer** *See* **gemel.**

**gumwood** Wood from a gum tree, especially eucalyptus, used mostly for interior trim.

**gun** **1.** Equipment designed to deliver shotcrete. **2.** A pressure cylinder for pneumatic delivery of freshly mixed concrete. **3.** A spray gun. **4.** A slang expression for a transit, as it is used to *shoot* grades.

**gun consistency** The degree of viscosity of caulking or glazing compound that renders it suitable for application by a caulking gun.

**gun finish** The finish on a layer of shotcrete left undisturbed after application.

**gun grade** *See* **gun consistency.**

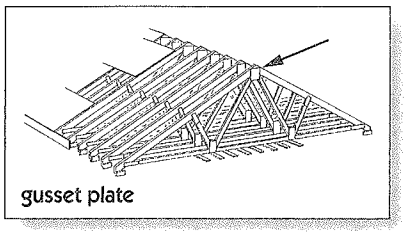
**gunite** Concrete mixed with water at the nozzle end of a hose through which it has been pumped under pressure. Gunite is applied or placed pneumatically, as shot, onto a backing surface.

**gunstock stile** In joinery, a diminishing stile whose width is tapered.

**Gunter's chain** In surveying, a measuring device with 100 metal links and a total length of 66 feet.

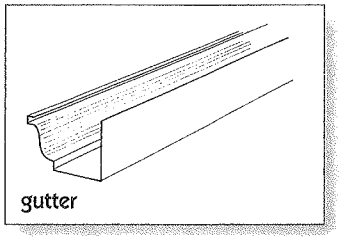
**gusset** A metal or wood brace attached to structural members at their joints to add strength and stability.

**gusset plate** A plate fastened across a joint, as in wood or steel framework members. *See also* **chain.**



gusset plate

**gutter** **1.** A shallow channel of wood, metal, or PVC positioned just below and following along the eaves of a building for the purpose of collecting and diverting water from a roof. **2.** In electrical wiring, the rectangular space allowed around the interior of an electrical panel for the installation of feeder and branch wiring conductors.



gutter

**gutter bed** A strip of flexible metal over the wall side of a gutter that prohibits any gutter overflow from penetrating the wall.

**gutter hook** A bent metal strip used for securing or supporting a metal gutter.

**gutter plate** **1.** A single side of a box or valley gutter, lined with flexible metal and carrying the feet of the rafters. **2.** A beam that supports a lead gutter.

**gutter spikes** Long (6" to 12") aluminum or galvanized steel nails used to hang gutters.

**gutter straps** Metal bands used to support gutters.

**guy** A cable or rope anchored in the ground at one end and supporting or stabilizing an object at the other end.

**guy derrick** A derrick with a guyed mast and hinged boom at its base. This type of derrick is used for erecting and hoisting materials.

**gypsite** Gypsum whose degree of purity is from 60% to 90%. Gypsite also contains sand, clay, and loam.

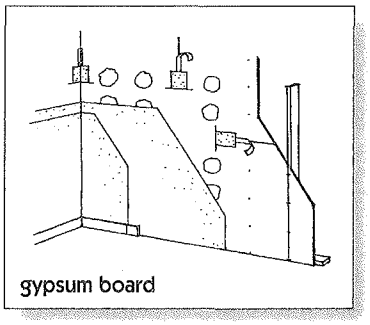
**gypsum** A naturally occurring, soft, whitish mineral (hydrous calcium sulfate) that, after processing, is used as a retarding agent in Portland

cement and as the primary ingredient in plaster, gypsum board, and related products.

**gypsum backerboard** A type of gypsum board, not as smooth as wall-board, surfaced with gray paper, and manufactured specifically as a base onto which tile or gypsum wallboard is adhered.

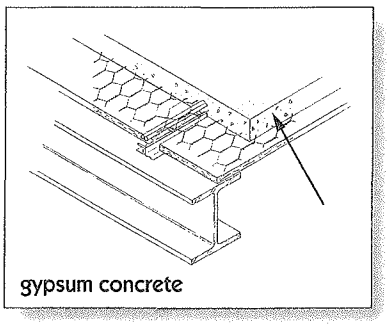
**gypsum block** A lightweight, hollow or solid masonry unit made from gypsum and used to construct nonbearing partitions.

**gypsum board** A panel whose gypsum core is paperfaced on each side, and that is used to cover walls and ceilings while providing a smooth surface that is easy to finish. Used as a substitute for plaster.


gypsum board

**gypsum cement** *See* **Keene's cement.**

**gypsum concrete** A mixture of calcined gypsum binder, wood chips or other aggregate, and water. The mixture is poured to form gypsum roof decks.


gypsum concrete

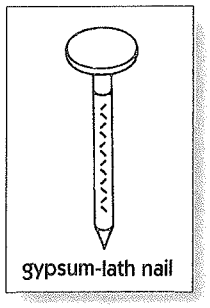
**gypsum fiber concrete** A gypsum concrete whose aggregate is composed of wood shavings, fiber, or chips.

**gypsum fiber panels** Gypsum panels with fiber reinforcement concentrated on each face of the panel.

**gypsum insulation** A loose-fill thermal insulation made of gypsum.

**gypsum lath** A gypsum board used as the base for application of gypsum plaster.

**gypsum-lath nail** A low-carbon steel nail with a large flat head and long point. The characteristics make it especially suitable for fixing gypsum lath and plasterboard.


gypsum-lath nail

**gypsum moulding plaster** A calcined gypsum plaster used primarily for plaster casts or molds, sometimes used as a gauging plaster.

**gypsum neat plaster** A calcined gypsum plaster without aggregate; common usage is for gypsum plaster as a basecoat.

**gypsum panel** *See* **gypsum board.**

**gypsum perlite plaster** A base-coat plaster manufactured from gypsum and an aggregate of perlite.

**gypsum plaster** A plaster made from ground calcined gypsum. The set and workability of gypsum plaster are controlled by various additives. When mixed with aggregate and water, the resulting mixture is used for base-coat plaster.

**gypsum sheathing** A type of wallboard whose core is made from gypsum with which additives have been mixed to make it water-resistant. The sheathing is surfaced with a water-repellent paper to make it appropriate for exterior wall coverings.

**gypsum trowel finish** Factory-prepared plasters consisting primarily of calcined gypsum and used in finishing applications.

**gypsum wallboard** *See* **gypsum board.**

**gyratory crusher** A rock-crushing mechanism whose central conical member moves eccentrically within a circular chamber.