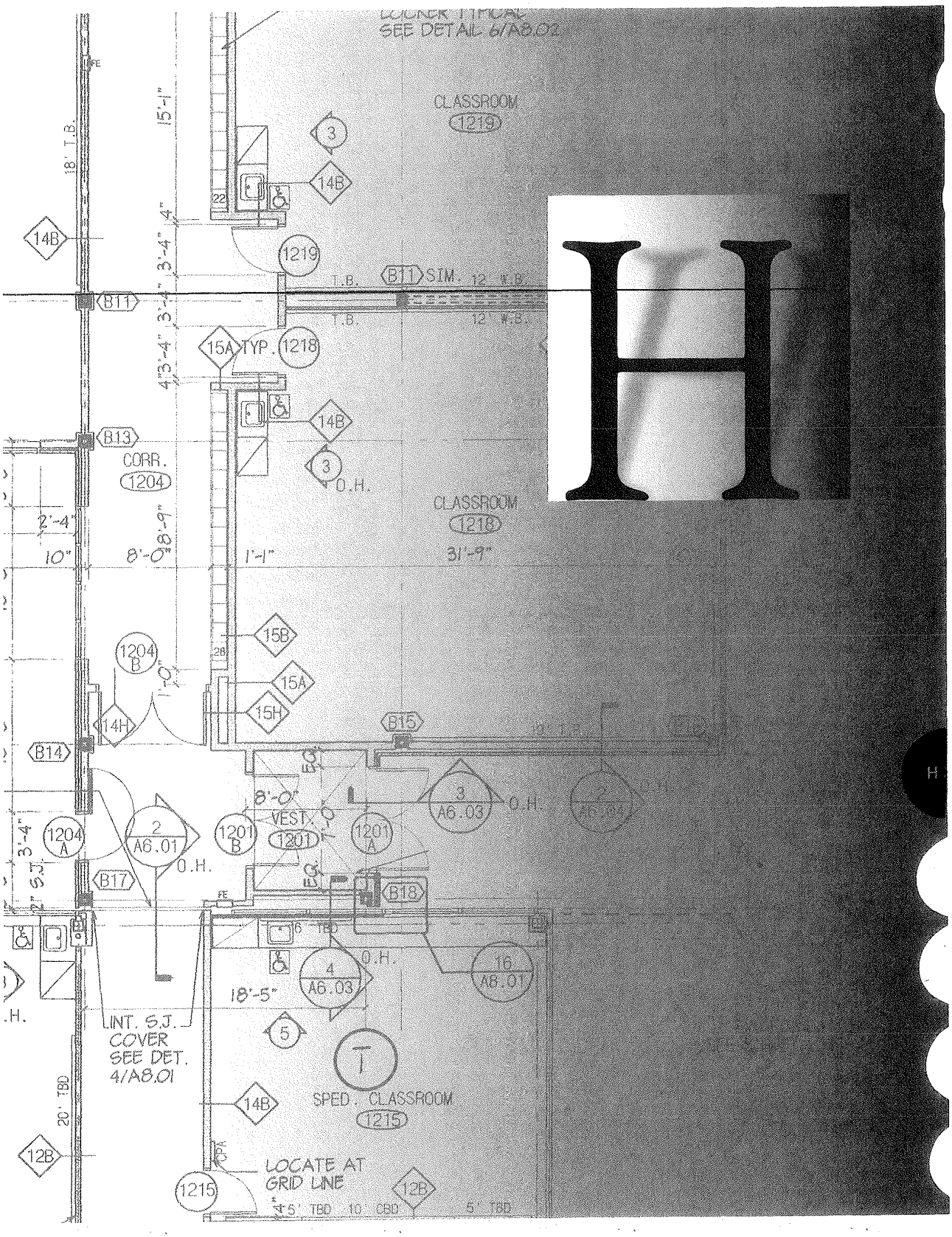


Pictometry EX2034 (Part 2 of 3)
Roofr v. Pictometry
IPR2023-00436

H Abbreviations

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

h harbor, hard, height, hours, house, hundred

H "head" on drawings, high, high strength bar joist, Henry, hydrogen

HA hour angle

H&M hit and miss

HASP health and safety plan

haz hazardous

HAZMAT hazardous materials

HB hollow bark

HC high capacity

HCFCs hydrochlorofluorocarbons

HCl hydrochloric acid

hd head(s)

HD heavy duty, high density

hdbrd hardboard

hdcp handicap

hdlg handling

HDO High Density Overlaid

HDPE high density polyethylene

Hdr header

hdw, hdwe, hdwr hardware

hdwd hardwood

He helium

HE high explosive

Help helper average

hem hemlock

HEPA High Efficiency Particulate Air (filter)

HEW Department of Health, Education, and Welfare

hex hexagon

hf half, high-frequency

HF hot finished

HFCs hydrofluorocarbons

hg hectogram

Hg mercury

hgr hanger(s)

hgt height

hi high

HI height of instrument

HIC high interrupting capacity

HID high intensity discharge

hint high intensity

hip hipped (roof)

HIPS high impact polystyrene

hl hectoliter

hm hectometer

HM hollow metal

hndrl handrail

HO high output

H-O-A hand-off-auto

hol hollow

hor, horiz horizontal

H or M hit or miss

hosp hospital

HOW home owner's warranty

hp, HP horsepower

HP high pressure, steel pile section, handicapped person

HPF high power factor

HPLC high performance liquid chromatography

hr hour

HRS hazard ranking system, hot rolled steel

Hrs/Day hours per day

HS high strength, hollow stem

HSC high short circuit

hsg housing

hst hoist

ht, Ht height, heat

HT high-tension

htd heated

htg, Htg heating

htr heater(s)

Htrs heaters

HTRW hazardous toxic radiological waste

HUD Department of Housing and Urban Development

hv, HV high voltage

HVAC heating, ventilating, and air-conditioning

hvy, Hvy heavy

HW high-water, hot water, hazardous waste, heavy weight

HWM high-water mark

hwy highway

hyd, hydraul hydraulic, hydrostatics

hyd exc hydraulic excavator

Hyd, Hydr Hydraulic

hydrocar hydrocarbons

hydrst hydrostatic

hyp, hypoth hypothesis; hypothetical

hz hertz (cycles)

habitable space General living areas in a building, excluding bathrooms, storage, and utility spaces.

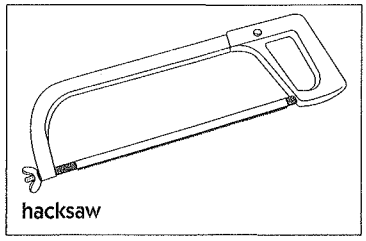
hachure One of the short parallel lines used on an architectural drawing for shading or for indicating a section of a drawn object, or on a topographic map for indicating the degree and direction of slopes and depressions.

hack **1.** To cut or strike at something irregularly or carelessly, or to deal heavy blows. **2.** Slang for a person who lacks, or does not apply, knowledge or skill in performing his job.

hacking **1.** Striking a surface with a special tool so as to roughen it. **2.** A style of brick-laying in which the bottom edge is set in from the plane surface of the wall. **3.** In a stone wall, the breaking of a single course into two or more courses, sometimes for effect but usually because of the scarcity of larger stones.

hacking knife A glazier's tool used for removing old putty prior to reglazing.

hacksaw A lightweight, metal-cutting handsaw having a narrow, fine-toothed blade retained in an adjustable metal frame.



hacksaw

haffit Refers to the vertical side of a dormer. Also referred to as "cheek."

haft The handle of a cutting tool.

ha-ha (haw-haw) A trench or similar depression serving as a sunken fence or barrier for livestock.

hair interceptor In plumbing, a trap-like device installed in the waste drain side of a fixture's plumbing system to capture and collect hair on screens or in perforated steel baskets that are removable from the bottom of the device.

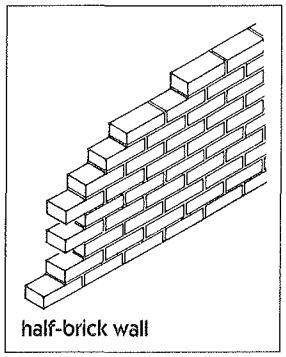
hairline cracks Very fine, barely visible random cracks appearing on, but not penetrating, the finish surface of materials such as paint and concrete.

hairpin **1.** A type of wedge used in tightening some kinds of form ties. **2.** Hairpin-shaped rebar sometimes used in beams, columns, and prefabricated column shear heads.

half baluster An engaged baluster having an outward protrusion equal to approximately half its diameter.

half bat (half brick) A half-brick produced by cutting a brick in two, across its length.

half-brick wall A brick wall having the thickness of a brick laid as a stretcher.



half-brick wall

half by Slang term for any lumber with a half-inch thickness.

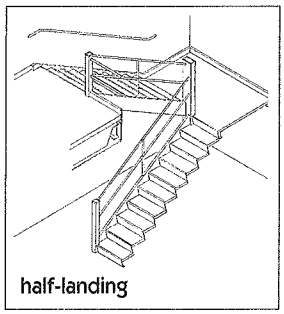
half column An engaged column protruding only slightly more than half its diameter.

half-face respirator A respirator that covers only the nose and mouth.

half hatchet A carpenter's hatchet similar to a plasterer's lath hammer but having a broader blade with a notched underpart for pulling nails.

half header Half of a brick or concrete block made by cutting the unit longitudinally through its faces. Half headers are used to close the work at the end of a course.

half-landing (halfpace landing, halfspace landing) A platform in a stairway, where the stairs change direction halfway between the floors of a building.

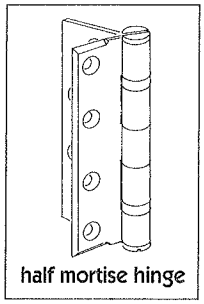


half-landing

half-lapped joint (halved joint, halved splice) A transverse joint formed at the intersection of two equally thick pieces of wood, both having been notched to half their original depth, so as to form a joint with flush faces.

half-life The period of time that the level of radioactivity for a substance decays by 50%.

half mortise hinge A door hinge with one plate surface-mounted on the jamb and the other plate mortised into the door stile.



half mortise hinge

H

half-pitch roof A roof with a pitch whose rise is equal to one half the width of the span.

half principal A roof rafter or similar member with the upper end not extending all the way to the ridgeboard, but instead supported by a purlin.

half rabbeted lock A type of mortise lock having a front turned into two perpendicular planes, used on a door with a rabbeted edge.

half-ripsaw A handsaw with teeth more closely spaced than those on a ripsaw.

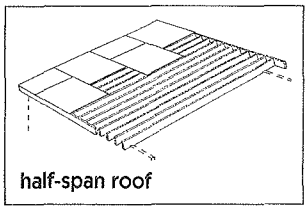
half round **1.** Molding having one flat side and one rounded side, making it semicircular in profile. **2.** Veneer produced by slicing a flitch or log that has been sawn into two equal halves.

half-round file A file having one side in the shape of a segment of a circle and the other flat.

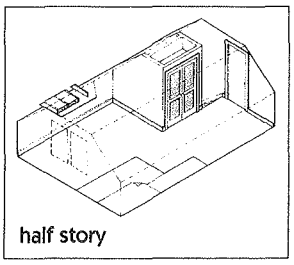
half slating *See* **open slating.**

halfspace landing *See* **half-landing.**

half-span roof (lean-to roof) A roof that slopes in only one plane and abuts a higher exterior wall.


half-span roof

half story An attic or story immediately below a sloping roof and usually having some partitions and a finished ceiling and floor.


half story

half-surface hinge A door hinge having one plate surface-mounted onto the door leaf, and the other plate mortised into the jamb. A half-surface hinge is the opposite of a half-mortise hinge.

half timbered Descriptive of a building style common in the 16th and 17th centuries, with foundations, supports, knees, and studs all made of timbers. The wall spaces between the timbers are filled with masonry, brick, or lathed plaster.

half truss One side of a jack truss spanning from a main roof truss to a wall, usually at an angle to the main truss.

half turn Describes a stair making a 180° turn or two 90° turns at each landing.

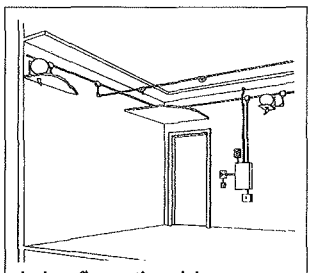
halide lamp *See* **metal halide lamp.**

halide torch A device used to detect leaks of halocarbon refrigerant. The color of the sampling torch's normal, alcohol-produced, blue flame becomes a bright green when refrigerant is detected.

hall **1.** A large room in which people assemble for entertainment or meetings. **2.** A small entrance room or corridor. **3.** A term often used in the proper names of public or university buildings.

hallway A passageway providing access to various parts of a building.

halon fire extinguisher A suppressing system for use on all classes of fires. Its extinguishing agent is bromotrifluoromethane, a colorless, odorless, and electrically nonconductive gas of exceptionally low toxicity. Considered to be the safest of the compressed gas fire-suppressing agents. Although often used in computer equipment rooms, the use of halon is severely restricted because of its properties (which destroy the ozone layer).


halon fire extinguisher

hammer A hand tool with a handle perpendicular to its head, for driving nails or other applications involving pounding or striking.

hammer ax (lath hammer) A hammer having a head with a flattened end for driving nails and a notched, narrow hatchet end for pulling nails.

hammer beam (hammer-beam trusses) Either one of a pair of short horizontal members used in place of a tie beam in roof framing. A hammer beam is attached to the foot of a principal rafter and supported from below by a brace to the supporting column.

hammer-beam roof Timbered roof construction in which hammer beams carry the principal rafters and support the feet of arched ribs.

hammer brace The brace, often curved, between a hammer beam and pendant post.

hammer dressed Descriptive of stone-masonry having a finish created only by a hammer, sometimes at the quarry.

hammer drill A pneumatically powered mechanism using percussion to penetrate rock.

hammer finish A finish produced by the application of an enamel containing powdered metal and rendering an appearance similar to that of hammered metal.

hammerhead crane A heavy-duty crane with a swinging boom and counterbalance, giving it a "T" shape.

hammerhead key A hardwood key, dovetailed on both ends, and driven into similarly shaped recesses in the two timbers it serves to join.

hammer man The worker on a pile hammer who operates the hoist or controls the steam jet that, in turn, powers the hammer.

hammermill crusher An impact type crusher that breaks up and grinds materials to a finished size.

hammer post A pendant post at the foot of the truss in a hammer-beam roof.

hamm tip A nozzle, used to deliver shotcrete, having a larger diameter at midpoint than either inlet or outlet.

hance **1.** A small arch or half arch connecting a larger arch or lintel to its jamb. **2.** Light-concealing trim member at the top of a window.

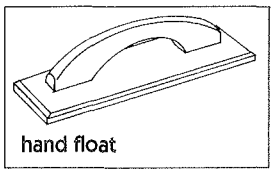
hand **1.** Prefaced by "left" or "right" to designate how a door is hinged and the direction it opens. **2.** Preceded by "left" or "right" to designate the direction of turn one encounters when descending a spiral stair, with "right-hand" being clockwise.

hand brace A wood-boring hand tool made of a single frame of small diameter bar or rod bent to form a stationary bracing handle at one end and a bit-holding chuck at the other. A short distance from, but parallel to, the central axis, a handle repeatedly turns in wide circles, causing the bit to turn.

hand chisel A struck tool measuring 2" to 2-1/2" used to cut red hot steel. Should not be used to cut cold steel or rock.

hand drill A hand-operated boring device made up of a central steel tube containing a shaft. At one end is a handle and at the other a bit-holding chuck.

hand float A wooden tool used to lay on and smooth or texture a finish coat of plaster or concrete.


hand float

handicap door opening system A door equipped with a knob or latch and handle located approximately 36" from the floor, and an auxiliary handle on the other side at the hinge edge, for convenience to wheelchair users.

handicapped fixtures Refers to plumbing fixture connections complying with ADA requirements that are exposed and located in facilities for handicapped individuals.

handicap water cooler A water cooler set low and operated by push-bars or levers for convenience to people in wheelchairs.

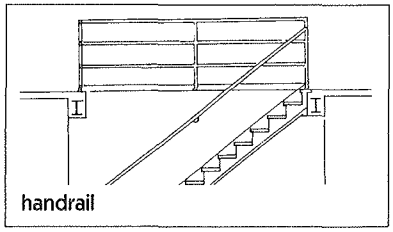
hand level In surveying, a hand-held sighting level having limited capability.

hand line **1.** A line attached to a structural member or piece of building equipment being hoisted. Used to control the position of the item during erection or setting. **2.** A line manipulated to control stage rigging in a theater.

handling tight A degree of tightness to which couplings are screwed onto a pipe causing their removal to necessitate the use of a wrench.

hand punch A struck tool designed for punching or marking metal, driving and removing pins, and aligning holes. Ranges in size from 1/4" to 1" in diameter, and 4-1/2" to 20" long.

handrail A bar of wood, metal, or PVC, or a length of wire, rope, or cable, supported at intervals by upright posts, balusters, or similar members or, as on a stairway, by brackets from a wall or partition, so as to provide a handhold.


handrail

handrail scroll, handrail wreath The spiraled end of a handrail.

handsaw Any manual woodcutting saw having a handle at one end by which it is gripped and manipulated.

hand screw A woodworker's clamp made up of two parallel wooden jaws, connected by two parallel screws tightened from opposite sides.

hand split and resawn (HS and RS) A type of cedar shake. Handsplits are split from cedar bolts by a mallet and froe (a type of steel blade). The pieces are then ripped on a resaw to produce two shakes, each with a rough, split face and a smooth, sawn back.

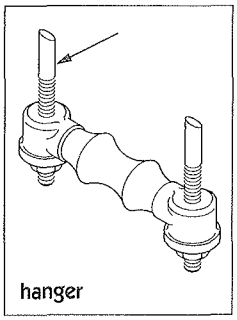
hand tight Descriptive of couplings tightened by hand by the application of force roughly equal to the force an average man can exert.

hang To install a door or window within its respective frame and/or by its respective hardware.

hangar An enclosure, usually for housing and/or repairing aircraft.

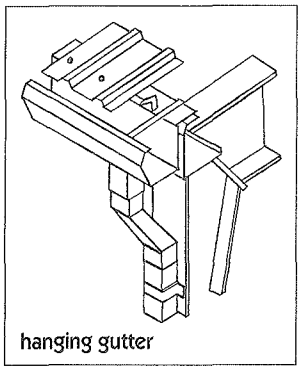
H

hanger **1.** A strip, strap, rod, or similar hardware for connecting pipe, metal gutter, or framework, such as for a hung ceiling, to its overhead support. **2.** Any of a class of hardware used in supporting or connecting members of similar or different material as, for instance, a stirrup strap or beam hanger for supporting the end of a beam or joist at a masonry wall. **3.** A person whose trade it is to install gypsum board products.



hanger

hanging gutter A metal gutter attached to the roof eaves with metal straps and sometimes further supported by the fascia.



hanging gutter

hanging post The post from which a gate or door is hung.

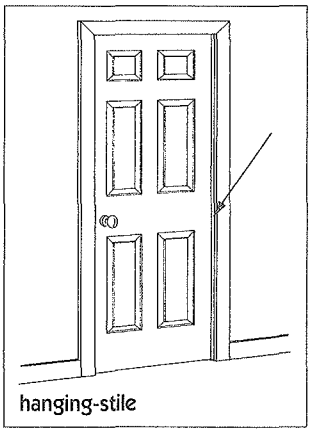
hanging rail The horizontal section at the top and bottom of a door, to which the hinges are secured.

hanging sash *See* **hung sash.**

hanging shingling Shingles fixed to very steep or vertical surfaces.

hanging steps Cantilevered steps.

hanging stile **1.** The vertical structural member on the side opposite the handle, to which the hinges are fastened. **2.** That vertical section of a window frame to which the casements are hinged.



hanging-stile

hard asphalt A solid form of asphalt having a normal penetration of less than 10.

hardback Molding and BTR lumber that is D-select graded from the good face only, which must be clear. The back may contain knots that do not extend through the piece.

hardboard Dense sheets of building material made from heated and compressed wood fibers.

hard-burnt **1.** Descriptive of clay products, such as bricks or tiles, having been burnt or fired at high temperatures, resulting in their durability, high compressive strength, and low absorption. **2.** A hard plaster, such as Keene's.

hard compact soil All earth materials not classified as running or unstable.

hard conversion The conversion from one system of measurement to another, with an inherent consequence being the necessity of changing the physical sizes of the products involved.

hard copy Information from a computer in printout form.

hard-dry The stage at which paint film is sufficiently dry to resist thumb-inflicted mutilation, and therefore ready to accept a topcoat or other method of finishing.

hard edge A special preparation used in the core of gypsum board under the papered edges to provide extra resistance.

hardener **1.** Any of several chemicals serving to reduce wear and dusting when applied to concrete sustaining heavy traffic, such as a floor. **2.** The curing agent of a two-part synthetic resin, adhesive, or similar coating. **3.** A substance used to harden plaster casts or gelatin molds.

hard facing Creating a hard, abrasion-resistant cutting edge on tools such as drill bits and saw blades, by welding tungsten carbide onto the steel or other metal.

hard finish A mixture of gypsum, plaster, and lime applied as a finish coat, usually over rough plastering, then troweled to provide a dense, hard, smooth finish.

hard lead *See* **antimonial lead.**

hard light Light that creates well-defined shadows.

hard maple The sugar maple tree, *Asersaccharum*, or its wood.

hardness **1.** The resistance of a substance, material, or surface, to cutting, scratching, denting, pressure, wear, or other deformation. **2.** The degree, expressed as parts per million or grains per gallon of calcium carbonate in water, to which calcium and magnesium salts are dissolved in water.

hardpan Highly compacted soil, boulder clay, or other usually glacially deposited mixture, sometimes including sand, gravel, or boulders. The extreme density of hardpan makes its excavation difficult.

hard pine Any of the resinous pines, such as Loblolly or yellow pine.

hard plaster Quick-setting calcined gypsum, usually used in finishing, often requiring a retarding agent to be incorporated in the mix to help control the set.

hardscape Non-plant material landscape work, such as paving and building structures, that occurs as part of a construction project.

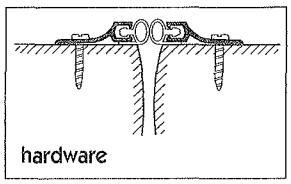
hard solder Solder containing silver, copper, or aluminum, and thus requiring more intense heat for melting than does soft solder. Hard solder is usually applied with a brazing torch.

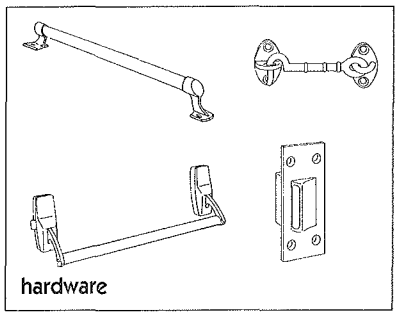
hard stopping A stiff paste having a calcined gypsum content, causing it to harden quickly. Hard stopping is used in painting operations to fill deep holes and wide cracks.

hardtop A road that has been hard-surfaced.

hardwall A base-coat plaster made from gypsum, often without aggregate.

hardware **1.** A general term encompassing a vast array of metal and plastic fasteners and connectors used in or on a building and its inherent or extraneous parts. The term includes rough hardware, such as nuts, bolts, and nails, and finish hardware, such as latches and hinges. **2.** The mechanical equipment associated with data processing. In building automation systems, computer hardware includes the central processing unit (CPU), hard disk drive, monitor (CRT), keyboard, controllers, and analog or digital point modules.


hardware


hardware

hardware cloth Usually galvanized, a thin screen made from wire welded or woven to produce a mesh size of 1/8" to 3/4".

hard water Water containing a concentration higher than 85.5 ppm of dissolved calcium carbonate and other mineral salts.

hard wired A communications link permanently joining two devices, nodes, or stations.

hardwood A general term referring to any of a variety of broad-leaved, deciduous trees, and the wood from those trees. The term does not designate the physical hardness of wood, as some hardwoods are actually softer than some softwood (coniferous) species.

harmonic The sinusoidal component of an arc voltage that is a multiple of the fundamental wave frequency.

harsh mixture A concrete mixture lacking mortar or aggregate fines, resulting in an undesirable consistency and workability.

harsh mortar A mortar that is difficult to spread due to an improper measure of materials.

Hartford loop The configuration of a steam boiler's return piping connections serving to equalize the pressure between the supply and return sides of the system, thus preventing water from backing out of the boiler and into the return line.

harvested rainwater Rainwater collected in a storage unit that can be treated or untreated and used for a variety of applications, such as flushing toilets, serving HVAC units, washing clothes, and irrigation.

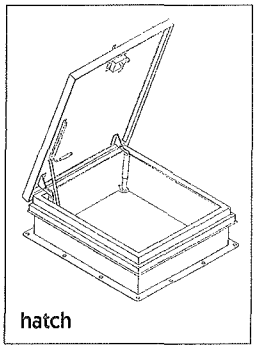
hashing over Discussing, debating, and revising estimates.

hasp A metal fastening device made up of a staple secured to and protruding from one member, and a hinge with a slotted plate fastened to another member. The slotted plate can be slipped over the staple and then locked with a tapered pin or a padlock.

hasp lock A device permanently secured to the hasp on a door that causes the hasp to be locked as soon as the door is closed. Hasp locks are often used in prisons.

hatbanding A defect in a painting job caused by uneven application. Hatbanding occurs when paint is brushed or rolled on too heavily in an area, or when a roller is used with an excessively long nap.

hatch An opening in a floor or roof of a building, as in a deck of a vessel, having a hinged or completely removable cover. When open, a hatch permits ventilation or the passage of persons or products.


hatch

hat channel furring A light gauge metal furring strip used on vertical concrete surfaces to provide for fastening of finish materials.

H

hatchet A wood-handled tool having a steel head flattened at one end and suitable for striking or driving, and formed at the other end into a wide, sharp blade suitable for chopping. The underpart of the blade may or may not be notched for pulling.

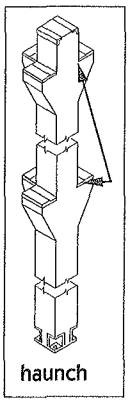
hatchet iron The hatchet-shaped tip of a type of plumber's soldering iron.

haul *See* **haul distance.**

haul distance The distance measured along the center line or most direct practical route between the center of mass of excavation and the center of mass finally placed. It is the average distance material is moved by a vehicle. *

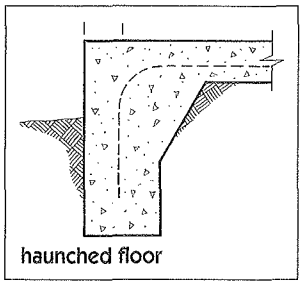
haul road A crude, temporary road built to facilitate the movement of people, equipment, and/or materials along the route of a job.

haunch **1.** A bracket built into a wall or column to support a load falling outside the wall or column, such as a hammer brace in a hammer-beam roof. **2.** Either side of an arch between the crown, or centerstone, and the springing, or impost. **3.** A thickening of a concrete slab to support an additional load, as under a wall.



haunched beam A beam or similar member broadened or thickened near the supports.

haunched floor A floor slab thickened around its perimeter.



haunched tenon A tenon narrower, at least in part, than the wood member from which it is fashioned.

haw-haw *See* **ha ha.**

hawk A flat, thin piece of wood or metal approximately one foot square and having a short, perpendicular handle centered on its underside. A hawk is used by plasterers for holding plaster from the time it is taken from the mixer to the time it is troweled.

hawk snip (hawkbill snips, duck bill snips) Tin snips with curved jaws for cutting along curves.

haydite Heated shale having an expanded cellular structure, making it a suitable lightweight aggregate for concrete.

hazard class A Department of Transportation shipping designation code.

hazard classes Nine classes established by the United Nations to categorize hazardous materials: flammable liquids, flammable solids, explosives, gases, oxidizers, radioactive materials, corrosives, poisonous infectious substances, and dangerous substances.

hazard insurance Insurance that protects against property damage from certain hazards, such as storms and fire.

hazardous area **1.** The part of a building where highly toxic chemicals, poisons, explosives, or highly flammable substances are housed. **2.** Any area containing fine dust particles subject to explosion or spontaneous combustion.

hazardous ranking system (HRS) A scoring system used by the U.S. Environmental Protection Agency to assess various environmental aspects of sites, such as ranking disposal sites in need of cleanup.

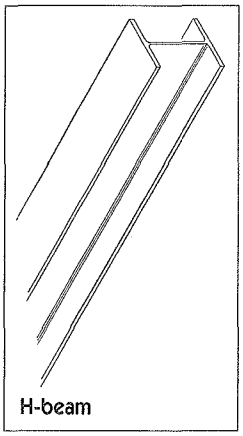
hazardous substance Any substance that, by virtue of its composition or capabilities, is likely to be harmful, injurious, or lethal.

hazardous waste A material defined by any of several statutes and regulations, usually characterized by a propensity to cause an adverse health effect to humans.

hazard rating system A system used to score a hazardous or toxic waste site's risk to human health and the environment.

H-bar A steel or aluminum bar used in structural systems, such as suspended ceilings, that has a cross section in the shape of an "H."

H-beam A steel beam that resembles an "H" in cross section.



H-block A hollow masonry unit having no ends and opposite pairs of unconnected faces. The result is a block shaped like an "H."

H-brick Brick with horizontal perforations.

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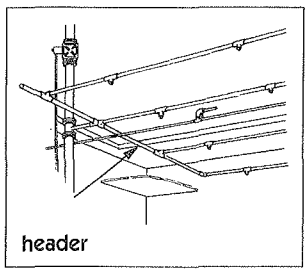
H clip A small metal clip that resembles an "H" shape that is used to strengthen the joint of plywood roof sheeting or wafer board.

head **1.** The top of almost anything, such as the head of a nail or a window head. **2.** In roofing, a tile of normal width but only half the normal length, and used in constructing the eaves course. **3.** The horizontal member across the top of a window or door between the jambs, sometimes offering structural support for construction above it. **4.** The measure of the pressure of water, expressed in feet of water. One psi equals 2.31 feet of water.

headache ball (breaker ball) The rounded, heavy, metal or concrete demolition device swung on a cable from the boom of a crane to break through concrete or masonry construction.

head casing A horizontally placed board at the head or top of a door or window opening between the two vertical casings.

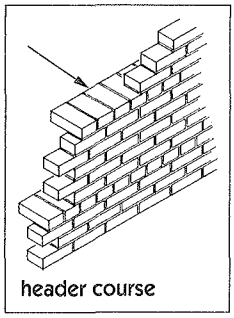
header **1.** A rectangular masonry unit laid across the thickness of a wall, so as to expose its end(s). **2.** A lintel. **3.** A member extending horizontally between two joists to support tailpieces. **4.** In piping, a chamber, pipe, or conduit having several openings through which it collects or distributes material from other pipes or conduits. *See also* **manifold.** **5.** The wood surrounding an area of asphaltic concrete paving.


header

header block A concrete masonry unit from which part of one face shell has been removed to facilitate bonding with adjacent masonry, such as brick facing.

header bond A bond whose face shows only headers, the center of which is placed directly above the joint of the two adjacent headers below.

header course In masonry, a course comprising only headers.


header course

header joist A beam or timber positioned horizontally between two longer beams so as to support the ends of tailpieces or to accept common joists in order to frame around an opening. *See also* **header (3.).**

header pipe A pipe functioning as a central connection for two or more smaller pipes. Also refers to a collector pipe that receives and carries water from connected well points. *See also* **header (4.).**

header tile In a masonry-faced wall, a tile having recesses to accept headers.

head flashing In a masonry wall, the flashing over a projection, protrusion, or window opening.

heading **1.** In mining, the digging face and its immediate work area in a tunnel, drift, or gallery. **2.** The increase of expansion of a localized cross-sectional area of metal bar due to hot-forging. **3.** A general classification of a category of data, under which follow more specific classifications. **4.** Pieces of lumber from which a keg, or barrel head, is cut. **5.** Stock after it has been cut and assembled to form a barrel head.

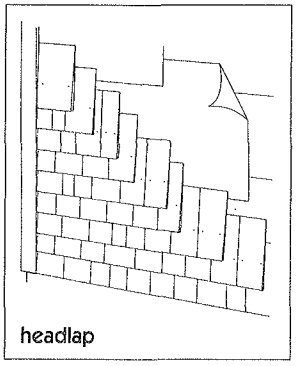
heading bond *See* **header bond.**

heading course *See* **header course.**

heading joint **1.** The joint formed between two pieces of timber connected end-to-end, in a straight line. **2.** The joint between two adjacent masonry units in the same course.

head jamb The horizontal member that constitutes the doorhead or top of a door opening.

headlap That portion of a shingle not exposed to the weather, because it is covered by the shingle(s) in the course above it.


headlap

head mast The tower portion of a cable excavator that carries the working lines.

head mold The molding over an opening, such as a door or window.

head nailing Nailing shingles near the top instead of at the middle.

head piece The capping horizontal piece in a frame of vertical wood members.

head plate *See* **wall plate.**

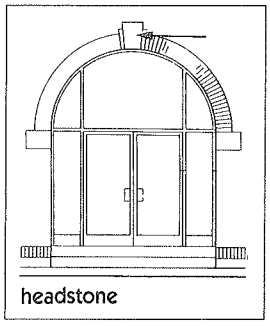
head pressure The operating pressure in the discharge line of a refrigeration system.

H

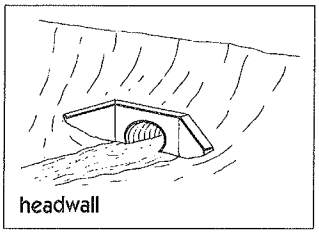
head race A channel through which water is fed to a waterwheel, mill, or turbine.

head room **1.** The vertical distance, or space, allowable for passage, as in a room or under a doorway. **2.** The space between the top of one's head and the nearest obstacle above it, as inside a vehicle. **3.** The unobstructed vertical space between a stair tread and the ceiling or stairs above. **4.** The distance between the top of the finished floor to the bottom of the finished ceiling.

headstone Any principal stone in masonry construction, such as the keystone in an arch or the cornerstone of a building.


headstone

headwall A wall, usually of concrete or masonry, at the outlet side of a drain or culvert, serving as a retaining wall, as protection against the scouring or undermining of fill, or as a flow-diverting device.


headwall

heart The center portion of the cross-section of a log. The term usually refers to heartwood. *See also* **heartwood.**

heart bond A masonry bond, used in walls too thick for through stones, in which a third header covers the joint of two headers meeting within a wall.

heart check Seasoning checks in the central core of a timber.

heart face The face side of a piece of lumber that is free of sapwood.

hearth The floor of a fireplace and the adjacent area of fireproof material.

hearthstone **1.** A large stone used as the floor of a fireplace. **2.** Other naturally occurring or synthetic materials used to construct a hearth. **3.** Figuratively, the fireside.

hearting The interior of a masonry wall to whose face or faces finishing is subsequently applied.

heartshake A radial crack or split emanating from the center of a log or timber, usually as a result of uncontrolled or improper drying.

heart side The side of a piece of lumber that, if it were still part of the log, would be closest to the heart of the log. In flat grain lumber, it is the side on which the grain is more likely to rise or separate from the piece.

heartwood (heart wood) The core of a tree, which is no longer vital to the life growth of the tree and which is often darker and of a different consistency than the growing sapwood.

heat The form of energy inherent in the motion of atoms or molecules, measured in British thermal units, and transferred automatically (wherever temperature differences exist) from warmer to cooler bodies, areas, or elements by conduction, convection, or radiation.

heat absorbing glass Slightly blue-green tinted plate glass or float glass designed with the capacity to absorb 40% of the infrared solar rays and about 25% of the visible rays that pass through it. Cracking from uneven heating can occur if the glass is not exposed uniformly to sunlight.

heat-affected zone In welding or soldering, an area of metal that has been altered but has not yet melted.

heat balancing **1.** An efficient procedure for determining a numerical degree of combustion by totaling all the heat losses, in percentages, and subtracting the result from 100%. **2.** A condition of thermal equilibrium where heat gains equal heat losses.

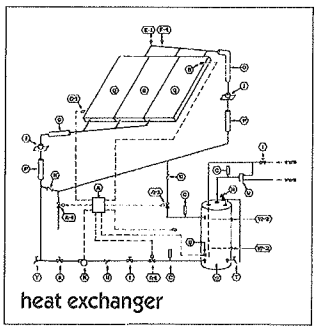
heat capacity The amount of heat required to increase the temperature of a given mass by one degree. The capacity is arrived at numerically by multiplying the mass by the specific heat.

heated doorway *See* **air curtain.**

heated space An area of a building that is directly supplied with heat.

heater **1.** A general term including stoves, appliances, and other heat-producing units. **2.** A person who heats something, such as a steelworker who heats rivets on a small forge before passing them to the sticker.

heat exchanger A device designed to transfer heat between two physically separated fluids. The fluids are usually separated by the thin walls of tubing.


heat exchanger

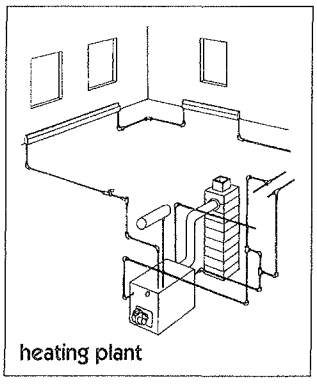
heat gain **1.** The net increase in Btus, caused by heat transmission, within a given space. **2.** A piece of resistance material connected between terminals to produce heat electrically. **3.** That portion of a heating device, such as a stove or soldering gun, consisting of a wire or other metal piece heated by an electric current.

heating degree days (HDD) A quantitative comparison of the average daily outdoor air temperature to the standard of 65°F used to analyze energy needed to heat or cool a space. One degree day equals one day with an average temperature one degree above 65°F.

heating load The number of Btus per hour required to maintain a specified temperature within a given enclosed space.

heating medium The fluid or gas conveying the heat from a source, such as a stove or boiler, to an area or substance being heated. The heating medium may or may not be confined within carriers such as pipes.

heating plant The entire heating system of a building or complex, including either a boiler, piping, and radiators, or a furnace, ducts, and air outlets.



heating plant

heating rate The rate of temperature increase in degrees per hour, as in a kiln or autoclave.

heating system The method and its related necessary equipment used in a given heating application, such as a forced hot air system.

heat island effect A pattern of elevated temperatures in urban areas caused by structural and pavement heat fluxes and pollutant emissions. In some cases, urban temperatures can be as much as 10°F warmer than nearby rural areas, which can result in increased energy demands and heat-related illnesses.

heat loss **1.** The net decrease in Btus within a given space, by heat transmission through spaces around windows, doors, etc. **2.** The loss by conduction, convection, or radiation from a solar collector after its initial absorption.

heat of fusion The amount of heat needed to melt a unit mass of a solid at a specified temperature.

heat of hydration **1.** Heat resulting from chemical reactions with water, as in the curing of Portland cement. **2.** The thermal difference between dry cement and partially hydrated cement.

heat mirror technology A type of window design that uses a low-emissivity coated film product suspended inside or between panes of an insulating glass unit. This is a lower-cost alternative to low-E glass double-pane units.

heat pump A refrigeration system designed to utilize alternately or simultaneously the heat extracted at a low temperature and the heat rejected at a higher temperature.

heat recovery The extraction of heat from any source not primarily designed to produce heat, such as a chimney or lightbulb.

heat-reflective glass Window glass in which the exterior surface has been treated with a transparent metallic coating to reflect substantial portions of the light and radiant heat striking it.

heat-resistant concrete Concrete immune to disintegration when subjected to constant or cyclic heating to below ceramic-bonding temperature.

heat-resistant paint A paint, usually containing silicon resins, used on items such as stoves and radiators because of its stability at high temperatures.

heat rough Refers to the installation of duct work, heating pipes, and flue pipes by a heating contractor in new construction after interior walls and stairs are built.

heat sealing The use of heat and pressure to bond plastic sheets or films.

heat seaming In roofing, joining thermoplastic films or sheets together by heating contact areas so that they fuse together.

heat sink **1.** The substance or environment into which heat is discharged after its removal from a heat source, as by a heat pump. **2.** Any medium capable of accepting discharged heat.

heat source **1.** Any area, environment, or device that supplies heat. **2.** The area from which a refrigeration system removes heat.

heat tracing system A heating system with an externally applied heat source, usually a heating cable, that traces the object to be heated.

heat transfer fluid The liquid substance used to carry heat away from its source to be cooled, usually by another fluid, as in a heat exchanger.

heat transmission The rate at which heat passes through a material by the combination of conduction, convection, and radiation.

heat transmission coefficient Any of several coefficients used to calculate heat transmission by conduction, convection, and radiation through a variety of materials and structures.

H

heat treatment Subjecting any solid metal or alloy to heating and cooling to produce specific, desired changes in its physical condition or properties.

heat trim Refers to a heating contractor's preparation work prior to a final heat inspection. Includes the installation of thermostats, vent grilles, registers, and other heating and ventilation-related work.

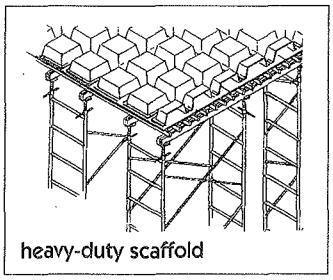
heave The localized upward bulging of the ground due to expansion or displacement caused by phenomena such as frost or moisture absorption.

heavy concrete High-density concrete. Concrete having a high unit weight up to 300 pounds per cubic foot, primarily due to the types of aggregate employed and the density of their ultimate incorporation. Such diverse materials as trap rock, barite, magnetite, steel nuts, and bolts can be used as aggregate. The density makes heavy concrete especially suitable for protection from radiation.

heavy construction Construction requiring the use of large machinery, such as cranes or excavators.

heavy-duty pavement Paving intended and designed for heavy traffic volume and loads.

heavy-duty scaffold A scaffold constructed to carry a working load not to exceed 75 lbs. per square foot.



heavy-duty scaffold

heavy-edge reinforcement In highway pavement slabs, reinforcement made of wire fabric with up to four edge wires that are heavier than any of the other longitudinal wires.

heavy joist A timber at least 4" thick and 8" wide.

heavy metal A naturally occurring elemental metal with a high molecular weight.

heavy soil A fine-grained soil consisting primarily of clay and silt, which are damper, hence heavier, than sand.

heavy timber **1.** A type of construction requiring noncombustible exterior walls with a minimal fire-resistance rating of two hours, solid or laminated interior members, and heavy plank or laminated wood floors and roofs. Also called *mill construction*. **2.** Rough or surface pieces with a least dimension of 5".

heavyweight aggregate Aggregate possessing a high specific gravity, such as barite, magnetite, limonite, ilmenite, iron, and steel, making it suitable for use in heavy concrete.

heck **1.** A type of door having an upper section that swings independently of its lower section. **2.** A gate of latticework.

hectare A measurement of land area equal to 2.471 acres or about 107,637 square feet.

hedge In master production scheduling, a quantity of stock used to protect against uncertainty in demand. The hedge is similar to safety stock, except that a hedge has the dimension of timing as well as amount. *

heel **1.** The lower end of a door's hanging stile or of a vertically placed timber, especially if it rests on a support. **2.** A socket, floor brace, or similar device for wall-bracing timbers. **3.** The bottom inside edge of a footing or a retaining wall. **4.** The back end of a carpenter's plane.

heel bead A glazing compound used at the base of the channel after setting a pane but prior to the installation of the removable stop, so as to prohibit leakage past the stop.

heeling The temporary, severely angular planting of trees and shrubs, often in trenches, to facilitate their removal prior to permanent transplanting.

heel post **1.** A post or stanchion at the open end of a stall partition. **2.** The post, either of a gate or stairway, to which the gate hinges are secured.

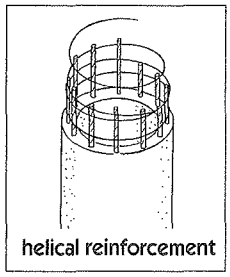
heel strap A steel fastening device for connecting a rafter to its tie beam.

height **1.** The distance between two points in vertical alignment or from the top to the bottom of any object, space, or enclosure. **2.** The vertical distance between the average grade around a building, or the average street curb elevation, and the average level of its roof. **3.** The rise of an arch.

height board A measuring device for setting the heights of stair risers.

height of instrument The height of a leveling instrument above the datum being used in the survey.

helical reinforcement Column reinforcement bent in the form of a helix. More commonly called *spiral reinforcement*.



helical reinforcement

helical rotary compressor (screw-type compressor) A device that compresses gas by trapping it in the space formed by the flutes of meshing screws, thus reducing the gas volume.

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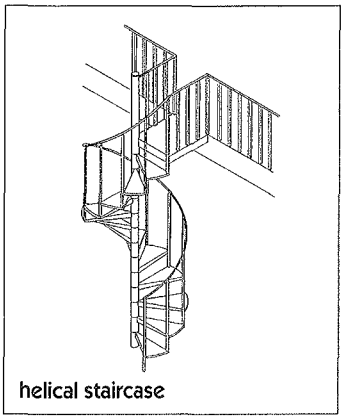
helical staircase (spiral staircase) A staircase built in the form of a helix.


helical staircase

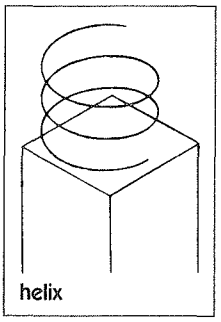
helicline A helical ramp, as in a parking garage.

heliograph In surveying, a device to make a distant surveying station easily identifiable by reflecting sunlight in flashes.

heliostat An instrument having an automatically adjusting mirror that follows the apparent movement of the sun and continuously reflects its rays onto a collector.

heliport An airport or landing area specifically for helicopters.

helix **1.** A reinforcing rod bent to form a spiral used for reinforcing the circumference of concrete columns. **2.** A volute found on a Corinthian or Ionic capital. **3.** Any spiral structure, ornament, or form.


helix

helm roof A roof with four steeply-pitched faces rising diagonally from four gables to form a spire where they converge.

helve **1.** A tool handle, such as that of an ax, hatchet, or hammer. **2.** The handle of a wagon.

hem-bal A combination of western hemlock and balsam fir produced in British Columbia for overseas markets.

hem-fir A species combination used by grading agencies to designate any of various tree species, such as white fir and western hemlock, having common characteristics. The designation is used for identification and standardization of recommended design values and because some species, in lumber form, cannot be visually distinguished.

hemihydrate Any hydrate having only half a molecule of water for every molecule of compound. The most common hemihydrate is partially hydrated gypsum, or plaster of Paris.

hemlock A coniferous North American tree, the wood of which is used in general construction and for pulp.

hemlock spruce (eastern hemlock, eastern spruce) A coniferous tree of eastern North America having soft, coarse wood of uneven texture that is unusable in construction but widely used for pulp.

hemp A natural fiber once widely used in cordage, but now almost totally replaced by synthetic fibers, such as nylon and dacron. Hemp is still laminated to a paper backing to produce a type of wallcovering.

hem-tam A combination of eastern hemlock and tamarack produced in the northeastern United States and eastern Canada.

HEPA-filter *See* **high efficiency particulate air filter.**

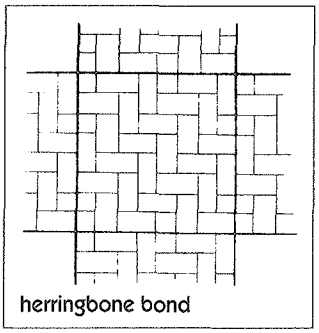
HEPA-filtered vacuum A vacuum device fitted with a high efficiency particulate removal system.

herbicide A substance that kills plants on contact.

Herculite Trade name for a type of thick, tempered plate glass, commonly used for doors without framing.

hermaphrodite caliper A tool with two hinged legs used to lay out lines that are parallel with the edges of the workpiece. It can also be used to locate the center of cylindrical shaped workplaces.

herringbone bond In masonry, a type of raking bond in which a zigzag effect is created by laying rows of headers perpendicular to each other.


herringbone bond

herringbone drain (chevron drain) A V-shaped drain.

hertz A unit of measurement of frequency equal to one cycle per second.

hesitation set *See* **early stiffening.**

hession *See* **burlap.**

hewn Roughly cut, fabricated, shaped, or dressed.

hex roofing Hexagonally shaped asphalt roofing shingles.

H

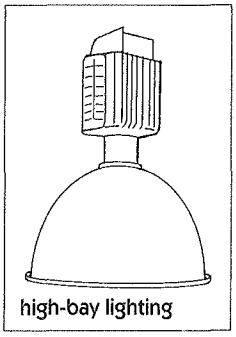
hickey (hicky) **1.** A threaded electrical fitting for connecting a light fixture to an outlet box. **2.** An apparatus used to bend small pipe, conduit, or reinforcing bar.

hick joint In masonry, a mortar joint cut in any direction to be flush with the face of the wall, resulting in a hairline crack that renders the joint no longer watertight.

hiding power The capacity of a paint film to completely obscure the surface, including flaws, to which it is applied.

high-alumina cement *See* **calcium aluminate cement.**

high-bay lighting Usually an industrial lighting system having direct or semidirect luminaires located high above floor or work level.


high-bay lighting

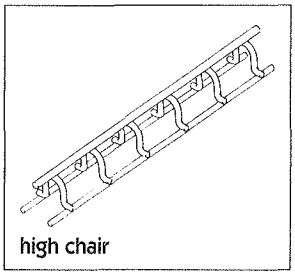
high-bond bar *See* **deformed bar.**

high-build coating A coating composed of a series of films that are thicker than those normally associated with paints (minimum 5 mls) and thinner than troweled material.

high-calcium lime A type of lime composed primarily of calcium oxide or calcium hydroxide and containing a maximum of 5% magnesium oxide or hydroxide.

high-carbon steel Steel having a carbon content between .6% and 1.5%.

high chair Slang for a heavy, wire, vaguely chair-shaped device used to hold steel reinforcement off the bottom of the slab during the placement of concrete.


high chair

high-density concrete *See* **heavy concrete.**

high-density foam Usually a type of synthetic rubber applied as a liquid foam to the back side of carpeting. When cured, the foam is an integral part of the whole.

high-density overlay A cellulose fiber sheet impregnated with a thermosetting resin and bonded to plywood, rendering a hard, smooth, waterproof, wear-resistant surface for use in concrete formwork and decking.

high-density plywood Plywood manufactured from resin-impregnated veneer and formed with heat at high pressures to render a product having at least twice the density of conventional plywood.

high density polyethylene An extensively polymerized plastic used for pipe. Polyethylene material is highly abrasion and corrosion resistant, and thereby able to handle a wide variety of slurries and abrasive materials as well as nearly all acids, caustics, salt solutions and other corrosive liquids and gases.

high-discharge mixer *See* **inclined-axis mixer.**

high-early-strength concrete Concrete containing high-early-strength cement or admixtures causing it to attain a specified strength earlier than regular concrete.

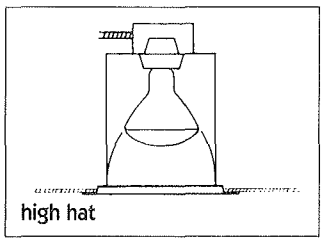
high efficiency particulate air filter (HEPA filter) A high-efficiency (99.9%) dry filter made in an extended surface configuration of deep space folds on submicron glass fiber paper.

highest and best use The use that is likely to produce the highest return on investment at a specific time on a particular piece of real estate under development.

high-frequency gluing An extremely rapid gluing process in which high-frequency electronic waves are passed through the wood and glue to cause bonding, as in the construction of laminated beams.

high gloss Descriptive of a substantial degree of luster or of a paint which dries with a lustrous, enamel-like finish.

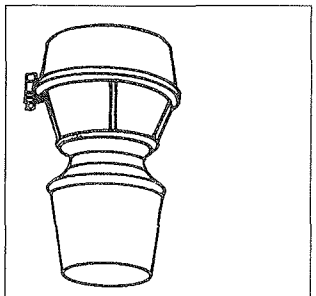
high hat **1.** A recessed lighting fixture that sheds its light vertically downward. **2.** A black circular tube attached to the front of a spotlight to contain the stray light around the perimeter of the beam.


high hat

high-hazard contents Those building contents that, in a fire, might explode, burn with such vigor as to approximate explosion, produce toxic fumes, or produce other dangerous effects.

high impact polystyrene A plastic with good toughness, moderately high heat resistance, and good resistance to stress cracking.

high-intensity discharge lamp A mercury, high-pressure sodium, or other electric discharge lamp requiring a ballast for starting and for controlling the arc, and in which light is produced by passing an electric current through a contained gas or vapor.


high-intensity discharge lamp

high-joint pointing Pointing in which a high joint is grooved on each side by scraping along the edges of the brick while the mortar is still soft.

high-lift grouting In masonry, a method of grouting in which each lift is raised at least 12'.

high line A high-tension electric power supply line.

high-magnesium lime The product resulting from calcining dolomitic limestone or dolomite and containing 37%–41% magnesium oxide or hydroxide, as compared to the 5% contained in high-calcium lime.

high-mass construction A building construction approach using masonry, adobe, or other building materials that can lessen the extremes of diurnal flux, especially in arid climates.

high-output fluorescent lamp A rapid-start fluorescent lamp with greater flux as a result of its operation on higher current.

high-performance building A building that is energy-efficient, healthy, and comfortable for its occupants.

high polymer **1.** A substance consisting of a large molecule often made of repeat units of low molecular weight. **2.** A polymer with a molecular weight greater than 10,000.

high-pressure laminate Laminate manufactured at pressures between 1,200 and 2,000 pounds per square inch during its molding and curing processes. Used in furniture, paneling, and cabinet manufacturing, high pressure laminate is also an ideal material for access flooring around sensitive equipment because of its excellent ability to dissipate static electricity.

high-pressure mercury lamp A mercury vapor lamp designed to function at a partial mercury vapor pressure of about one atmosphere or more (usually 2-4).

high-pressure overlay A plastic laminate consisting of layers of melamine sheet or phenolic-impregnated kraft paper onto which a melamine-impregnated printed pattern sheet and/or a translucent melamine overlay may have been impressed. The laminate is produced at a temperature above 300°F and a pressure of about 400 psi, resulting in a hard, smooth, wear-resistant surface that is often bonded to wood and used in doors and on tabletops.

high pressure side *See* **high side.**

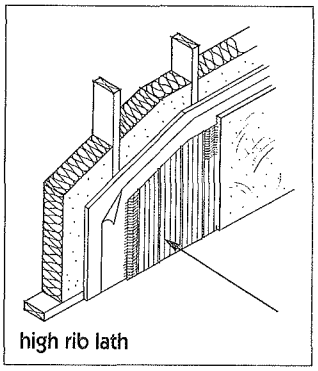
high-pressure sodium lamp A sodium vapor lamp, operating at a partial vapor pressure of 0.1 atmosphere, that produces a wide-spectrum yellow light.

high-pressure steam curing (autoclave curing) The steam curing of products made from cement, sand-lime, concrete, or hydrous calcium silicate in an autoclave at temperatures of 340° to 420°F.

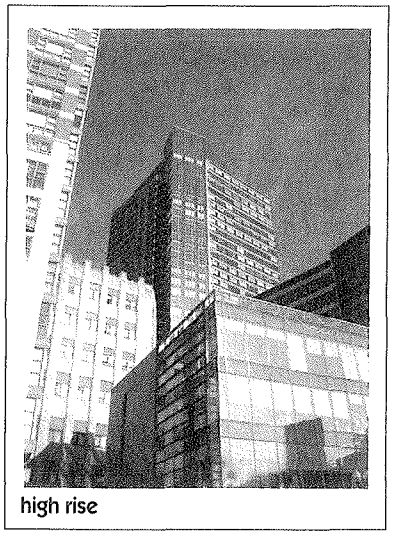
high-pressure steam heating system A steam heating system in which heat is transported from a boiler to a radiator by steam at pressures above 100 psi.

high relief Sculptured relief in which the modeled figures protrude from the background by at least half their thickness.

high rib lath An expanded metal lath used as a backup for wet wall plaster and as formwork for thin concrete slabs.


high rib lath

high rise **1.** A building having many stories and serviced by elevators. **2.** A building with upper floors higher than fire department aerial ladders, usually ten or more stories. **3.** Slang for a traffic-control device consisting of a barricade with stationary flagged arms positioned at 10 o'clock, 12 o'clock, and 2 o'clock and located at each end of a construction zone.


high rise

H

high side (high pressure side) **1.** Those parts in a refrigeration system that are exposed to pressure at least as great as condenser pressure. **2.** Slang for the outside of a pipe bend or conduit bend.

high-silicon bronze A copper alloy made of 96% copper, 3% silicon, and 1% zinc, manganese, aluminum, iron, and/or nickel.

high steel Steel containing a higher than normal amount of carbon.

high-strength bolts Bolts made from high-strength carbon steel or from alloy steel that has been quenched and tempered.

high-strength steel Steel with an inherent high yield point.

high-temperature sprinklers Automatic sprinklers normally set to operate at 212°F (boiling point of water).

high-tensile bolt (high-tension bolt) A bolt made from high-strength steel and tightened to a specified high tension. High-tensile bolts have replaced the use of steel rivets in steel-frame construction.

high transmission glass Glass that transmits an exceptionally high percentage of visible light.

high-velocity duct system A duct system carrying air at more than 2,400 feet per minute.

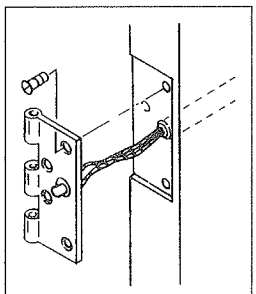
hinge A flexible piece or a pair of plates or leaves joined by a pin so as to allow swinging motion in a single plane of one of the members to which it is attached, such as a door or gate.

hinge backset The horizontal distance from the edge of a hinge to the face of the door that closes against a rabbet or stop.

hinge, brass A hinge made from or plated with brass, either for ornamental effect or because its imperviousness to corrosion is desired or required, as in marine applications.

hinge, cabinet Any decorative hinge used in cabinetwork.

hinge, electric A hinge designed to pass electric wires from the frame to the door for use in an electric-controlled lock.



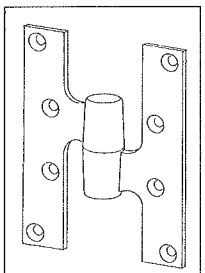
hinge, electric

hinge, hospital *See* **hospital hinge.**

hinge jamb The doorjamb to which the hinges are fastened.

hinge joint Any joint allowing action similar to that permitted by a hinge and only a very slight separation between the adjacent members.

hinge, paumelle Usually a contemporary-designed pivot-type door hinge with a single joint.



hinge, paumelle

hinge plate *See* **hinge strap.**

hinge reinforcement A metal plate secured to a door or its frame to supply a base to which a hinge is attached.

hinge, residential A lighter hinge than those designed for commercial and industrial use.

hinge, security **1.** A hinge with a pin that cannot be removed. **2.** A hinge with a stud in one leaf projecting into the other leaf when the door is closed so the door cannot be moved with the pin removed. **3.** *See* **hinge, electric.**

hinge strap (hinge plate) A usually ornamental metal strap fastened to the surface of a door to render the appearance of a strap hinge.

hip **1.** The exterior inclining angle created by the junction of the sides of adjacent sloping roofs, excluding the ridge angle. **2.** The rafter at this angle. **3.** In a truss, the joint at which the upper chord meets an inclined end post.

hip-and-valley roof A roof incorporating both hips and valleys.

hip bevel **1.** The angle between two adjacent sloping roofs separated only by a hip. **2.** The angle at the end of a rafter that allows its conformation to the oblique construction at a hip.

hip capping The top layer of a hip's protective covering.

hip hook *See* **hip iron.**

hip iron (hip hook) A galvanized steel or wrought iron bar or strip secured to the foot of a hip rafter to hold the hip tiles in place.

hip jack In a hip roof, a rafter shorter in length than most of the other rafters used in the same construction, whose upper end is secured to a hip rafter.

hip knob An ornament, such as a finial, at the top hip of a roof or at the apex of a gable.

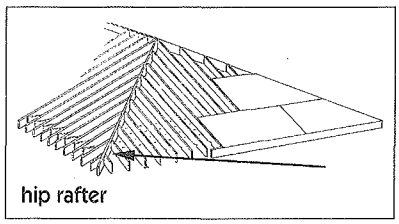
hip molding The molding on a hip rafter.

hipped end Either of the triangular ends of a hipped roof.

hipped gable (jerkin head) A modified gabled end that is gabled only about halfway to the ridge and then inclines backwards and forms hips where it meets the two principal slopes.

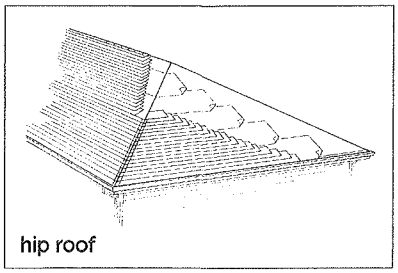
hipped-plate construction *See* **folded-plate construction.**

hip rafter The rafter that, in essence, is the hip of a roof, by virtue of its location at the junction of adjacent inclined planes of a roof.


hip rafter

hip roll The finish covering over the hip of a roof, fashioned from wood, metal, tile, or thin material.

hip roof A roof formed by several adjacent inclining planes, each rising from a different wall of building, and forming hips at their adjacent sloping sides.


hip roof

hip tile Shaped tile, of material such as clay or concrete, covering the other roof tiles meeting at the hips. The lowest tile is held by a hip hook. *See also* **hip iron.**

hip vertical The upright tension member in a truss, the lower end of which carries a floor beam, and the upper end of which joins an inclined end post and an upper cord at a hip.

historical database Records accumulating past project experience stored as data for use in planning, estimating, forecasting and predicting future events. Often includes data that has been processed so as to facilitate planning and other purposes such as validation and benchmarking (e.g., metrics, etc). *

historic district A specific, definable geographic area with a significant number of historic buildings, features, structures, or objects that are united by historical events or aesthetic associations.

historic preservation The application of strategies that promote the identification, evaluation, documentation, registration, protection, continued use, and interpretation of prehistoric and historic resources.

historic records Documentation from past projects that can be used to predict trends, analyze feasibility and highlight problem areas/pitfalls on future similar projects. *

historic structure report A written document presenting a detailed analysis of a historic structure. Includes an analysis of the property's initial construction, historical research, drawings, photographs, recommendations for appropriate preservation techniques, and documentation of the performance and condition of the building's architectural materials and overall structural stability.

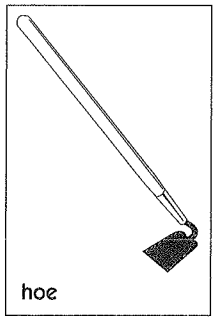
hit-and-miss window A two-part window with the lower sash containing movable ventilation panels. One panel slides in front of the other to permit air flow.

H-molding An H-shaped trim piece used in a butt joint assembly. The two channels of the "H" hold the members in place. *See also* **H-runner.**

hoarding A crude, temporary wall or fence on the site of a construction project.

hod In masonry construction, a V-shaped, trough-like container with a pole handle projecting vertically downward from the bottom to allow steadying with one hand while being carried on the shoulder of a laborer (hod carrier) at a construction site. A hod is used to transport bricks or mortar.

hoe **1.** An implement similar to a garden hoe but having a larger blade to facilitate the mixing of cement, lime, and sand in a mortar tub at a construction site. **2.** A backhoe.


hoe

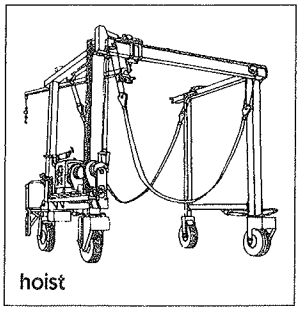
hog **1.** In masonry, a course which is not level, usually because the mason's line was incorrectly set and/or pulled. **2.** A closer in the middle of a course. **3.** A machine to grind waste wood into chips for fuel or other purposes.

hog-backed Cambered. The term is often used in reference to a sagging roof.

hogging The sagging of the end extremities of a beam or timber supported only in the middle.

hogsback tile A slightly-less-than-half-round ridge tile.

hoist **1.** Any mechanical device for lifting loads. **2.** An elevator. **3.** The apparatus providing the power drive to a drum, around which cable or rope is wound in lifting or pulling a load. Also called a *winch*. *See also* **chain hoist.**


hoist

hoistway *See* **elevator shaft.**

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H

holdback **1.** A safety device on a conveyor to prevent reverse motion of the belt automatically. **2.** Funds retained until specific events occur or work is completed.

hold down A connector device used to resist overturning caused by uplift on the chords of shear walls.

hold-down bolt *See* **anchor bolt.**

hold-down clip A fastener used in an exposed suspension acoustical ceiling system or in roofing to join and anchor adjacent sections of capping.

holder-up A dolly bar used by an ironworker to back up a rivet while the driver forms a head on it.

hold harmless A clause of indemnification by which an insurance carrier agrees to assume his client's contractual obligation and to assume responsibility in certain situations which otherwise might be the obligation of the other party to the contract.

holding tank A tank used for temporary storage of chemicals or materials being processed.

hole saw *See* **crown saw.**

holiday **1.** A small area inadvertently missed during painting or other surfacing applications. **2.** An otherwise valid working day that has been designated as exempt. Holidays typically occur on a yearly basis. In the U.S., holidays may include New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas. *

holing A process of punching holes in roofing slates to facilitate nailing during installation.

holistic design An approach that emphasizes the functional relationship between the various building parts and the facility as a whole. May include protection of the Earth's resources, as well as an element of spirituality, aiming to create spaces that enrich the quality of the environment *and* the lives of those who use the building.

hollow-backed Descriptive of the unexposed surface of a piece of wood, stone, or other material, intentionally hollowed to render a snug fit against an irregular surface.

hollow bed In masonry, a bed joint in which mortar is placed so as to provide contact only along the edges.

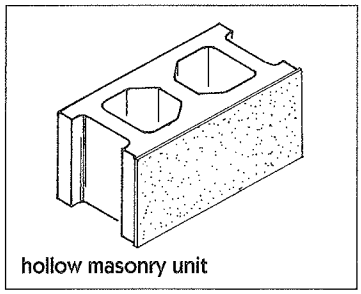
hollow block *See* **hollow masonry unit.**

hollow brick A hollow clay masonry unit in which the net cross-sectional area is at least 60%.

hollow chamfer Any concave chamfer.

hollow-core door A flush door with plywood or hardwood faces secured over a skeletal framework, the interior remaining void or honeycombed.

hollow masonry unit (hollow block) A masonry unit in which the net cross-sectional area is less than 75% of the gross cross-sectional area when compared in any given plane parallel to the bearing surface.



hollow masonry unit

hollow metal **1.** Light-gauge metal fabricated into a door, window frame, or similar assembly. **2.** Descriptive of an assembly thus produced.

hollow metal door A hollow-core door constructed of channel-reinforced sheet metal. The core may be filled with some type of lightweight material.

hollow metal frame A door frame constructed of sheet metal with reinforcing at hinges and strikes.

hollow partition A partition constructed of hollow blocks or in two separate sections between which a void is left for accepting a sliding door and/or acoustic or thermal insulation.

hollow plane A woodworking plane with a convex blade for fashioning hollow or concave molding.

hollow roll A process of joining two flexible metal roofing sheets in the direction of the roof's maximum slope by lifting them at the joint and bending them there to create a cylindrical roll. The fastening of the roll sometimes requires a fastener or metal clip.

hollow tile *See* **structural clay tile.**

hollow wall A masonry wall designed to provide for airspace inside the wall.

Home Energy Rating System (HERS) A scoring system established by the Residential Energy Services Network (RESNET) in which a home built to the specifications of the HERS Reference Home (based on the 2006 *International Energy Conservation Code*) scores a HERS Index of 100, while a net zero energy home scores a HERS Index of 0. The lower a home's HERS Index, the more energy-efficient it is.

home office Office of a company in the country of origin or centralized location. Usually synonymous with head office. *

home office cost Those necessary costs, typically not incurred at the project site, involved in the conduct of everyday business, that can be directly assigned to specific projects, processes, or end products, such as engineering, procurement, expediting, legal fees, auditor fees inspection, estimating, cost control, taxes, travel, reproduction, communications, etc. *

homeowners' association (HOA) A nonprofit association of owners of housing units that manages the common areas and amenities of the facility.

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homogeneous Similar in structure, composition, appearance, or texture.

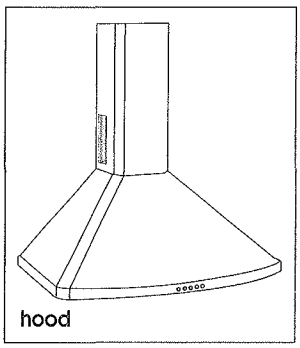
hone A smooth, fine-grained stone against which a tool's cutting edge is worked to achieve a finish edge much sharper than that yielded by the coarser stone used in preliminary sharpening procedures. Usually an oil is used in the process to carry off minute particles of loose stone and metal to prevent them from clogging the pores on the stone's surface.

honed finish The very smooth surface of stone effected by manual or mechanical rubbing.

honeycomb **1.** In concrete, a rough, pitted surface resulting from incomplete filling of the concrete against the formwork, often caused by using concrete that is too stiff or by not vibrating it sufficiently after it has been poured. **2.** Voids in concrete resulting from the incomplete filling of the voids among the particles of coarse aggregate, often caused by using concrete that is too stiff. **3.** In sandwich panel construction or in some hollow-cored doors, resin-impregnated paper is fabricated into a network of small, interconnected, open-ended, tubular hexagons laminated between two face panels to provide internal support.

honeycomb wall A brick wall whose face contains a pattern of openings created by missing units or gaps between stretchers, sometimes used under floors to provide ventilation and/or joist support.

hood **1.** A protective cover over an object or opening. **2.** A cover, sometimes including a fan, a light fixture, fire extinguishing system, and/or grease filtration/extraction system, and supported, hung, or secured to a wall such as above a cooking stove chimney, or to draw smoke, fumes, and odors away from the area and into a flue. **3.** A curved baffle used to minimize scattering and separation of material discharged by a conveyor belt.

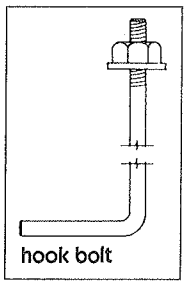


hoodmold The interior or exterior drop molding projecting over a door.

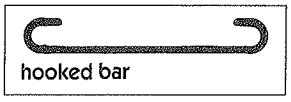
hook **1.** Any bent or curved device for holding, pulling, catching, or attaching. **2.** A terminal bend in a reinforcing bar. **3.** Slang term for a *crane*.

hook-and-butt joint A scarf joint between timbers with their ends fashioned to lock together positively and resist tension.

hook bolt A bolt with an unthreaded end bent into an "L" shape.



hooked bar In reinforced concrete, a reinforcing bar that has a hooked end to facilitate its anchorage. *See also* **hook (2.)**.



hook knife (hook bill knife, linoleum knife) A knife with a blade in which the cutting edge is bent back toward itself in the same plane, forming a hook shape.

hook strip A narrow board fastened horizontally to a closet wall to provide a surface to which clothes hooks are secured.

hoop iron Thin iron strips used to bond masonry, as in a chain bond.

hoop reinforcement Closely-spaced steel rings providing circumferential or lateral reinforcement to prevent buckling of vertical reinforcing bars in concrete columns.

hopper **1.** A top-loading, bottom-discharging funnel or storage bin, as for crushed stone or sand. **2.** One of a pair of draft barriers at the sides of a hopper light. **3.** A toilet bowl, usually funnel-shaped.

hopper frame The bottom-hinged, inward-opening upper sash of a window frame.

hopper head A funnel-shaped enlargement at the top of a downspout where the gutter rainwater is received.

hopper lite (hopper light) **1.** A bottom-hinged, inward-opening window sash which allows air to pass above it when open. **2.** A side-hinged, inward opening window sash which, when open, allows most of the passing air over its top, but also allows the passage of some air through a narrow opening along its bottom.

hopper window (hospital window) A hopper light with hoppers along the sides to minimize draft. *See also* **hopper (2.)**.

horizon **1.** The apparent intersection of the earth and sky, as perceived from any given position. **2.** The same illusion as it might be portrayed in a perspective drawing.

horizontal Parallel to the plane of the horizon and perpendicular to the direction of gravity.

H

horizontal application A method of installing gypsum board with its length perpendicular to the framing members.

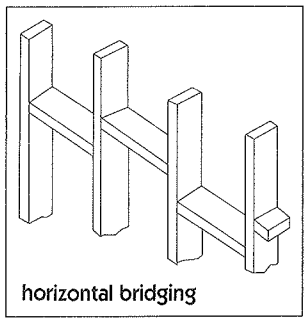
horizontal auger A drilling machine with a horizontally mounted auger, used to drill blast holes in strip mining.

horizontal boring Soil-boring on the horizontal as opposed to the vertical.

horizontal bracing Any bracing lying in a horizontal plane.

horizontal branch A branch drain accepting waste products delivered to it vertically, by gravity, from one or more similar but usually smaller fixtures, and conducting them horizontally to the primary disposal drain.

horizontal bridging Perpendicular braces between joists or beams placed horizontally to stiffen the system and distribute the load.



horizontal bridging

horizontal cell tile Structural masonry ceramic tile with the cells installed horizontally in a wall.

horizontal circle In surveying, a device for measuring horizontal angles and consisting of a graduated circle on the lower plate of a transit or telescope.

horizontal control In surveying, a control system in which the relative positions of points has been established by traverse, triangulation, or another system.

horizontal diaphragm A metal plate serving to disperse forces in a horizontal plane.

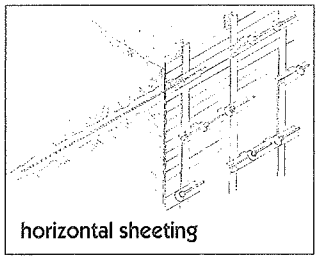
horizontal distance The distance between points anywhere on a horizontal plane.

horizontal lock A lock in which the primary dimension is horizontal.

horizontal panel A wall panel in which the major dimension is horizontal.

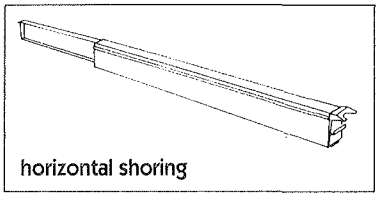
horizontal pipe Any pipe placed or laid horizontally or at an angle to the horizontal of less than 45°.

horizontal sheeting In excavation, any type of earth-restraining sheeting placed horizontally between and supported by soldier piles.



horizontal sheeting

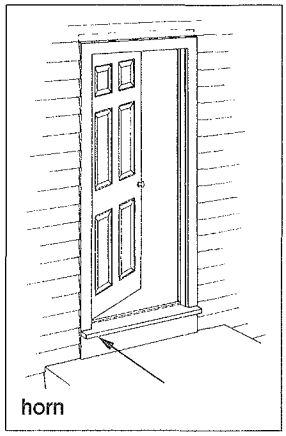
horizontal shoring **1.** Extendible beams or trusses capable of providing concrete form support over fairly long spans, thus reducing the number of vertical supports required. **2.** The collective support provided by several horizontal shores in an application.



horizontal shoring

horizontal wiring subsystem (gray cable) In a premises distribution system, the cables that connect the satellite closet and an information outlet.

horn **1.** The extension beyond a right-angled joint that is part of a stile, jamb, or sill. **2.** The stub of a broken branch left on a log.



horn

hornblende A mineral composed of iron, silicate of magnesium, calcium, and aluminum.

horse **1.** Framework functioning as a temporary support, such as a sawhorse. **2.** In a stair, one of the slanting supports or strings carrying the treads and risers.

horsehead **1.** A frame-like device for supporting a pulley back over a pit so that people and materials may be lowered into it and raised out from it. **2.** Forepole support when tunneling through soft material.

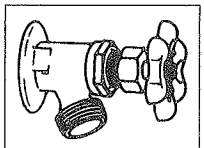
horse mold A template for a cornice mounted on a wooden frame, and used in plastering to shape a cornice.

horsepower A unit measurement of power or energy in the United States Customary System. Mechanically, a single horsepower represents 550 foot-pounds per second. Electrically, a single horsepower represents 746 watts.

horsepower hour A unit representing the amount of work performed by one horsepower in one hour.

horse scaffold A scaffold for light or medium duty, composed of horses supporting a work platform.

hose bib (hose cock) An outdoor water faucet protruding from a building at about sill height, which is usually threaded to accept a hose connection.


hose bib

hose cabinet Identifiable cabinet to house folded hose and valve, partially recessed and wall-mounted.

hose cock *See* **hose bib.**

hose coupling A connection between hoses or between a hose and a pipe.

hose station In a fire safety system, a storage rack that includes a valve, hose, and nozzle.

hose stream test A test that measures an assembly's ability to withstand lateral impact from falling debris during a fire endurance period and before active fire suppression efforts begin.

hose thread A standard screw thread (12 threads per inch on 3/4" pipe) used in garden hose connections.

hospital A building or institution in which 24-hour medical care and services are available and provided.

hospital arm pull A door handle having an extension to allow opening by hooking one's arm around it, thus leaving the hands free.

hospital door A flush door through an opening large enough to allow passage of beds and/or other large equipment.

hospital door hardware The special hardware with which hospital doors are often equipped, such as arm pulls, hinges, terminated stops, latches, and strategically placed protective metal strips or plates.

hospital frame A door frame incorporating terminated stops.

hospital hinge A fast pin hinge furnished with a special tip to eliminate the possibility of injuries caused by the projection of conventional hinge tips.

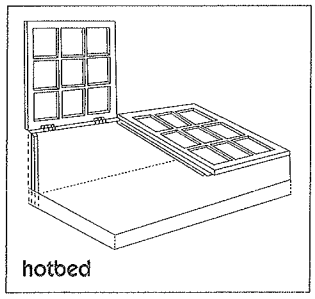
hospital partition A system of tracks and curtains used to provide a degree of privacy around beds commonly called *hospital cubicles.*

hospital window *See* **hopper window.**

hot Slang for a live or electrically charged wire or other electrical component.

hot-air furnace A heating unit in which air is warmed and from which the warmed air is drawn into ducts to be carried throughout a building or selected portion thereof.

hotbed A usually small, shallow (rarely larger than 5' x 10' x 18") enclosure, usually of wood and often covered by glass, containing a plant-growing medium heated by electric cables buried in it or by fermenting manure. A hotbed is used to provide a controlled environment favorable to seed germination and maximum seedling and plant growth.


hotbed

hot-cathode lamp A type of fluorescent, electric discharge lamp in which the electrodes operate at incandescent temperatures and in which the arc and/or circuit elements provide the energy required to maintain the cathodes at incandescence.

hot cement Cement having a high physical temperature resulting from improper cooling after manufacture.

hot chisel A type of chisel used to cut red hot steel. Has a sharp edge usually 2" to 2-1/4" wide.

hot deck (hot duct) In a heating system, the source of hot air for interior heating.

hot-dip galvanized Descriptive of iron or steel immersed in molten zinc to provide it with a protective coating.

hot driven rivet Any rivet heated just prior to placement.

hot glue A glue requiring heating before being used.

hothouse A greenhouse in which the interior atmosphere is kept very warm.

hot line A telephone line serving two phone sets exclusively. Dialing is not necessary, as the system is designed so that one phone will ring simply by lifting the receiver of the other.

hotmelt A thermoplastic substance almost always heated before being applied as a coating, sealer, or adhesive.

hot mix Paving made of a combination of aggregate uniformly mixed and coated with asphalt cement. To dry the aggregate and obtain sufficient fluidity of asphalt cement for proper mixing and workability, both the aggregate and asphalt must be heated prior to mixing.

hot press The method of producing plywood, laminates, particleboard, or fiberboard, in which adhesion of layers in the panel is accomplished by the use of thermosetting resins and a heat process, under pressure, to cure the guidelines.

hot rolled Descriptive of structural steel members or sections shaped from steel fillets or plates, heated to a plastic state, by passing them through successive pairs of massive steel rollers, each of which serves to bring the product closer to its final, intended shape, such as an angle, channel, or plate.

H

hot-setting adhesive An adhesive whose proper setting necessitates a minimum temperature of 212°F.

hot spraying The spraying of paints or lacquers in which the viscosity has been reduced by heat rather than by thinners, allowing formation of a thicker coat, requiring less spraying pressure, hence less overspray.

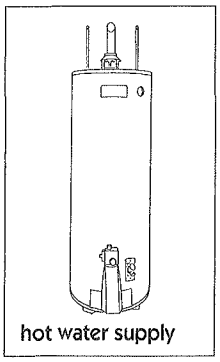
hot surface **1.** A highly alkaline or highly absorbent surface. **2.** A surface having a high temperature.

hot water As defined for the purpose of building codes, water temperature that is 110°F or greater.

hot water boiler Any heating unit in a hot water heating system in which or by which water is heated before being circulated through pipes to radiators or baseboards throughout a building or portion thereof.

hot water heating system One in which hot water is the heating medium. Flow is either gravity or forced circulation.

hot water supply The combination of equipment and its related plumbing supplying domestic hot water.



hot water supply

hot-wire anemometer An anemometer with a velocity-sensing device consisting of a temperature-sensitive wire resistor connected to an electrical circuit and placed directly in the path of the airflow.

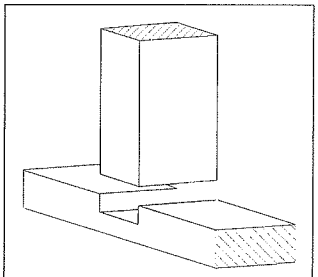
hot wires An electrically charged or power-carrying wire.

hot work Any construction operation involving flames or hot air, or use of heat-producing equipment, such as arc welders and cutting equipment, brazing and soldering equipment, blow lamps, or bitumen boilers.

house connection *See* **house sewer.**

housed **1.** Descriptive of a piece or member fitted into another piece or member that has been modified, as by hollowing, gouging, or chiseling. **2.** Enclosed.

housed joint A usually perpendicular joint formed where the full thickness of one member's edge or end is accepted into a corresponding housing, groove, or dado in another member.



housed joint

house drain In any given plumbing system, as of a house or building, the major lowest horizontal pipe(s) connecting directly to the building sewer just outside the building wall.

housed stair An entire stair between two walls. *See also* **box stair.**

housed string *See* **housed stair, close string.**

house pump In a gravity supply system, the pump that is used to fill the gravity tank that supplies water to the building.

house sewer The exterior horizontal extension of a house drain outside the building wall leading to the main sewer, either public or private, and connecting directly to the sewer pipe.

house slant A pipe fitting connecting a house drainage system to a sewer.

housing Casings that enclose heating, ventilation, and air conditioning equipment, such as coils, filers, or fans. Made most often of sheet metal. May also be used to enclose other types of equipment.

housing starts The number of housing units on which construction has begun. Estimates of housing starts are made on national, regional, and local basis to evaluate economic activity and conditions.

Howe truss A truss with vertical and diagonal webs. The members of the vertical web absorb tension while those of the diagonal web absorb compression.

H-pile A type of steel beam driven into the earth by a pile driver.

HP-shape A typical pile section made from hot-rolled steel and used for a specific type of pile in which the size is prefaced by "HP."

H-runner A lightweight, H-shaped, metal member used on its side in a suspended ceiling system, so that its flat top fastens to a channel and the flat bottom fits into the kerfs in the ceiling tiles.

hub **1.** The central core of a building, usually the area into which stairs and/or elevators are incorporated, and from which hallways or corridors emanate. **2.** The usually strengthened central part of a wheel, gear, propeller, etc. **3.** The end of a pipe enlarged into a bill or socket. **4.** A rotating piece within a lock, through whose central aperture the knob spindle passes to actuate the mechanism. **5.** In surveying, a stake designating a theodolite position. **6.** Caulking or cement connections between pipe joints.

hudee rim A metal frame used to secure a sink in a countertop.

hue **1.** The designation of color. **2.** Characteristic by which one color differs from another.

human exposure The subjection of a human being, through inhalation, to levels of airborne contaminants, taking into consideration concentration of contamination and duration or exposure.

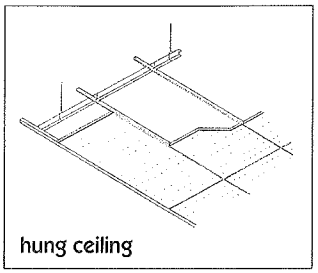
humidifier A mechanical apparatus to add moisture to the air or other material.

humidistat (hygrostat) The automatic regulating device of a humidifier or dehumidifier that is sensitive to and actuated by changes in humidity.

humidity The water vapor contained in a given space, area, or environment.

humus Soil-like organic substance composed of decayed or decaying organic matter.

hung ceiling A nonstructural ceiling having no bearing on walls, being entirely supported from above by the overhead structural element(s) from which it is suspended.

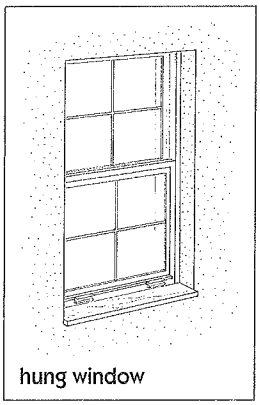

hung ceiling

hungry Descriptive of a surface so absorbent that paint applied to it leaves a thin film revealing every detail of the background.

hung sash A sash hung from its sides by cords or chains, whose other ends are secured to counterweights to allow movement in the vertical plane.

hung slating **1.** Slates installed to cover a vertical surface, rather than an inclining or horizontal surface. **2.** Slates secured by wire clips rather than nails.

hung window A window containing one or more hung sashes.


hung window

hurricane clips Metal anchor used in pole construction to fasten floor joists to a supporting beam or other structural member.

hurricane-prone regions As defined for the purpose of building codes, coastal regions of the U.S. susceptible to hurricanes with wind speed greater than 90 MPH, including the coasts of the Gulf of Mexico and Atlantic Ocean, as well as Hawaii, Puerto Rico, American Samoa, Guam, and the Virgin Islands.

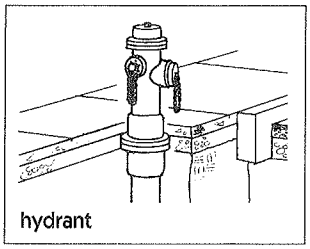
hurricane protection shield A durable guard that folds out accordion-style to protect windows and sliding glass doors from the high winds of hurricanes.

hybrid The result of breeding plants of two different varieties.

hybrid beam A fabricated beam having flanges made from steel with a specified minimum yield strength different from that of the steel used in the web plate.

hybrid photovoltaic generator system A power system that combines solar photovoltaics with a conventional generator system to minimize life cycle costs. It takes advantage of the low operating cost of a photovoltaic array and the on-demand capability of a generator. To optimize cost, a PV system can incorporate a generator to run infrequently during cloudy periods. The PV array typically provides 70%–90% of the annual energy, and the generator provides the remainder.

hydrant A discharge connection to a water main, usually consisting of an upright pipe having one or more nozzles and controlled by a gate valve.


hydrant

hydrargyrum medium arc-length iodide lamp (HMI lamp) A mercury-halide discharge lamp that approximates daylight with an approximate color temperature of 5600K.

hydrated lime A dry, relatively stable product derived from slaking quicklime.

hydration **1.** Any chemical action occurring as the result of combining a material with water. **2.** The chemical reaction that occurs when cement is mixed with water.

hydraulic Characterized or operated by fluid, especially under pressure.

hydraulic cement Cement whose constituents react with water in ways that allow it to set and harden under water.

hydraulic conductivity The rate at which a fluid flows through a porous substance, such as soil.

hydraulic dredge A floating dredge or pump by which water and soil, sediment, or seabed are pumped, either on board for sifting, as for clams or oysters before they are discharged overboard, or through a series of floating pipes for discharge on shore.

H

hydraulic ejector A pipe through which the working chamber of a pneumatic caisson is cleansed of sand, mud, or small gravel. *See also* **elephant trunk**.

hydraulic excavator A powered piece of excavating equipment having a hydraulically operated bucket.

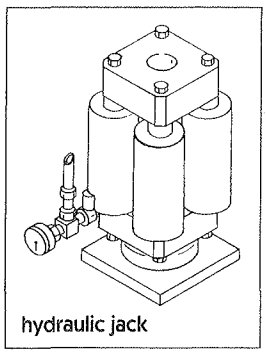
hydraulic fill Fill composed of solids and liquid, usually water, and usually delivered by a dredge. After placement, the water eventually drains to leave only the solid fill.

hydraulic friction Resistance to flow, effected by roughness or obstructions in the pipe, channel, or similar conveying device.

hydraulic glue Glue unaffected by water.

hydraulic hydrated lime The dry, hydrated, cementitious product resulting from the process of calcining a limestone containing silica and alumina to a temperature just below incipient fusion. The resultant lime will harden under water.

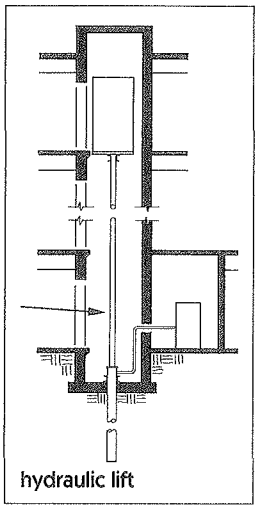
hydraulic jack A mechanical lifting device incorporating an external lever to which force is applied to cause a small internal piston to pressurize the fluid, usually oil, in a chamber. The pressure exerts force on a larger piston, causing it to move vertically upward and raise the bearing plate above it.



hydraulic jack

hydraulic jump An abrupt increase in the depth of a fluid flowing in a channel as its velocity is slowed and kinetic energy is converted to potential energy.

hydraulic lift An elevator car or platform moved by a piston, or plunger, powered by a pressurized fluid, usually oil, in a cylinder.



hydraulic lift

hydraulic lime Lime composed of at least ten silicates and which will set and harden under water.

hydraulic mortar A mortar capable of hardening under water, hence used for foundations or underwater masonry construction.

hydraulic pile driving The employment of hydraulic force to drive sheet piles.

hydraulic pump The device causing the fluid to be forced through a hydraulic system.

hydraulic radius The ratio of the cross-sectional area of a stream of fluid within a conduit to the wetted perimeter of that conduit.

hydraulic splitter A concrete- or rock-cracking mechanism incorporating a wedge inserted into a predrilled hole and then expanded by hydraulic power to cause the cracking.

hydraulic spraying Paint spraying accomplished by high fluid pressure rather than by compressed air.

hydraulic test Employing pressurized water to test a plumbing line for pressure integrity.

hydrocarbons Class of chemical compounds consisting of hydrogen and carbon.

hydrochlorofluorocarbons (HCFCs) Compounds comprised of hydrogen, chlorine, fluorine, and carbon atoms. They do not persist to the same extent as chloroflourocarbons, and so do not pose as great a threat to the ozone layer.

hydrofluorocarbons (HFCs) Compounds comprised of hydrogen, fluorine, and carbon atoms. Because they do not contain chlorine, they are not involved in ozone depletion.

hydrogeologic testing A means of determining the structure and characteristics of subsurface soils and rocks, and the way water flows through them.

hydronic A term pertaining to water used for heating or cooling systems.

hydrophobic cement A treated cement with a reduced tendency to absorb moisture.

hydro-seeding The liquid application of a combined mixture of grass seed, fertilizer, pesticide, and a moisture-retaining binder sprayed under pressure over an area requiring lawn or grass cover.

hydrostatic head The pressure in a fluid, expressed as the height of a column of fluid, which will provide an equal pressure at the base of the column.

hydrostatic pressure Pressure exerted by water, or equivalent to that exerted on a surface by water in a column of specific height.

hydrostatic strength The capability of a pipe to resist internal pressure buildup, measured under specific conditions.

hydrostone A plaster of high strength and density suitable for casting and ornamental use.

hygrometer An instrument used for measuring the moisture content of air.

hygrometric expansion The expansion of a material as it takes on moisture.

hygroscopic Having the tendency to absorb and retain moisture from the air.

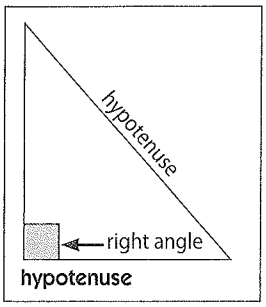
hygrostat *See* **humidistat.**

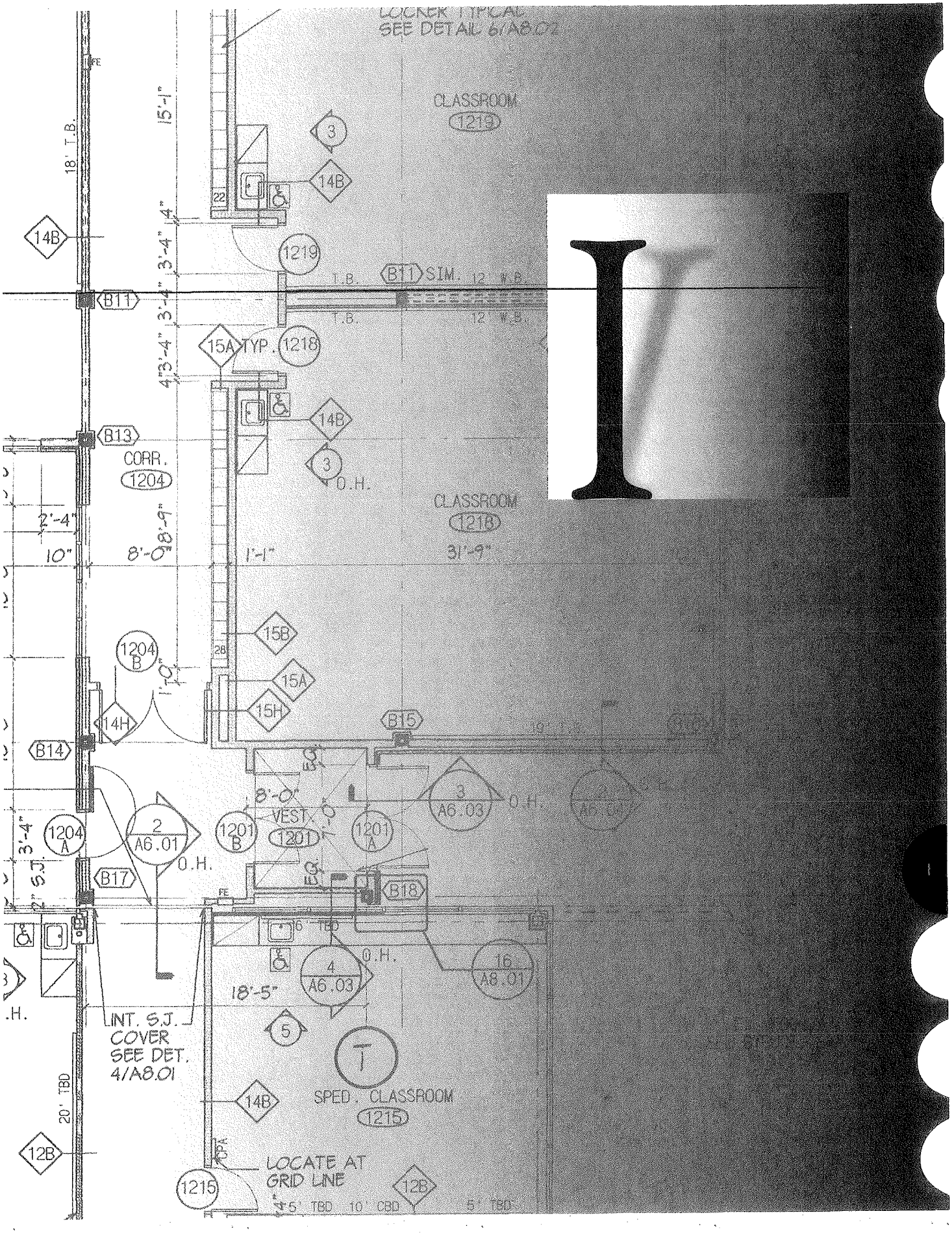
Hypalon® caulking *See* **Hypalon® roofing.**

Hypalon® roofing An elastomeric roof covering available commercially in liquid, sheet, or putty-like (caulking) consistency in several different colors. Hypalon roofing is more resistant to thermal movement and weathering than neoprene.

hypersensitivity diseases Diseases characterized by allergic responses to pollutants. Those most clearly associated with indoor air quality are asthma, rhinitis, and pneumonic hypersensitivity.

hypotenuse The side of a right triangle that faces the right angle.




LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
3
14B
22
1219
B11 SIM.
T.B.
12' W.B.
B11
15A TYP.
1218
14B
3
O.H.
B13
CORR.
1204
CLASSROOM
1218
2'-4"
10"
8'-0"
18'-9"
1'-1"
31'-9"
15B
28
1204
B
15A
15H
14H
B15
B14
8'-0"
VEST.
1201
1201
B
1201
A
3
A6.03
O.H.
1204
A
2
A6.01
O.H.
B17
B18
16 TBD
4
A6.03
O.H.
16
A8.01
18'-5"
5
INT. S.J.
COVER
SEE DET.
4/A8.01
SPED. CLASSROOM
1215
14B
12B
LOCATE AT
GRID LINE
1215
12B
5' TBD
10' CBD
5' TBD
18' T.B.
15'-1"
3'-4"
3'-4"
3'-4"
4"
4"
3'-4"
2" S.J.
3'-4"
20' TBD
.H.

I Abbreviations

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

I moment of inertia

IARC International Agency for Research on Cancer

IBI Intelligent Buildings Institute

IC interrupting capacity, ironclad, incense cedar

ICBO International Conference of Building Officials

ICC Interstate Commerce Commission, International Code Council

ID inside dimension, inside diameter, identification

IDHA International District Heating Association

IDLH immediately dangerous to life and health

IEEE Institute of Electrical and Electronics Engineers, Inc.

IEER intergrated energy efficiency ratio

IES Illuminating Engineering Society

IF inside frosted

IFB Invitation for Bids

Ihp indicated horsepower

IMC intermediate metal conduit

imp imperfect

in inch

inc included, including, incorporated, increase, incoming

incan incandescent

incl included, including

Ins insulate, insurance

inst installation

insul insulation, insulate

int intake, interior, internal

IP iron pipe

IPLV integrated part-load value

IPS iron pipe size

IPT iron pipe threaded

IR inside radius at the start, or initiation, of an activity

IRS Internal Revenue Service

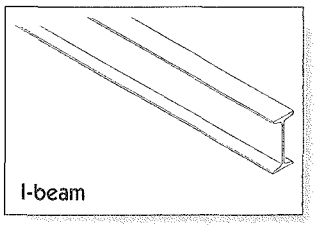
ISO Insurance Services Office, International Organization for Standardization

IWP Idaho white pine

i In the critical path method (CPM) of scheduling, the symbol that represents the event at the start, or initiation, of an activity.

IARC Monograph A brief summary of the carcinogenic effects of a particular substance as determined by the International Agency for Research on Cancer.

I-beam A structural member of rolled steel whose cross section resembles the capital letter "I."


I-beam

ice dam An accumulation of ice and snow at the eaves of a sloping roof.

ichnography The graphic, geometrically scaled representation of a horizontal section.

identification of long lead procurements Refers to determining material and/or equipment that must be ordered prior to the start of construction to ensure availability at the specified time of installation.

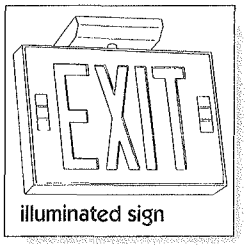
idle equipment cost The cost of equipment that remains on site ready for use but is placed in a standby basis. Ownership or rental costs are still incurred while the equipment is idle.*

idler A gear or wheel used to impart a reversal of direction or rotation of a shaft.

idle time A time interval during which either the worker, the equipment, or both do not perform useful work.*

igneous rock A rock formed by the solidification of molten materials.

illuminated sign A sign that is illuminated by an internal or external source, often used to mark a path of emergency exit.



illuminated sign

illumination The intensity of light on a surface exposed to incident light.

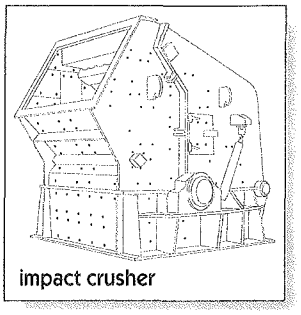
I-joist An engineered wood product created with two flanges joined by a web that develops certain structural capabilities. I-joists are also used for rafters.

immersion heater A thermostatically controlled electric resistance heating device that is submerged in the fluid it heats.

impact The stress to which a structure is subjected from vibrating, falling, or shifting loads. Impact is a percentage of the structure's live load.

impact cost Added expenses due to the indirect results of a changed condition, delay, or changes that are a consequence of the initial event. Examples of these costs are premium time, lost efficiency, and extended field and home office overhead.*

impact crusher A crushing machine that utilizes a series of hammers to break up materials.


impact crusher

impact damages Losses that affect the overall performance and cost of contract work, such as delay to the project, lost labor productivity, and acceleration. Distinguished from direct damages.

impact factor A number by which a static load is multiplied to approximate that load applied dynamically.

impact force Force resulting from the collision of two or more objects.

impact insulation class (IIC) A test method that assigns single number ratings for the transmission of impact sound through various types of construction. A high rating number indicates better noise resistance.

impact isolation **1.** The use of insulating material and structures that reduce the transmission of impact noise. **2.** The degree of effective reduction of impact noise transmission accomplished by the structures and materials designed and used specifically for that purpose.

impact isolation class (IIC) A single number rating used to compare and evaluate the performance of floor-ceiling constructions in isolating impact noise.

impact load The dynamic effect on a stationary or mobile body as imparted by the short, forcible contact of another moving body.

impact noise The sound created when a building surface is struck by an object.

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I

impact noise rating The single-number rating used to evaluate and compare the effectiveness of assemblies and floor/ceiling constructions in isolating impact noise. The higher the number, the greater the effectiveness in suppressing noise.

impact resistance The resistance of a member or assembly to dynamic loading. Also refers specifically to an insulation's ability to withstand damage or abuse.

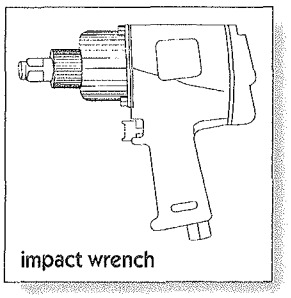
impact sound pressure level (ISPL) The sound (in decibels), measured in a receiving room, resulting from the transmission of impact sound through floor construction, produced by a standard "tapping" machine.

impact sound transmission Sound that originates by contact with the structure and travels through the structure.

impact test Any of a number of dynamic tests (usually a load striking a specimen in a specified manner) used to estimate the resistance of a material to shock.

impact transmission The transfer of sound waves through walls, floors, and other structures.

impact wrench An electric or pneumatic wrench with adjustable torque that is supplied to a nut or bolt in short, rapid impulses.


impact wrench

impedance Measured in ohms, the total opposition or resistance to the flow of current when voltage is applied to an alternating-current electric circuit.

impeller **1.** The vaned member of a rotary pump that employs centrifugal force to convey fluids from intake to discharge. **2.** A related device used to force pressurized gas in a given direction. **3.** In ventilation, a device that rotates to move air.

impending slough The consistency of shotcrete such that no more water can be added without causing it to sag or flow after placement.

impermeable Descriptive of a material that does not allow the passage of liquid.

impervious Highly resistant to penetration by water.

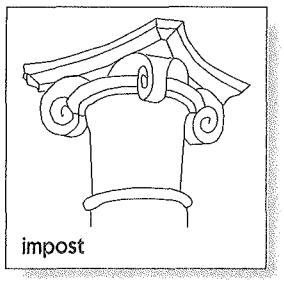
impervious soil A very fine-grained soil, such as clay or compacted loam, that is so resistant to water penetration that slow capillary creep is the only means by which water can enter.

implied contract A contract not created by explicit agreement between the parties, but inferred by law from their acts or conduct.

imposed load Any load that a structure must bear, exclusive of dead load.

impossibility of performance A doctrine by which a contract for construction can be rescinded if it is determined to be impossible or extremely impractical to perform as a result of the disproportionate cost to perform in comparison to what would have been reasonably anticipated.

impost The often distinctively decorated uppermost member of a column, pillar, etc., that supports an end of an arch.


impost

impoundment A water storage area or tank.

impracticability Inability to perform work because of extreme and unreasonable difficulty, expense, injury, or loss involved. This is sometimes considered practical impossibility.*

impregnated wood (impreg) Wood with cell walls impregnated with a synthetic resin to reduce shrinking and swelling.

impregnation **1.** The penetration of a (timber) product under pressure with an oil, mineral, or chemical solution, usually for preservation. **2.** Treating soil with a liquid waterproofing agent to reduce leakage.

improved land Property where water, sewers, sidewalks, and other basic facilities have been installed prior to residential or industrial development.

improvement A physical change or addition made on a property so as to increase its value or enhance its appearance.

impulse radar The process of using a generator to produce an electromagnetic pulse that travels through a structure to record and measure the changes in wave velocity without causing damage to the structure. Used to investigate the stability of structures such as bridges, castles, roads, and modern concrete structures.

inactive leaf (inactive door) In a pair of doors, a stationary leaf to which the strike plate is secured. It is usually bolted at the head and sill.

in-and-out bond A bond in which masonry units are arranged so that headers and stretchers alternate in successive courses. This arrangement is most often used when forming a corner.

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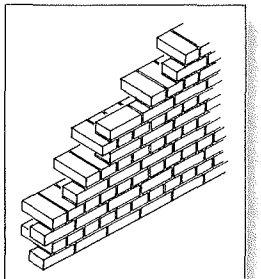

in-and-out bond

inband A header stone used in a reveal.

inbark (bark pocket) Ingrown bark enclosed in the wood of a tree by growth and subsequently exposed by manufacture.

inbond A masonry bond across the entire thickness of a wall, and usually consisting of headers or bondstones.

incandescence The emission of visible light as a consequence of being heated.

incandescent lamp A lamp in which electricity heats a (tungsten) filament to incandescence, producing light.

incandescent lighting fixture A complete luminaire, comprising an incandescent lamp, socket, reflector, and often a diffusing apparatus.

incense cedar *Libocedrus decurrens*. A tree, indigenous to the area from northern Oregon to southern California, whose aromatic, durable wood is used in pencil manufacture and for many of the same applications as western red cedar. Incense cedar is highly resistant to moisture.

inch A measure of length equal to 1/12 of a foot (2.54 centimeters).

inch of water A unit of pressure that is equal to the pressure exerted by a one-inch high column of liquid water at a temperature of 39.2°F (4°C).

inch-pounds **1.** A unit of work derived by multiplying the force in pounds by the distance in inches through which it acts. **2.** A unit of energy that will perform an equivalent amount of work.

inch stuff Descriptive of building materials having a nominal thickness of 1", but in reality somewhat less (usually 7/8").

incident radiation Solar energy, both direct and diffuse, upon its arrival at the surface of a solar collector or other surface.

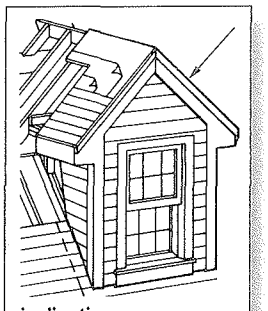
incident sound Noise that is directly received from the source, as distinguished from sound that is reflected from a surface.

incinerator A type of furnace in which combustible solid, semisolid, or gaseous wastes are burned.

incipient decay The early stage of decay in timber in which the disintegration has not proceeded far enough to affect the strength or hardness.

incising **1.** Cutting in, carving, or engraving, usually for decorative purposes. **2.** Cutting slits into the surface of a piece of wood prior to preservative treatment to improve absorption.

inclination **1.** The deviation of a surface or line from the vertical or horizontal. **2.** The angle produced by the deviation of a surface or line from the vertical or horizontal.


inclination

incline A slope, slant, or gradient.

inclined-axis mixer A truck-mounted concrete mixer. A revolving drum rotates around an axis that is inclined from the horizontal axis of the truck's chassis.

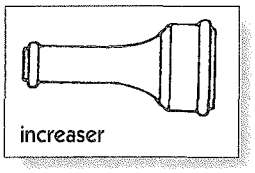
inclusive coverage A provision in an insurance policy for potential loss where specific types or origins of loss are included by description under the coverage provided.

incombustible (noncombustible) Incapable of burning.

income approach A real estate appraisal method used to calculate property value based on the income generated when the income is capitalized at the current market rate for the particular type of property.

incorporator A person who joins with others to form a corporation. The successors of those who actually sign the papers.

increaser In plumbing, a coupling with one end larger than the other. Generally the small end has outside threads and the large end has inside threads.


increaser

incremental cost (benefit) The additional cost (benefit) resulting from an increase in the investment in a project.*

incrustation Mineral, chemical, or other deposits left in a pipe, vessel, or other equipment by the liquids that they convey.

indemnification An obligation contractually assumed or legally imposed on one party to protect another against loss or damage from stated liabilities. *See also* **insurance.**

indent In masonry, a gap left in a course by the omission of a masonry unit. An indent is used for bonding future masonry.

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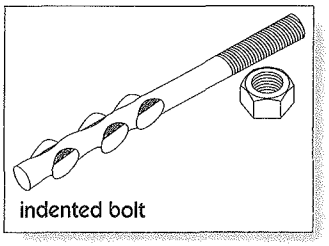
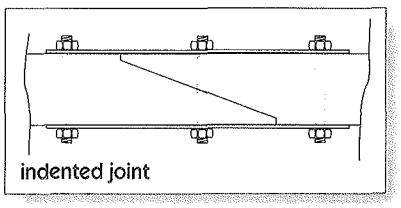
indented bar A deformed concrete reinforcing bar having indentations for improving the bond between the steel and the concrete.

indented bolt A type of anchor bolt comprising a plain bar into which indentations have been forged to increase its grip in concrete or grout.



indented joint A type of butt joint where a notched fish plate is fitted to notches in the timbers and the entire assembly is fastened with bolts.



indented wire Wire whose surface has been provided with indentations to increase its bond when used as concrete reinforcement or for pretensioning tendons.

indenture **1.** An official agreement between a bond issuer and his bond holders. **2.** Any deed or contract between two or more parties. **3.** A document in duplicate, triplicate, etc., whose edges have been irregularly indented so that the copies can later be matched to corroborate authenticity.

independent contractor A contractor who, under written contract, provides services to an owner but is not considered an employee of the owner for tax or other legal reasons. The independent contractor controls the means, method, and manner of producing the result to be accomplished.

independent cost estimate (ICE) A cost estimate made in order to validate other prior estimates for a project.

index mark In surveying, a mark used as a sighting reference to take measurements.

index of plasticity The numerically expressed difference between the liquid and plastic limits (of a cohesive material).

Indiana limestone A durable, easily sawn, planed, carved, and lathed limestone quarried in, and exported from, the state of Indiana.

indicated horsepower The horsepower, determined by an indicator gauge, that is developed in the cylinders exclusive of losses sustained due to engine friction.

indicator bolt A type of door bolt used primarily on doors of bathrooms and toilets that indicates occupancy when locked, and vacancy when unlocked.

indicator button An occupancy-indicating mechanism used mostly on the locks of hotel room doors.

indicator pile A pile driven as a test to evaluate future piles.

indicator pollutant An easily measured pollutant that may or may not be hazardous in normally occurring concentrations, but which may indicate the presence of a more dangerous pollutant (e.g., NO_3 levels resulting from sewerage infiltration to ground H_20).

indicator valve A valve that includes some device indicating its open or closed condition.

indigenous Descriptive of any product, substance, growth, outcropping, characteristic, etc., that is geographically native to the area where it occurs, as opposed to having been introduced there.

indigenous planting Landscaping strategy that uses native plants. Provided plantings have the proper growing condition, they can achieve low, or zero supplemental water needs.

indirect costs **1.** Costs are directly attributable to the completion of an activity. Indirect costs are typically allocated or spread across all activities on a predetermined basis. **2.** In construction, all costs that do not become a final part of the installation, but are required for the orderly completion of the installation and may include, but are not limited to, field administration, direct supervision, capital tools, startup costs, contractor's fees, insurance, taxes, etc.*

indirect expense Overhead or other indirect costs incurred in achieving project completion, but not applicable to any specific task.

indirect gain/loss In passive solar design, heat gain or loss that occurs at the surface of a thermal storage wall. Typical materials include brick, concrete, and water.

indirect heating **1.** A method of heating, by steam, hot air, etc., for areas that are removed from the source of heat. **2.** Central heating.

indirect lighting Lighting achieved by directing the light emitted from a luminaire toward a ceiling, wall, or other reflecting surface, rather than directly at the area to be illuminated.

indirect luminaire A luminaire that distributes 90%–100% of its emitted light upward.

indirect system A system of heating, air-conditioning, or refrigeration whereby the heating or cooling of an area is not accomplished directly. Rather, a fluid is heated or cooled, then circulated to the area requiring the conditioning, or used to heat or cool air that then is circulated to achieve the same end.

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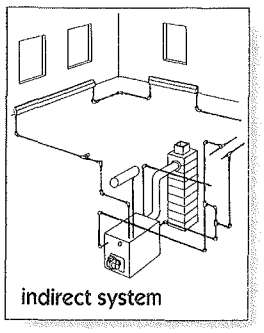

indirect system

indirect waste pipe A waste pipe that discharges through an air break or air gap into a trapped receptacle or fixture, rather than directly into the building drainage system.

indirect water heater A water heater system that increases the temperature of the water via a remote heat exchanger.

individual vent A pipe that vents a fixture drain and that is connected to the main vent system at some point higher than the fixture.

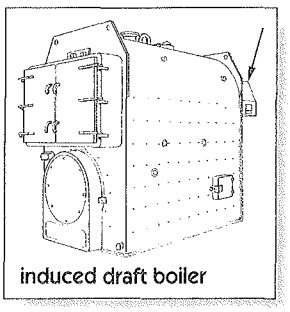
indoor air quality (IAQ) The quality and general healthfulness of air within a building, as affected by temperature, humidity, and airborne contaminants.

indoor environmental quality (IEQ) An important criterion for green, or sustainable, building design, this refers to general overall building occupant comfort. Includes humidity, ventilation and air circulation, acoustics, and lighting.

indoor/outdoor carpet A carpet in which all the components have been designed or treated so as to remain essentially unaffected by water, sun, temperature, etc.

induced draft A process in which air is drawn through the cooling tower into the fan.

induced draft boiler A boiler that uses a fan at its discharge end to pull air through the burner and oiler, and transfer the exhaust products into the atmosphere through a chimney.


induced draft boiler

induced draft fan *See* **induced draft boiler.**

induced draft water-cooling tower A water-cooling tower incorporating one or more fans in the path of the saturated air stream leaving the tower.

inductance The process that occurs when one conductor is placed next to another carrying AC current. The ever-changing magnetic field that results will induce a current in the first conductor.

induction The entrainment of air in a room by the strong flow of primary air from an air outlet.

induction air terminal units A factory assembly consisting of a cooling coil and/or heating coil that receives preconditioned air under pressure that is mixed with recirculated air by the induction process.

induction brazing A brazing process whereby required heat is derived from the resistance of the work to an induced electric current.

induction heating A technique used to heat-treat completed welds in piping. The heat is generated by the use of induction coils around the piping.

induction motor A motor that operates on alternating current. Its primary winding is usually on the starter, which is connected to the electric power source. Its secondary winding, usually on the rotor, conveys the induced current.

induction soldering A soldering process whereby required heat is derived from the resistance of the work to an induced electric current.

induction welding A type of welding in which coalescence is achieved by heat derived from the work's resistance to an induced electric current, either with or without applied pressure.

inductive loads Loads whose voltage and current are out-of-phase. Most loads in modern electrical distribution systems are inductive.

industrial appearance grade Structural glue-laminated timber produced for use where appearance is not a primary concern.

industrial construction Construction of residential or commercial structures (in a factory environment) that will later be assembled on the building site. Includes HUD-Code manufactured homes as well as residential and commercial modular construction.

industrial hygienist In asbestos abatement, a professional hired by the building owner to sample and monitor the air, and for other safety-related tasks.

industrial tubular door A tubular steel door with locked seams and welded corners.

industrial waste Liquid waste from manufacturing, processing, or other industrial operations, which might include chemicals, but not rainwater or human waste.

industry specification A type of specification prepared by technical or industry associations that is approved for use by federal agencies.

industry standard Readily available information in the form of published specifications, technical reports and disclosures, test procedures and results, codes, and other technical information and data. Such data should be verifiable and professionally endorsed, with general acceptance and proven use by the construction industry.

I

industry standard specification A published specification meeting the general definition of an *industry standard.*

inelastic behavior Deformation of a material that remains even after the force that caused it has been relieved or removed.

inert **1.** Chemically inactive. **2.** Resistant to motion or action.

inertia The tendency of a body at rest to remain at rest, or of a body in motion to remain in motion in a straight line unless directly influenced by an external force.

inertia block Usually a concrete block supported on some sort of resilient material and used as a base for heavy, vibrating mechanical equipment, such as pumps and forms, to reduce the transmission of vibration to the building structure.

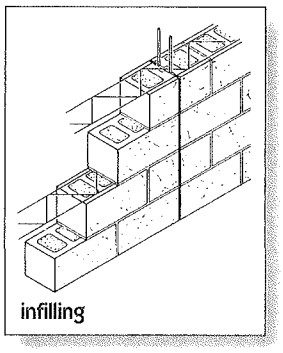
inertial guidance system **1.** A guidance system in which a predetermined course is used to heat-treat completed welds in piping. The heat is generated by the use of induction coils around the piping. **2.** A guidance system in which a predetermined course is maintained by a computer utilizing gyroscopic and accelerometer data.

inert pigment A pigment or extender that does not react chemically with the materials with which it is being mixed.

inexcusable delays Project delays that are attributable to negligence on the part of the contractor, which lead, in many cases, to penalty payments.*

infill Building on a vacant site or underutilized parcel of land within an established urban area rather than on the outskirts in order to promote more efficient use of existing infrastructure.

infilling Fill material providing insulation, stiffness, and/or fire resistance. It is used in buildings to fill the void areas, within a frame, between structural members.


infilling

infiltration The leakage of air into a building through the small spaces around windows, doors, etc., caused by pressure differences between indoor and outdoor air.

infiltration basins Shallow, level-bottomed depressions dug into the earth around newly planted trees and shrubs to collect snowmelt and rainwater for hydrating them.

inflammable Easily ignitable and highly combustible. The preferred term is *flammable. See also* **combustible.**

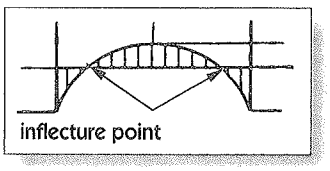
inflatable gasket A type of gasket whose effective seal results from inflation by compressed air.

inflatable structure An airtight structure of impervious fabric, supported from within by slightly greater than atmospheric pressure generated by fans.

inflation A persistent increase in the level of consumer prices, or a persistent decline in the purchasing power of money, caused by an increase in available currency and credit beyond the proportion of available goods and services.*

inflection The bending of a straight line from concave to convex, or the converse.

inflecture point That point in a flexural structural member where reversal of curvature occurs and the bending moment is zero.



influence line A technique, useful in solving problems that involve moving loads, that indicates the effect at a given section of a unit load imposed at any point on the structure.

information stake A stake used on-site to convey surveying measurements to an excavation crew.

infrared Descriptive of invisible electromagnetic radiation that, when produced by a light source, is usually undesirable, except in certain industrial applications, such as drying and baking finished surfaces.

infrared camera A device used to detect uninsulated or under-insulated areas and gaps in the building envelope where heat is escaping in the winter and entering in the summer.

infrared drying Drying that is accomplished or accelerated by infrared lamps.

infrared heater A source of heat-producing wavelengths, longer than visible light, which do not heat the air through which they pass, but only those objects in the line of sight.

infrared lamp A type of incandescent lamp that often has a red glass bulb to reduce its radiated visible light. Such a lamp emits more radiant power in the infrared region than does a standard incandescent lamp, and it has a lower filament temperature, which contributes to its longer life.

infrared photography Photography in which the film used is more sensitive to infrared rays than to visible light rays.

infrastructure Improvements supporting an area, including transportation, roadways, communication, and utility systems.

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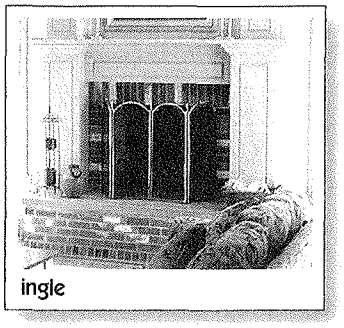
ingle **1.** A fireplace. **2.** A hearth.



ingle

inglenook A nook or part of a corner near a chimney or fireplace, often having built-in seats.

ingot A large mass of molten metal cast in a vertical mold but requiring further processing before becoming a finished product.

ingot iron An iron, primarily used in sheets, containing very small amounts of carbon, manganese, and other impurities.

inhibiting pigment Rust-, corrosion-, or mildew-resistant pigments, such as lead and zinc chromate or red lead, that are added to coatings to color them and to provide them with protective qualities.

inhibitor Oxidants added to coatings to retard drying, skinning, and other undesirable effects or conditions.

initial drying shrinkage The difference between the length of a concrete specimen when first poured and the final, permanent length of the same specimen after it has dried, usually expressed as a percentage of the initial moist length.

initial graphics exchange specification A neutral file specification that allows for the transfer of data between CAD/CAM systems. Focuses primarily on 2D & 3D graphical information.

initial prestress The stress or force applied to prestressed concrete at the time of its stressing.

initial set That point in the setting of a concrete and water mixture when it has attained a certain degree of stiffness, but is not yet finally set. Initial set is usually expressed in terms of the time required for a cement paste to stiffen enough to resist a pre-established degree of penetration by a weighted test needle.

initial setting time The time it takes for a fresh mixture of cement paste, mortar, or concrete to attain *initial set.*

initial stress The stress existing in a prestressed concrete member prior to the occurrence of any loss of stress.

initiating circuit A circuit in a fire safety system that contains sensors to detect a fire condition.

injecter The mechanism in a diesel engine that sprays the fuel into the combustion chamber.

injection burner A gas burner in which gas and air for combustion are forced into the burner by a gas jet.

injection molding The process of pouring heat-softened plastic into a cool mold to create a desired shape.

inlaid work Small pieces of material, different from that of the background, that are laid or set into a surface so as to produce a decorative pattern.

inlay **1.** To decorate with inlaid work. **2.** An ornamental design cut into the surface of linoleum, wood, or metal, and filled with a material of different color, often by gluing.

inlet **1.** The surface connection to a closed drain or pipe. **2.** The upstream end of any structure through which there is a flow.

inlet well An opening at the surface of the ground through which runoff water enters the drainage system.

inner court An outdoor area that is open above, but surrounded on four sides by the exterior walls of a building or structure.

inorganic material Substances of mineral composition, not carbon compounds of animals or vegetables.

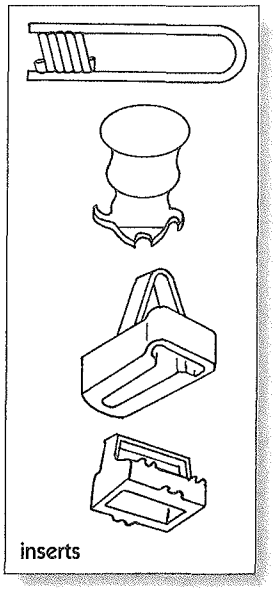
in-place value Value of a physical property, e.g., market value plus costs of transportation to site and installation.*

input/output device Any piece of equipment used to communicate with the central host computer in a building automation system, for example, a telephone, keyboard, or annunciator command terminal.

input system A ventilating system utilizing a fan to draw air from a roof into rooms through ducts. An air cleaner or filter and an automatic air heater are usually included.

insecticide A substance toxic to insects.

insert **1.** A patch, plug, or shim used to replace a defect in a plywood veneer. **2.** A unit of hardware embedded in concrete or masonry to provide a means for attaching something. **3.** A nonstructural patch in laminated timber, made for the sake of appearance.



inserts

insert grille A grille that is fabricated separately from the door and installed in the field.

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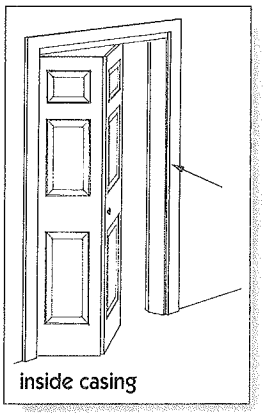
I

inset staple To staple the paper flange of bat insulation to the inside portion of a stud or rafter.

inside-angle tool In masonry and plastering, a float designed especially for shaping inside (internal) angles.

inside caliper A caliper with pointed legs turned outward that is used for measuring inside diameters.

inside casing The interior trim around the frame of a door or window, which might consist of dressed boards, molding, and trim.



inside corner molding Concave or canted molding used to cover the joint at the internal angle of two intersecting surfaces.

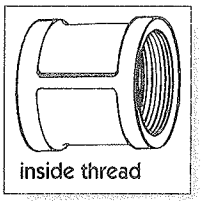
inside glazing External glazing that is placed from within the frame or from inside the building.

inside lining **1.** Inside casing. **2.** Any part of a cased frame that has its face toward the building or structure.

inside micrometer An instrument used to accurately measure the inside diameters of relatively small cylinders or pipes.

inside stop Usually a beaded or molded strip of wood secured to the casing along the inside edge of the inner sash to hold it in place and restrict its movement to the vertical plane.

inside thread The threaded inner surface of a pipe or fitting that accepts the outside threads of another pipe or fitting.



inside trim Any trim used inside a building. *See also* **inside casing**.

in situ **1.** In place, as natural, undisturbed soil. **2.** Descriptive of work accomplished on the site rather than in prefabrication elsewhere, as in cast-in-place concrete.

in situ biodegration A process used to degrade organic wastes through biological processes in the soil or groundwater.

in situ concrete Concrete placed where it will harden to become an integral part of the structure, as opposed to precast concrete.

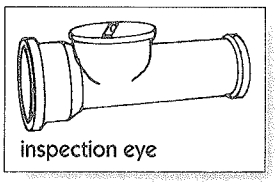
in situ soil test Soil testing performed in a borehole, tunnel, or trial pit, as opposed to being performed elsewhere on a sample that has been removed.

in situ vitrification A process that electronically melts contaminated soil at temperatures well above the soil's initial melting range.

insoluble residue The part of an aggregate or cement that does not dissolve in diluted hydrochloric acid.

inspection **1.** A visual survey of construction work—either completed or in progress—to ensure that it complies with the contract documents. **2.** Examination of the work by a public official, owner's representative, or others.

inspection eye A pipe fitting equipped with a plug that can be removed to allow examination or cleaning of the pipe run.

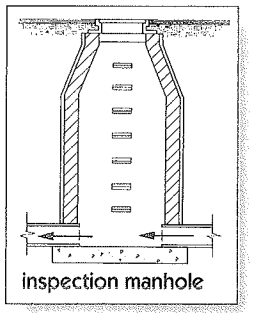


inspection fitting *See* **inspection eye**.

inspection junction *See* **cleanout**.

inspection list A list of incomplete or incorrect work items that must be addressed by the contractor before final payment can be issued.

inspection manhole A covered shaft leading from the outside down to a sewer or duct, so constructed as to allow a person to enter it from the surface.



inspector A person authorized and/or assigned to perform a detailed examination of any or all portions of the work and/or materials. *See also* **building inspector, owner's inspector,** *and* **resident engineer**.

instancing A buzz word used in CADD technology to describe the copying of a part of a drawing for reuse somewhere else.

instant lock (instant locker) **1.** An automatic lock that is actuated by the closing of the door. **2.** A time lock or chromatic lock working on the same principle.

instant-start fluorescent lamp An electric discharge lamp that is started without the preheating of electrodes, but rather by application of a high enough voltage to eject electrons from the electrodes by field emission, initiate electron flow through the lamp, ionize the gases, and initiate a discharge through the lamp.

instructions to bidders A document included as part of the bidding requirements that sets forth specific instructions to candidate constructors on procedures, expectations and disclaimers of the owner, and other necessary information for the preparation of proposals for consideration by the owner for a competitive bid.

insulate To provide with special features and/or materials that afford protection against sound, moisture, heat, or heat loss.

insulated cavity wall A hollow masonry wall with a cavity containing some type of insulation.

insulated concrete forms (ICF) Highly insulated, pre-engineered forms for reinforced concrete walls with R-values as high as R-40. Most often made of polyvinyl chloride (PVC) or expanded polystyrene foam (EPS).

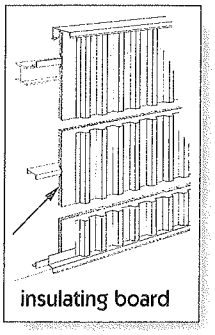
insulated conductor An electrical conductor that is contained within an NEC-approved, non-conductive material.

insulated flange A coupling that interrupts the electrical transmission between two metal pipes.

insulated metal roofing A type of roofing panel made from mineral fiber, insular glass, foamed plastic, etc., and faced with light-gauge flexible metal.

insulated roof membrane assembly (IRMA) A roofing system where the roof membrane is laid directly on the roof deck and then covered with extruded foam insulation and ballasted with stone.

insulating board A thin, lightweight, rigid or semi-rigid board, usually of processed plant fibers, that offers little structural strength but does provide thermal insulation. It is usually applied under a finish material.


insulating board

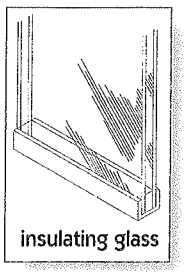
insulating cement A putty-like mixture of hydraulic-setting cement or other bonding material and a loose-fill insulation. Used to fill voids, joints, cracks, etc.

insulating concrete Concrete possessing low thermal conductivity and used as thermal insulation.

insulating fiberboard Building board manufactured from processed plant fiber in a variety of sizes, thicknesses, densities, and strengths. *See also* **insulating board.**

insulating formboard Insulation board that serves as a permanent form for poured-in-place gypsum or lightweight concrete roof decks.

insulating glass Glazing comprising two or more panes of glass, between which there exist(s) a hermetically sealed airspace(s), joined around the edges.


insulating glass

insulating oil The oil contained and used within the enclosure of a transformer, switch, or other electric device for cooling and insulation.

insulating plasterboard Gypsum board with aluminum foil backing that provides resistance to heat flow and moisture.

insulating resistance The measure of a material's ability to inhibit electric current flow.

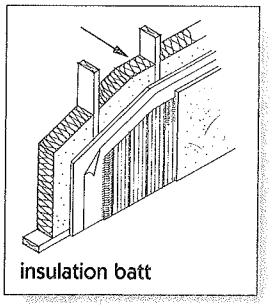
insulating sheathing Insulating board with a minimum thermal resistance of R-2 of the core material.

insulating strip The soft, resilient material used in an expansion joint.

insulating varnish A varnish that is applied to wires or electric circuits as an insulator.

insulation **1.** Material used to reduce the effects of heat, cold, or sound. **2.** Any material, device, or technique that provides protection against fire or the transfer of electricity, heat, cold, moisture, or sound. **3.** Thermal insulation is a material used for covering pipes, ducts, vessels, etc., to effect a reduction of heat loss or gain.

insulation batt Flexible insulation of loosely matted plant or glass fibers faced on one or both sides with kraft paper or aluminum foil and usually available in specifically sized sections.


insulation batt

insulation blanket Usually composed of the same materials and the same widths and thicknesses as batts, but is available in rolls.

I

insulation density The number of fibers per square inch in an insulation product. Denser insulation brings higher resistance to heat, cold, and sound.

insulation hanger A fastener, pin, or stud that holds insulation.

insulation lath Gypsum lath with an aluminum foil backing that provides resistance to heat flow and moisture.

insulation resistance The resistance of an insulator to a directly applied current.

insulator An insulating device designed and used to physically support a conductor and electrically separate it from other conductors or objects.

Insulux™ The first widely used hollow glass block produced by Owens-Illinois Glass Company in 1935.

insurance A contract, typically referred to as an insurance policy, in which the insurer, in return for the premium stated in the policy, agrees to pay the insured up to the limits specified in the policy for losses or damages incurred by the insured.

insurance, bodily injury A form of insurance that covers physical injury, sickness, or disease sustained by a person. *See also* **personal injury**.

insurance, builder's risk A specialized form of property insurance that provides coverage for loss or damage to the work during the course of construction. *See also* **property insurance**.

insurance, care, custody, and control The term used to describe a standard exclusion in liability insurance policies. Under this exclusion, the liability insurance does not apply to damage to property over which the insured is for any purpose exercising physical control.

insurance, certificate of A document, issued by an authorized representative of an insurance company, stating the types, amounts, and effective dates of insurance in force for a designated insured.

insurance, completed operations Liability insurance coverage for injuries to persons or damage to property occurring **1.** when all operations under the contract have been completed or abandoned; or **2.** when all operations at one project site are completed; or **3.** when the portion of the work out of which the injury or damage arises has been put to its intended use by the person or organization for whom that portion of the work was done. Completed operations insurance does not apply to damage to the completed work itself.

insurance, comprehensive general liability A broad form of liability insurance covering claims for bodily injury and property damage that combines, under one policy, coverage for all liability exposures (except as specifically excluded) on a blanket basis and automatically covers new and unknown hazards that may develop.

insurance, contractor's liability Insurance purchased and maintained by the contractor to protect from specified claims that may arise out of, or result from, the contractor's operations under the contract, whether such operations are by the contractor or by any subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

insurance, employer's liability Insurance protection for the employer against claims by employees or employees' dependents for damages that arise out of injuries or diseases sustained in the course of their work, and that are based on common law negligence rather than on liability under workers' compensation acts.

insurance, errors and omissions *See* **professional liability insurance**.

insurance, extended coverage An endorsement to a property insurance policy that extends the perils covered to include windstorm, hail, riot, civil commotion, explosion (except steam boiler), aircraft, vehicles, and smoke. *See also* **property insurance**.

insurance, liability Insurance that protects the insured against liability on account of injury to the person or property of another. *See also* **completed operations insurance, comprehensive general liability insurance, contractor's liability insurance, employer's liability insurance, owner's liability insurance, professional liability insurance, property damage insurance, public liability insurance,** *and* **special hazards insurance**.

insurance, loss of use Insurance protecting against financial loss during the time required to repair or replace property damaged or destroyed by an insured peril.

insurance, owner's liability Insurance to protect the owner against claims arising out of the operations performed for the owner by the contractor and arising out of the owner's general supervision.

insurance, personal injury Bodily injury, and also injury or damage to the character or reputation of a person. Personal injury insurance includes coverage for injuries or damage to others caused by specified actions of the insured, such as false arrest, malicious prosecution, willful detention or imprisonment, libel, slander, defamation of character, wrongful eviction, invasion of privacy, or wrongful entry. *See also* **bodily injury**.

insurance, personal liability *See* **personal injury**.

insurance, professional liability Insurance coverage for the insured professional's legal liability for claims for damages sustained by others allegedly as a result of negligent acts, errors, or omissions in the performance of professional services.

insurance, property Coverage for loss or damage to the work at the site caused by the perils of fire, lightning, extended coverage perils, vandalism and malicious mischief, and additional perils (as otherwise provided or requested). *See also* **builder's risk insurance, extended coverage insurance,** *and* **special hazards insurance.**

insurance, property damage Insurance covering liability of the insured for claims for injury to or destruction of tangible property, including loss of use resulting therefrom, but usually not including coverage for injury to, or destruction of, property that is in the care, custody, and control of the insured. *See also* **care, custody, and control.**

insurance, public liability Insurance covering liability of the insured for negligent acts resulting in bodily injury, disease, or death of persons other than employees of the insured, and/or property damage. *See also* **comprehensive general liability insurance** *and* **contractor's liability insurance.**

insurance, special hazards Insurance coverage for damage caused by additional perils or risks to be included in the property insurance (at the request of the contractor, or at the option of the owner). Examples often included are sprinkler leakage, collapse, water damage, and coverage for materials in transit to the site or stored off the site. *See also* **property insurance.**

insurance, Workers' Compensation (workmen's compensation insurance) Insurance covering the liability of an employer to employees for compensation and other benefits required by workers' compensation laws with respect to injury, sickness, disease, or death arising from their employment.

insurance, work in progress *See* **insurance, builder's risk.**

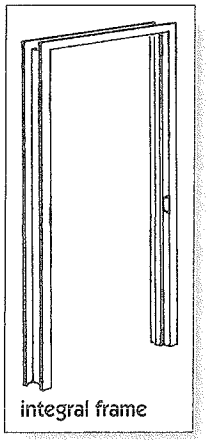
insurance policy A contract that provides insurance against specific loss. *See also* **insurance.**

intake The opening or device through which a gas or fluid enters a system.

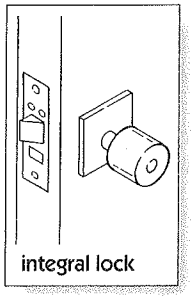
intake belt course In building, a belt course whose molded face is cut so as to function as an intake between the varying thicknesses of two walls.

intarsia Mosaic accomplished with small pieces of wood inlaid in contrasting colors.

integral frame A metal door frame whose trim, backhands, rabbets, and stops are all fabricated from one piece of metal for each jamb and for each head.


integral frame

integral lock A type of mortise lock in which the cylinder is contained in the knob.


integral lock

integral waterproofing The waterproofing of concrete achieved by the addition of a suitable admixture.

integrated building system A building designed to efficiently use climatic resources for heating, cooling, lighting, and electric power generation.

integrated ceiling A suspended ceiling system in which the grid and individual acoustical, illumination, and air-handling elements are combined to form a single, integrated system.

integrated design Also referred to as holistic or whole building design. A design method that integrates, early in the process, the whole building team, including all disciplines. For a sustainable building, resource efficiencies, indoor air quality, and other goals can be achieved most effectively with this approach.

integration An essential concept in sustainable building that views the building as a system and allows the discovery of synergies and potential tradeoffs or pitfalls with design choices. An integrated design approach helps maximize synergies and minimize unintended consequences.

intelligent building (smart building) A building that contains some degree of automation, such as centralized control over HVAC systems, fire safety and security access systems, and telecommunication systems.

Intelligent Buildings Institute A nonprofit professional organization formed in 1986 to promote the *intelligent building* industry through market information, government advocacy, regulatory action, and general education.

intensity A measure of acoustic energy per unit area of a sound wave. Measured in watts per square meter or micro-watts per square centimeter. The intensity is proportional to the square of the amplitude.

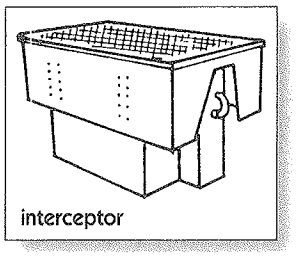
I

intercept In surveying, the length of the staff visible between the two stadia hairs of a transit's telescope.

intercepting drain A ditch, trench, or similar depression surrounding a subdrainage pipe and filled with a pervious filter material.

intercepting sewer A sewer into which empty the dry-weather flows from several branch sewers or outlets, and that may also receive a certain amount of storm water.

interceptor An apparatus that functions to trap, remove, and/or separate harmful, hazardous, or otherwise undesirable material from the normal waste that passes through it, allowing acceptable waste and sewage to discharge by gravity to the disposal terminal.



interceptor

intercom A general term for an internal communication system, such as one employing telephones, or microphones and loudspeakers that function without a central switchboard.

interconnection Any arrangement of pipes whereby water may flow from one system to another as determined by the pressure differential between the two systems.

interest expense A contractor's cost of borrowing funds or use of equity capital.

interface A common boundary shared by two adjacent parts of a system.

interface strength *See* **bond.**

interfenestration The area between windows in a façade consisting primarily of the windows and their ornamentation.

interference **1.** Any obstruction that prevents planned or normal usage or operations. **2.** Cooling tower effluent that enters the intake of an adjacent tower.

interior casing *See* **inside casing.**

interior door A door installed inside a building, as in a partition or wall, having two interior sides.

interior finish The interior exposed surfaces of a building, such as wood, plaster, and brick, or applied materials such as paint and wallpaper.

interior furnishings Components and furnishings necessary for the intended use of a building, including furniture, wall coverings, and flooring.

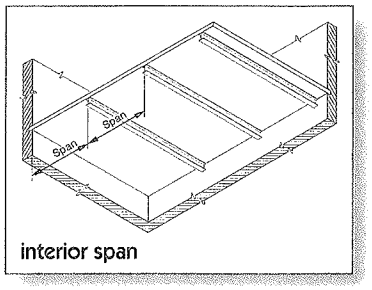
interior glazed Descriptive of glass that has been placed from inside a building.

interior hung scaffold A scaffold that is suspended from a ceiling or roof structure rather than being supported from below.

interior lot A lot bounded by a street either at its front or back, but not on either of its sides.

interior plywood Plywood in which the laminating glue is adversely affected by moisture; hence, it should be restricted to indoor or interior applications.

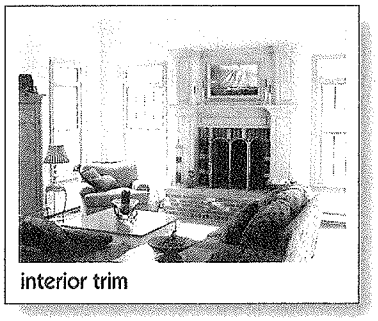
interior span An uninterrupted beam or slab that is continuous with neighboring spans.



interior span

interior stop In glazing, a removable bead or molding strip that serves to hold a light or panel in position when the stop is on the interior of the building, as opposed to an exterior stop.

interior trim **1.** Any trim, but especially that around door and window casings, baseboards, stairs, and on the inside of a building. **2.** Inside finish.



interior trim

interior wall A wall having two interior faces and existing entirely within the exterior walls.

interlaced fencing (interwoven fencing) Fencing that is constructed from very thin, flat boards that are woven together.

interleaves The arrangement of construction material in, or as if in, alternating layers.

interlocked **1.** Firmly joined. **2.** Closely united. **3.** Placed in close relative proximity or in a specific relationship with another or others.

interlocking Software program in which an event or set of events triggers another event or sequence of events. For example, a temperature rise above a set point that activates a fan.

interlocking joint **1.** In ashlar or other stonework, a joint accomplished by joggles in the joining units. **2.** In sheet metal, a joint between two parts whose preformed edges engage to form a continuous locked splice.

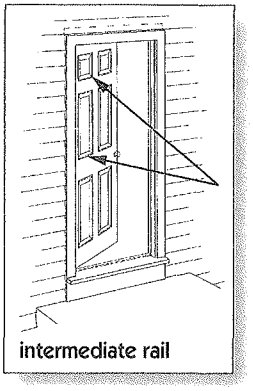
interlocking tile Single-lap tiles designed so that a groove along the edge of one tile accommodates an edge of an adjacent tile in the same course.

interlock wiring Control wiring permitting a secondary sequence to be enabled by a primary action.

intermediate floor beam In floor framing, any other floor beams that are positioned between the end floor beams.

intermediate rafter *See* **common rafter.**

intermediate rail In a door, any rail, one of which might be a lock rail, between the top and bottom rails.


intermediate rail

intermediate sight In leveling, a staff reading that is neither a back sight nor a foresight.

intermediate stiffener On a beam or girder, any stiffener between the end stiffeners.

intermittent escalator An escalator that remains idle when not in use, beginning operation when users approach, and stopping after users disembark.

intermittent-flame-exposure test An ASTM test of roof covering that involves exposing a sample of the roof material to a gas flame for a specified interval.

intermittent weld A weld whose continuity is interrupted by recurrent unwelded spaces.

internal dormer A vertical window in a sloped roof that is set in a depression in the main roof. An internal dormer is the inverse of a standard dormer.

internal glazing Glazing placed in interior partitions or walls (different from inside glazing). *See also* **borrowed light.**

internal partition trap A plumbing trap that relies on an internal partition of some form, rather than the water used in a standard trap, for a seal.

internal pressure The pressure within a building. Dependent on outside conditions, such as wind velocity, and the number and location of openings in the building.

internal quality block A masonry block that is structurally sufficient, but whose inferior surfaces make it suitable only for concealed work.

internal thread *See* **inside thread.**

internal treatment The treatment of water by feeding chemicals into the boiler rather than into the preheated water itself.

internal vibration Rapid agitation of freshly mixed or placed concrete performed by mechanical vibrators inserted at strategic locations. *See also* **concrete vibration.**

intern architect An apprentice architect who works under the direction of registered architects.

International Building Code (IBC) The International Code Council's (ICC) building code that, when adopted by a jurisdiction, covers all buildings other than one- and two-family dwellings and multiple single-family dwellings not more than three stories in height.

International Residential Code (IRC) The International Code Council's (ICC) building code that, when adopted by a jurisdiction, covers all one- and two-family dwellings not more than three stories in height.

interpier sheeting (interpile sheeting) Usually wooden sheeting placed horizontally between underpinning pits or piles, used in applications not requiring continuous underpinning.

interpolate To estimate untested values that fall between tested values.

interrogatories A formal method of obtaining information relevant to a lawsuit from a party by submitting written questions that must be answered under oath within a certain time period.

interrupting rating A designation given to an electrical device based on the highest current at rated voltage the device is designed to interrupt under standard testing conditions.

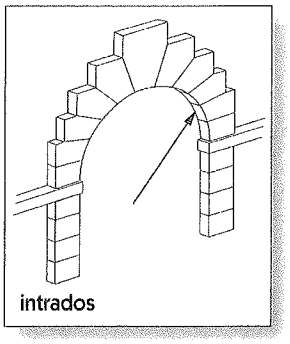
interruption A stopping or hindering of the normal process or flow of an activity.*

interstate commerce The buying, selling, or exchange of goods or property across state lines.

interstitial condensation Condensation that forms within an element of a building, such as within a wall.

intertie An intermediate member used horizontally between studs to strengthen them, especially at door heads or other places between floor heads.

intrados The under surface or interior curve of an arch or vault.


intrados

intrusion alarms Sensors that detect break-ins or forced entries into a facility.

intrusive evaluation techniques Investigative procedures that require opening or removing building components to reveal hidden conditions. Also referred to as destructive evaluation techniques.

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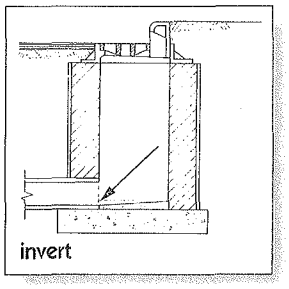
intumescent Descriptive of a material, like a paint or caulk, that forms a passive fire protection system when applied to another material, like steel or pipe. The intumescent material remains inactive until subjected to heat, when it swells and chars and creates a fire barrier.

invasive vegetation Any exotic plant species that is introduced to similar growing conditions in a new location and is therefore without natural deterrents and pests. Overgrowth can lead to choking out native species and disruption of the ecosystem.

inventory control **1.** A management plan designed to minimize the number and quantity of hazardous substances on a construction project. **2.** A managerial process to control the quantity of items in storage.

inverse condemnation A legal proceeding in which a landowner contends that some governmental body has, through its action or inaction, caused his real estate to suffer serious damage and loss of value.

invert The lowest inside surface or floor of a pipe, drain, sewer, culvert, or manhole.



invert block A wedge-shaped, hollow, masonry tile incorporated into the invert of a masonry sewer.

inverted asphalt emulsion A type of emulsified asphalt, anionic or cationic, in which asphalt (usually in liquid form) is the continuous phase, and whose discontinuous phase comprises minute globules of water in relatively small amounts.

inverted ballast A lamp ballast that operates on direct current.

inverted crown The fall or pitch from the sides to the center of a road, driveway, etc.

invert elevation The elevation of an invert (lowest inside point) of pipe or sewer at a given location in reference to a bench mark.

inverter Power conditioning equipment for photovoltaic systems used to convert DC power from photovoltaic arrays, wind turbines, water turbines, fuel cells, or batteries to AC power. A rotary inverter is a DC motor driving an AC generator. More common are static inverters, which use power transistors to achieve the conversion electronically.

invisible hinge A door hinge designed, fabricated, and installed with no visible or exposed parts when the door is in the closed position.

invitation to bid A written notice of an owner's intention to receive competitive bids for a construction project wherein a select group of candidate constructors are invited to submit proposals.

invited bidders (preferred bid list) A group of bidders chosen by the owner to submit bids for a project.

invoice An itemized bill listing the items and charges of merchandise and/or work.

involute **1.** The locus of a fixed point on a string as the string is unwound from a fixed plane curve, such as a circle (the Spiral of Archimedes), generally used to generate cams. **2.** Spirally curved, intricate, complex.

ion An atom with one or more electrons missing.

ion exchange The process of either gaining or losing electrons from compounds in a chemical exchange.

Ionic order An order of architecture characterized by a column that has spiral volutes at its capital.

ionization detector A device that indicates the presence of specific gaseous compounds in air by subjecting the compound to ultraviolet light or hydrogen flame, and recording the number of ions created.

Iowa curb A concrete curb that is relatively flat and mountable. Poured as part of the paved surface of a roadway.

iron A lustrous, malleable, magnetic, magnetizable, metallic element mined from the earth's crust as ore in hematite, magnetite, and lemonite. These minerals are heated together to 3,000°F in a blast furnace to produce pig iron, which emerges from the furnace as 95% iron, 4% carbon, and 1% other elements.

iron, cast An iron alloy usually containing 2-1/2% to 4% carbon and silicon, possessing high compressive but low tensile strength, and that, in its molten state, is poured into sand molds to produce castings.

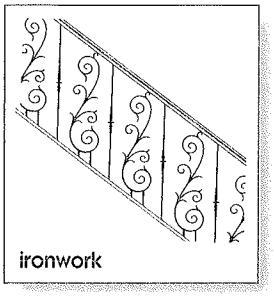
iron, core The steel bar under the wooden handrail connecting the tops of balusters in a stair.

iron, malleable Cast iron that has undergone an annealing process to reduce its brittleness.

iron-cement A type of cement that contains cast-iron boring or filings, sal-ammoniac sulfur, and other additives, and is used for joining or repairing cast-iron parts.

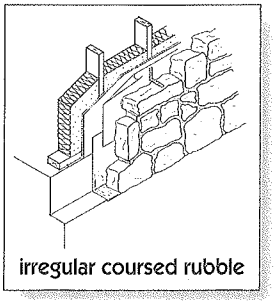
iron oxide A primary ingredient in a whole range of inorganic pigments. *See also* **rust (ferric oxide)**.

ironwork A comprehensive term for iron fashioned to be used decoratively or ornamentally, as opposed to structurally.


ironwork

iron, wrought The purest form of iron metal, which is fibrous, corrosion-resistant, easily forged or welded, and used in a wide variety of applications, including water pipes, rivets, stay bolts, and water tank plates.

irregular coursed rubble Rubble walls constructed in courses of various depths.

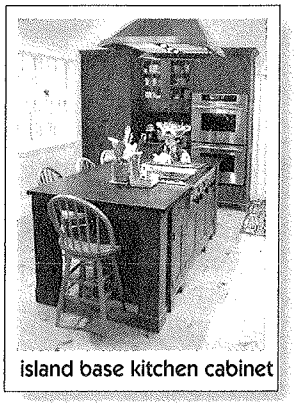

irregular coursed rubble

irregular pitch A type of roof whose slope does not have a constant rise per foot throughout.

irrigation **1.** The process or system, and its related equipment, by which water is transported and supplied to otherwise dry land. **2.** The use of water thus supplied for its intended purpose.

irritant A substance that causes discomfort, such as tearing, choking, vomiting, rashes, reddening of the skin, itching, or other topical responses.

island base kitchen cabinet A freestanding kitchen cabinet having exposed sides and a counter or work surface.


island base kitchen cabinet

isobar A line drawn on a map to indicate the limits of equal contaminant or pressure concentrations.

Isocyanate A glue used in making some building materials, such as bamboo flooring. Once dry, it does not produce toxic pollutants.

isodomum An ancient, very regular masonry pattern with units of uniform length and height placed to form continuous horizontal joints, with vertical joints centered above the blocks forming discontinuous straight lines.

isolated heat gain Solar heating achieved using an attached sunspace, such as a greenhouse.

isolated solar gain Passive solar heating in which heat to be used on one area is collected in another area.

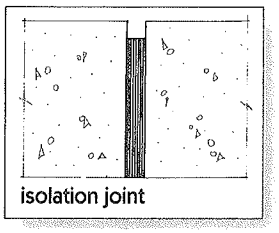
isolated spread footing A footing that transmits a load from columns to the supporting soil. If the soil is weak or the column loads heavy, isolated spread footings must be larger.

isolating membrane An underlay.

isolating switch A switch that isolates a circuit from its power source.

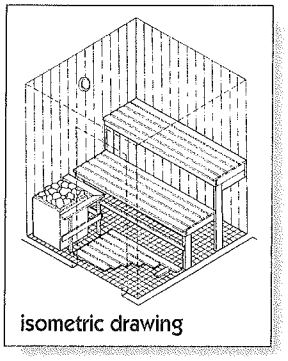
isolation Sound privacy effected by reducing direct sound paths.

isolation joint A joint positioned so as to separate concrete from adjacent surfaces or into individual structural elements that are not in direct physical contact, such as an expansion joint.


isolation joint

isolator The device on a circuit that can be removed to break the circuit in the absence of flowing current.

isometric drawing A type of projection drawing showing three dimensions. The horizontal planes generally appear at 30° from the standard horizontal axis, while the vertical lines are drawn parallel to the actual vertical axis.


isometric drawing

isotherm A line on a graph or map joining points of equal temperature.

isothermal Descriptive of a process or procedure that occurs at a constant temperature.

isotropic Exhibiting the same properties in all directions.

Italian tiling (pan-and-roll roofing tile) A roof covering with two different kinds of single-lap tiles, one being the curved and tapered overtile, and the other being the flanged, tapered, tray-shaped undertile.

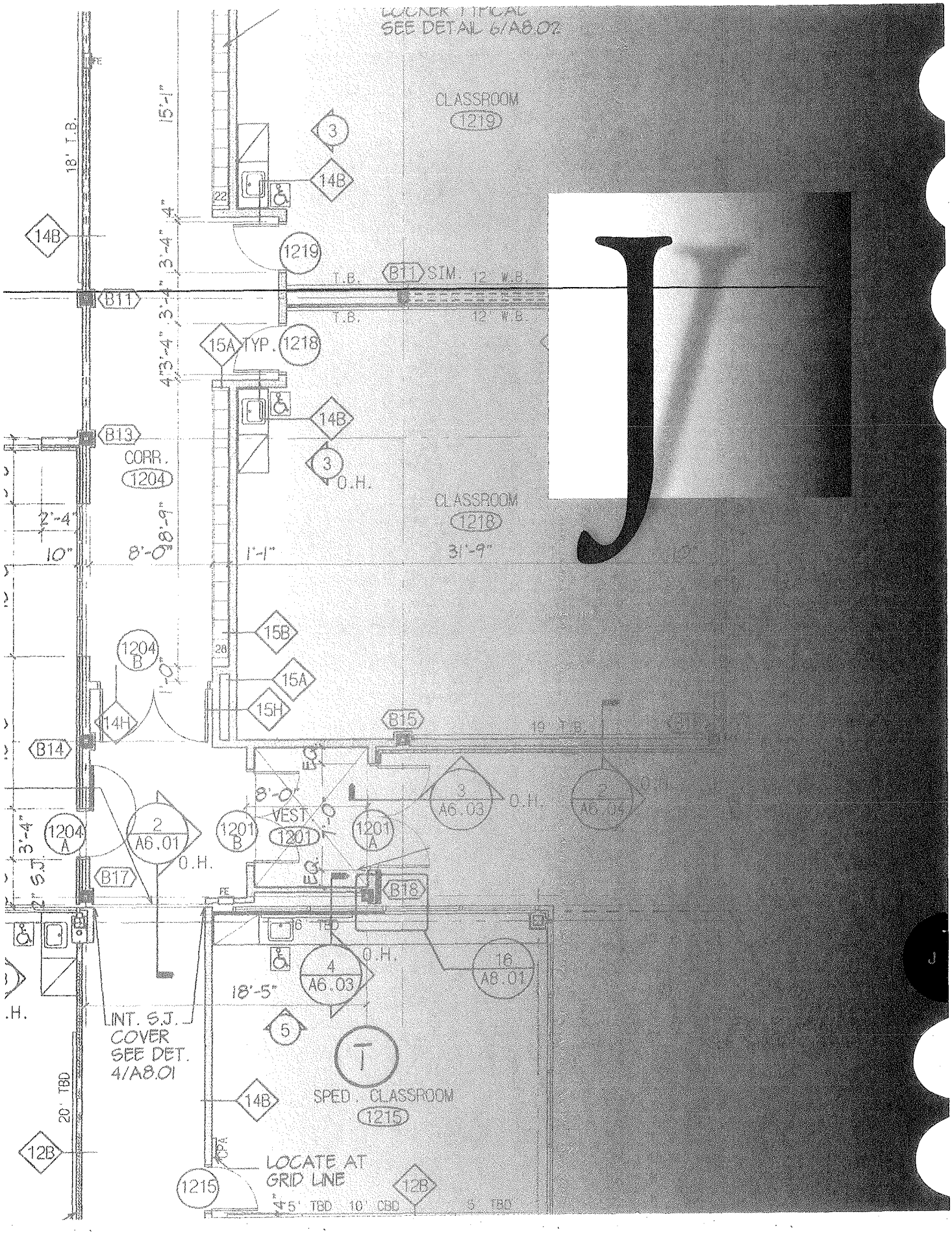
I

item A subdivision of the breakdown, smaller than a category, but larger than an element.

itemize To list or state each item separately, as in an itemized bid.

ivorywood A South American wood used mostly for cabinet and lathe work. White to pale yellow-brown in color, sometimes even with a tinge of green, it is heavy, hard, and strong, yet lacks durability.

Izod impact testing A type of impact test, used to estimate the resistance of a material, in which a falling or swinging pendulum delivers energy in a single impact.


LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
3
14B
22
1219
T.B.
B11 SIM.
12' W.B.
B11
15A TYP.
1218
14B
B13
CORR.
1204
3
O.H.
CLASSROOM
1218
2'-4"
10"
8'-0"
1'-1"
31'-9"
15B
28
1204
B
15A
15H
14H
B15
19' T.B.
B14
EQ.
8'-0"
VEST.
1201
1201
A
1201
B
3
A6.03
O.H.
2
A6.04
1204
A
2
A6.01
O.H.
B17
B18
FE
6' TBD
O.H.
4
A6.03
16
A8.01
18'-5"
INT. S.J.
COVER
SEE DET.
4/A8.01
5
T
SPED. CLASSROOM
1215
14B
20' TBD
12B
LOCATE AT
GRID LINE
1215
12B
5' TBD
10' CBD
5' TBD
18' T.B.
15'-1"
3'-4"
4"
3'-4"
4"
3'-4"
3'-4"
3'-4"
2'-4"
3'-4"
2" S.J.
1'-0"
1'-0"
8'-9"
J

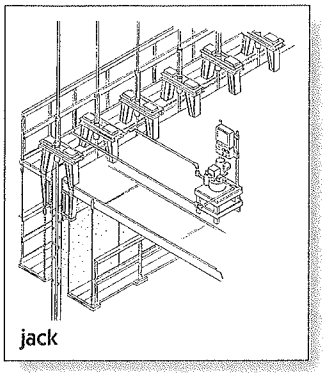
J Abbreviations

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

J&P joists and planks
jct junction
jour journeyman
JP jet propulsion
jt, jnt joint
jtd jointed
jsts joists
junc junction

j A symbol used to describe the event at the head of an activity arrow in a critical path method (CPM) schedule.

jack **1.** A portable mechanism for moving loads short distances by means of force applied with a lever, screw, hydraulic press, or air pressure, as in applying the prestressing force to the tendons, or making small adjustments in the elevations of forms or form support, as in lift slab or slipform operations. **2.** In electricity, a female connecting device or socket to which circuit wires are attached and into which a plug may be inserted (as on a telephone switchboard).


jack

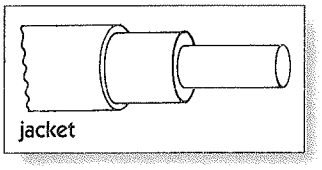
jack arch An arch whose intrados is flat or almost flat, instead of being curved or rounded.

jack beam A beam that is used to support another beam or truss, thereby eliminating the need for a column.

jack boom A boom that supports sheaves between the hoist and the main boom in a dredge or pull shovel.

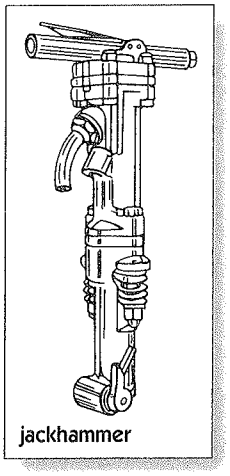
jacked pile A pile that is forced into the ground by jacking against the building above it.

jacket **1.** A covering, either of cloth or metal, applied to exposed heating pipes or ducts, to exposed or unexposed casing pipes, or over the insulation of such pipes. **2.** A watertight outer housing around a pipe or vessel, the space between being occupied by a fluid for heating, cooling, or maintaining a specific temperature. **3.** In wire and cable, the outer sheath or casing that protects the individual wires within from the elements and provides additional insulation properties.


jacket

jacketing The surrounding of a pipe or vessel by a confined bath or stream of fluid for temperature control or heat absorption. *See also* **jacket 2.**

jackhammer A hand-held, pneumatically powered device that hammers and rotates a bit or chisel. A jackhammer is used for drilling rock or breaking up concrete, asphalt paving, etc.


jackhammer

jacking In plumbing, a method of providing drainage by forcing a pipe into a precut opening using horizontal jacks. Also refers to pipe installation by hand excavation at the heading of shoved pipe and removing the same through the pipe.

jacking device A mechanism used to stress the tendons for prestressed concrete, or to raise a vertical slipform. *See also* **jack**.

jacking dice Blocks, usually of concrete-filled steel cylinders or pipes, used as temporary fillers during the jacking operations, as in foundation work.

jacking force The temporary force applied to tendons by a jacking device to produce the tension in prestressing tendons.

jacking plate A steel bearing plate used during jacking operations to transmit the load of the jack to the pile.

jacking stress The maximum stress that occurs during the stressing of a precast concrete tendon.

jackknife **1.** A tractor and trailer arriving at such an angle with each other that the tractor cannot move forward. **2.** The unintentional raising of a boom on a derrick, as caused by the load.

jack lagging The timber-bearing members employed in building the forms for arches or for other unusual shapes.

jackleg An outrigger post.

jack plane A medium-sized carpenter's plane used to do the coarse work on a piece of timber, such as truing up the edges in preparation for finish planing.

jack post An adjustable metal structural support most often used to replace inadequate supporting members.

jack rafter A shortened rafter generally found in hip roofs. A hip jack rafter spans from the plate to the hip rafter. A hip-valley cripple jack spans between a hip rafter and a valley rafter. A valley jack spans from a valley rafter to the ridgeboard.

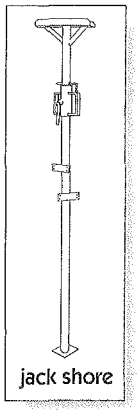
jack rib Any curved jack rafter used in a framed arch or small dome roof.

J

jack screw A screw-operated mechanical device equipped with a load-bearing plate and used for lifting or leveling heavy loads.

jack shaft A short drive shaft, as between a clutch and a transmission.

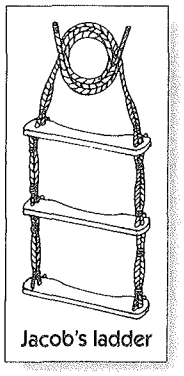
jack shore An adjustable, usually telescopic, single-post metal shore.


jack shore

jack timber In framework, a timber that is shorter than the rest, because it has been intercepted by another member.

jack truss **1.** A roof truss that is smaller than the main trusses, such as a truss in the end slopes of a hip roof. **2.** A truss that provides for the elimination of a column support by supporting a beam or another truss.

Jacob's ladder A marine ladder of rope or chain with wooden or metal rungs.


Jacob's ladder

jagger A toothed, stone-dressing chisel.

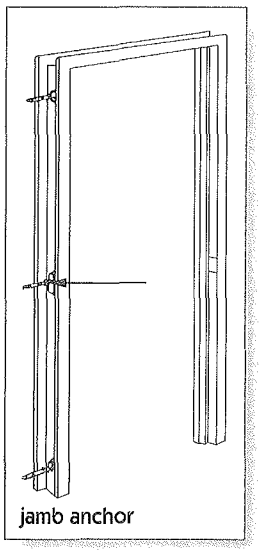
jal-awning window Windows with multiple awning units that swing outwards by pivoting in unison near the top of the glass.

jalousie A window shutter or blind having stationary or adjustable slats angled so as to permit ventilation and provide shade and some privacy, while simultaneously preventing the entrance of rain.

jalousie window *See* **louvered window.**

jamb An exposed upright member on each side of a window frame, door frame, or door lining. In a window, these jambs outside the frame are called *reveals*.

jamb anchor A metal anchoring device that secures the frame to the wall when inserted in the rear of the jamb of a door frame or window frame.


jamb anchor

jamb block A concrete masonry unit that is slotted at one end and used as an opening to receive a window or door frame.

jamb depth The face-to-face depth of a door frame.

jamb horn In a window frame, that portion of the jamb that extends beyond the sill or head jamb.

jamb lining A wood facing at the inside edge of a window jamb for the purpose of increasing its width.

jamb post The vertical timber that serves as a jamb at the side of an opening.

jamb shaft A small shaft having a capital and a base, positioned against or incorporated into the jamb of a door or window (sometimes called *esconsons* when employed in the inside axis of a window jamb). Often seen in medieval architecture.

jambstone A stone that forms the jamb of a door.

jamb stud A wood or metal stud adjacent to the door jamb.

jammer *See* **gemel.**

japan **1.** A dark-colored, short-oil varnish used to provide a hard, glossy surface. **2.** A type of resin varnish often used in paints as a drying agent.

japanned Painted with black japan and then baked.

jaspe A French term for wall covering that simulates jasper stone cut across the grain.

jaw One of a pair of opposing members of a device used for holding, crushing, or squeezing an object, as the jaws of a vise or a pair of pliers.

jaw crusher A rock-crushing device comprising one fixed inclined jaw and one movable inclined jaw. It is used to reduce rock to specific sizes.

J channel A plastic or metal channel, shaped like a "J," that is used to support building trim material.

jedding ax A stone mason's hand tool with two faces, one flat and the other pointed.

jemmy (jimmy) A short (less than 18") pinch bar or crowbar, both ends of which are curved.

jenny **1.** A machine that cleans surfaces by emitting a steady or pulsating jet of steam. **2.** A British term for a gin block.

jerkinhead *See* **hipped gable.**

jerrybuilt Constructed in a shoddy or flimsy manner.

jesting beam Any beam employed strictly for decorative or ornamental, as opposed to structural, purposes.

jet **1.** A high-velocity, pressurized stream of fluid or mixture of fluid and air, as emitted from a nozzle or other small orifice. **2.** The nozzle or orifice that shapes the stream. **3.** An orifice or other feature of a toilet that starts the siphon action by directing water into the trapway.

jetted pile A pile whose sinking has been accomplished by jetting.

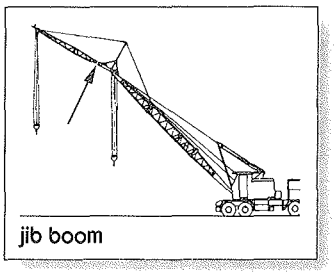
jetting The process by which piles or well points are sunk with the aid of high pressure water or air. Usually employed in locations where nearby buildings might be adversely affected during pile-driving operations.

jetty **1.** Any portion of a building that protrudes beyond the part immediately below it, such as a bay window or the second story of a garrison house. **2.** A dike-like structure, usually of rock, that extends from a shore into water, to provide some kind of protection, or induce scouring or bank-building. **3.** A deck on pilings constructed for landing at the edge of a body of water.

jewel An ornamental glass protrusion in a leaded window.

jib **1.** The hoisting arm of a crane or derrick, whose outer end is equipped with a pulley, over which the hoisting cable passes. **2.** The arm that holds a drifter on a rock drill.

jib boom The hinged extension attached to the upper end of a cranes boom. Its purpose is to extend the reach of the crane or the height of the boom.

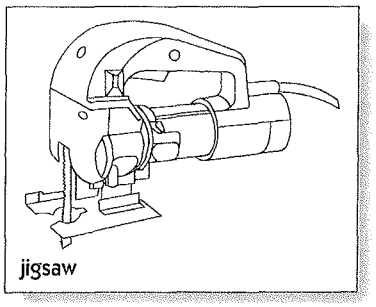

jib boom

jib crane **1.** A crane having a swinging jib, as opposed to an overhead traveling crane, which does not. **2.** A cantilevered boom or horizontal beam with hoist and trolley capable of picking up loads in all or part of a radius around the column to which it is attached.

jib door A door constructed and installed so as to be flush with its surrounding wall and whose unobtrusiveness is furthered by the lack of hardware on its interior face.

jig A device that facilitates the fabrication or final assembly of parts by holding or guiding them in such a way as to ensure their proper mechanical and relative alignment. A jig is especially useful in ensuring that duplicate pieces are identical.

jigsaw An electrically-powered, table-mounted saw with a small, narrow, vertically reciprocating blade that is capable of cutting a tighter radius than a band saw.


jigsaw

jimmer A hinge comprising two leaves that are permanently joined with a fixed pin. *See also* **gemel.**

jimmy *See* **jemmy.**

jitterbug A grate tamper used to cause sand and cement grout to rise to the surface of wet concrete during placement of slabs. May be motorized or hand operated.

job (job site) **1.** Term commonly used to indicate the location of a construction project. **2.** An entire construction project or any component of a construction project.

jobber **1.** A person reasonably knowledgeable and somewhat skilled in most of the more common construction operations, such as carpentry, masonry, or plumbing. **2.** In construction, a jack-of-all-trades.

job condition Those portions of the contract documents that define the rights and responsibilities of the contracting parties and of others involved in the work. The conditions of the contract include general conditions, supplementary conditions, and other conditions.

job-lot Refers to discontinued products and materials that are often sold at reduced prices.

job-made Made or constructed on the construction site, as a job-made ladder.

job order (JO) A formal, written, project-specific authorization to accomplish work. Job orders are issued to the JOC contractor by the owner during the term of the JOC contract.

job order authorization Written authorization by the owner to accomplish the described work.

job order contracting (JOC) An indefinite delivery/indefinite quantity project delivery method used for construction, remodeling, repair, and landscaping projects. It can also be used for maintenance services. Pricing structures are based on competitively bid coefficients applied to pre-established unit prices. JOC contracts usually have options for annual renewal.

J

job order proposal The design, along with a detailed scope of work including a project's performance times and price proposal, submitted in accordance with contract requirements. The scope of work and performance times are mutually agreed on before the job order contractor submits a lump-sum, fixed-price, detailed price proposal.

job overhead The expense of such items as trailer, toilets, telephone, superintendent, transportation, temporary heat, testing, power, water, cleanup, and similar items possibly including bond and insurance associated with the particular project.*

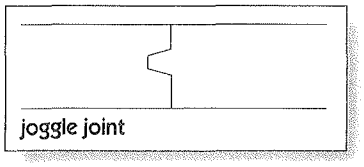
job site The area within the defined boundaries of a project.

jog An offset, such as an intentional change in direction or other unintentional irregularity in a line or surface.

joggle **1.** A notch or protrusion in one piece or member that is fitted to a protrusion or notch in another piece to prevent slipping between the members. **2.** A protrusion or shoulder that receives the thrust of a brace. **3.** A horn or stub tenon at the end of a mortised piece to strengthen it and prevent its lateral movement. **4.** The enlarged portion of a post by which a strut is supported. *See also* **key**.

joggle beam A built-up beam in which joggles are used to secure the components in their respective positions.

joggle joint In masonry or stonework, a joint that employs joggles in the adjacent members so as to prevent their lateral movement. *See also* **joggle**.



joggle joint

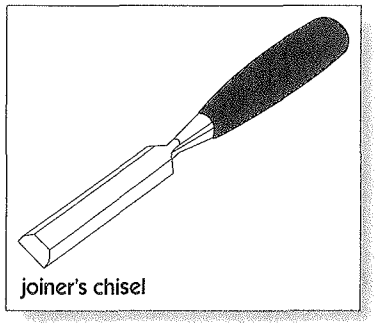
joggle post **1.** A post constructed of two or more joggled timbers. **2.** A king post whose lower end has been joggled to support the feet of struts. *See also* **joggle**.

joggle truss A roof truss comprising a single, centrally positioned post whose upper end is joggled to connect with the overhead chord, and whose lower end is supported by two braces that angle upward to join the ends of the chord.

joggle work Masonry or stonework in which the units of vertically adjacent courses are joggled on at least one side, resulting in a joggled horizontal joint.

joiner **1.** A primarily British term for a craftsman who constructs joints in woodwork. **2.** A carpenter who deals primarily with joining fitted parts, such as of a door.

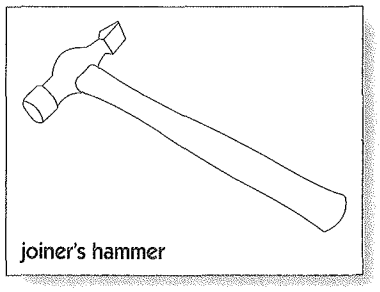
joiner's chisel (paring chisel) A long-handled woodworking chisel whose cutting is accomplished without the aid of a striking tool, but by hand force only.



joiner's chisel

joiner's gauge *See* **marking gauge**.

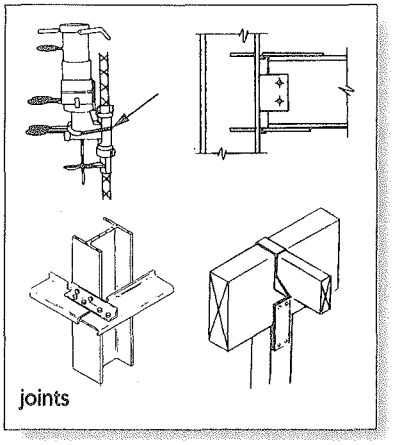
joiner's hammer A hammer whose head has a flat end for striking and a clawed end for pulling nails.



joiner's hammer

joinery **1.** Woodworking that deals more with joining and finishing, such as that required by doors, cabinets, or trim. **2.** A European designation for quality grades of lumber suitable for cabinetry, millwork, or interior trim.

joint **1.** The point, area, position, or condition at which two or more things are jointed. **2.** The space, however small, where two surfaces meet. **3.** The mortar-filled space between adjacent masonry units. **4.** The place where separate but adjacent timbers are connected, as by nails or screws, or by mortises and tenons, glue, etc.



joints

joint and several liability When two or more parties guarantee repayment of debt, all or any one of the parties are obligated to repay the debt.

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joint banding The visible striping of each panel joint—usually a result of over-sanding or uneven absorption of the primer due to differences in surface texture. More noticeable under critical lighting.

joint bolt (handrail bolt) A threaded metal rod or bolt having a nut at each end, used to bring two ends of a handrail together, as well as in joinery to bolt two mating surfaces together, as in a butt joint.

joint box A cast-iron box constructed around a joint between the ends of two electric cables. The cables' protective lead (or other) sheathing is secured by bolted clamps on the exterior of the box, which may be filled with insulation.

joint compound (joint cement) A premixed finishing material for embedding joint tape and filling and finishing gypsum panel joints, corner bead, trim, and fasteners. Sanded to a smooth finish.

joint efficiency The ratio of the strength of a welded joint to the strength of the base metal, expressed as a percentage.

jointer (jointer plane) **1.** A power-driven woodworking tool or long, hand-operated, bench plane used to square the edges of lumber or panels. **2.** An offset metal tool used to smooth or indent mortar joints in masonry. **3.** A metal tool about 6" long and 2" to 4" wide, having interchangeable depth-regulating bits and used for cutting joints in fresh concrete. **4.** In masonry, a bent strip of iron used in a wall to strengthen a joint.

jointer plane *See* **jointer.**

joint fastener A small strip of corrugated steel, having one sharpened edge and used to fasten (usually corner) pieces in rough carpentry. A joint fastener is positioned vertically, sharp edge down, over the joining edges of the two pieces, and then hammered down into them.

joint filler **1.** A powder that is mixed with water and used to treat joints, as in plasterboard construction. **2.** Any putty-like material similarly used. **3.** A compressible strip of resilient material used between precast concrete units to provide for expansion and/or contraction.

jointing **1.** Finishing the surface of mortar joints, as between units or courses, by tooling before the mortar has hardened. **2.** The finishing, as by machining, of a squared, flat surface on one face or edge of a piece of wood. **3.** The initial operation in sharpening a cutting tool, consisting of filing or grinding the teeth or knives to the desired cutting circle.

jointing compound In plumbing, any material, such as paste, paint, or iron cement, used to ensure a tight seal at the joints of iron or steel pipes.

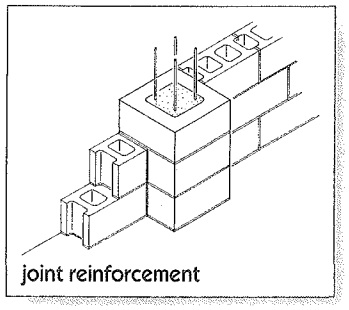
jointing material A sheet of rubber, asbestos, or synthetic compressible material from which gaskets or washers may be cut for use in joints of flanged pipes, pumps, etc.

jointing rule In masonry, a long straightedge used for drawing lines and pointing.

joint knife A hand tool with a wide flexible blade used to apply and smooth joint compound to drywall.

jointless flooring Any type of flooring that may be installed without joints. Terrazzo is one example.

joint reinforcement Any steel reinforcement used in or on mortar joints, such as reinforcing bars or steel wire.


joint reinforcement

joint rule A metal rule having one end formed at a 45° angle. It is used in plastering to form and shape miters at the joints of cornice moldings.

joint runner In plumbing, an incombustible packing material, such as pouring rope, used around the outside of a pipe joint to contain the molten lead that is poured in the bell of a joint.

joint sealant An impervious substance used to fill joints or cracks in concrete or mortar, or to exclude water and solid matter from any joints.

joint tape Paper, paper-faced cotton tape, or plastic mesh fabric, used with mastic or plaster to cover the joints between adjacent sheets of wallboard. *See also* **fusible tape.**

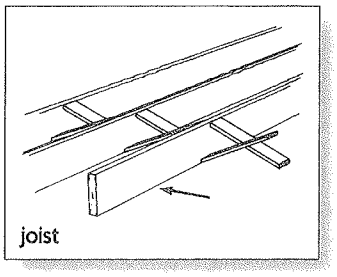
joint tenancy A form of ownership in which two or more people own equal shares of the same real property. Each co-owner, called a *joint tenant*, has the right to occupy and use all of the property and, therefore, must share with the other owners.

joint trench A trench jointly dug by electric and telephone utility companies to house their service lines.

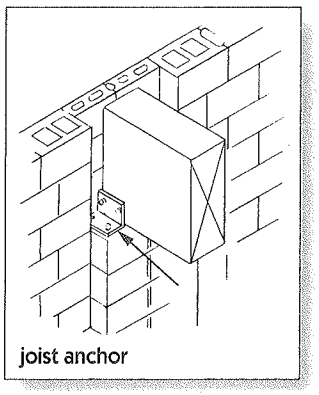
joint venture (contractual joint venture) The joining together of two or more parties to form an entity with the legal characteristics of a partnership, to achieve a specific objective.

J

joist **1.** A piece of lumber two or four inches thick and six or more inches wide, used horizontally as a support for a ceiling or floor. Also, such a support made from steel, aluminum, or other material. *See also* **random lengths.** **2.** Parallel beams of lumber, concrete, or steel used to support floor and ceiling systems.


joist

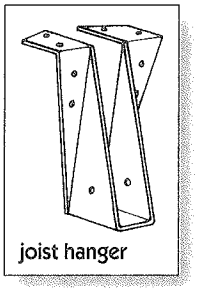
joist anchor A beam, wall anchor, or metal tie used to anchor beams or joists to a wall. An example is a metal strip with one end embedded in a concrete or masonry wall and the other end secured to a joist or rafter, so as to provide a lateral tie between the wall and a floor or roof. This type of anchor acts in shear and in tension. *See also* **beam anchor.**


joist anchor

joist bridging Lateral braces inserted between joists to evenly distribute loads.

joist chair A wire device used to support reinforcing steel in the formwork of a concrete beam, ensuring that the steel bars touch neither the bottom nor sides of the forms.

joist hanger A metal angle or strap used to support and fix the ends of wood joists or rafters to beams or girders. This type of anchor acts in shear and in tension.


joist hanger

joule The metric unit used to measure heat, work, and energy. One joule is the amount of work done or energy expended by a force of 1 newton acting through a distance of 1 meter.

journal That section of a shaft or axle that rotates within a load-supporting bearing.

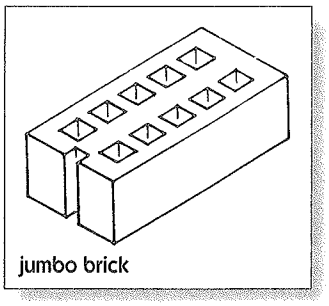
journeyman The second or intermediate level of development of proficiency in a particular trade or skill. As related to building construction, a journeyman's license, earned by a combination of education, supervised experience, and examination, is required in many areas for those employed as intermediate level mechanics in certain trades (e.g., plumbing, mechanical, and electrical work).

judas A small hole or opening in a door, as in a prison door, used for inspection or surveillance.

judgment A judicial decision rendered as a result of a course of action in a court of law.

jumbo **1.** A mobile support for concrete forms. **2.** An assortment of tunnel-drilling devices mounted on a carriage.

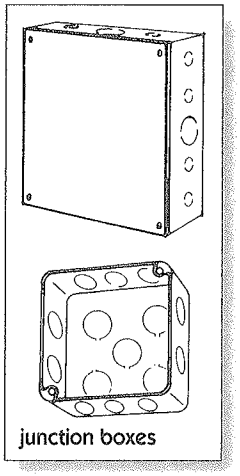
jumbo brick **1.** A brick manufactured larger than standard size, measuring 8" x 4" x 4", including mortar joints. **2.** A brick accidentally larger than standard size.


jumbo brick

jumper **1.** The short length of wire or cable used to make a usually temporary electrical connection within, between, or around circuits and/or their related equipment. **2.** A steel bar used manually as a drilling or boring tool. **3.** A stretcher covering two or more vertical joints in square rubble. **4.** The inverted mushroom-shaped component of a domestic water tap, on which the washer fits.

jumper wire A short length of conductor used to link two cross-connect termination points of a circuit, or to bypass a circuit.

junction box A metal box in which splices in conductors or joints in runs of raceways or cable are protectively enclosed, and which is equipped with an easy access cover.


junction boxes

junction chamber That section in a sewer system where the flow from one or more sewers joins or converges into a main sewer.

junction manhole A manhole located over the convergence of two or more sewers.

junior beam Lightweight, structural steel sections rolled to full I-beam shape.

junior channel An obsolete term for a lightweight structural channel.

jurisdiction The authority of a judicial or administrative forum to hear and resolve disputes.

jurisdictional dispute An argument between or among labor unions over which entity should perform certain work.

just-in-time A "pull" logistical system driven by actual demand. The goal is to produce, provide or deliver parts or supplies just in time for the next operation. The approach reduces stock inventories or storage costs, but leaves no room for error. *

jut Any protruding part of a building or structure, such as a jut window. *See also* **jetty 1.**

jute A plant fiber, from which a strong, durable yarn is made and used mostly for carpet backing, burlap, and rope.

jut window Any window that projects from an exterior wall, such as a bow window.

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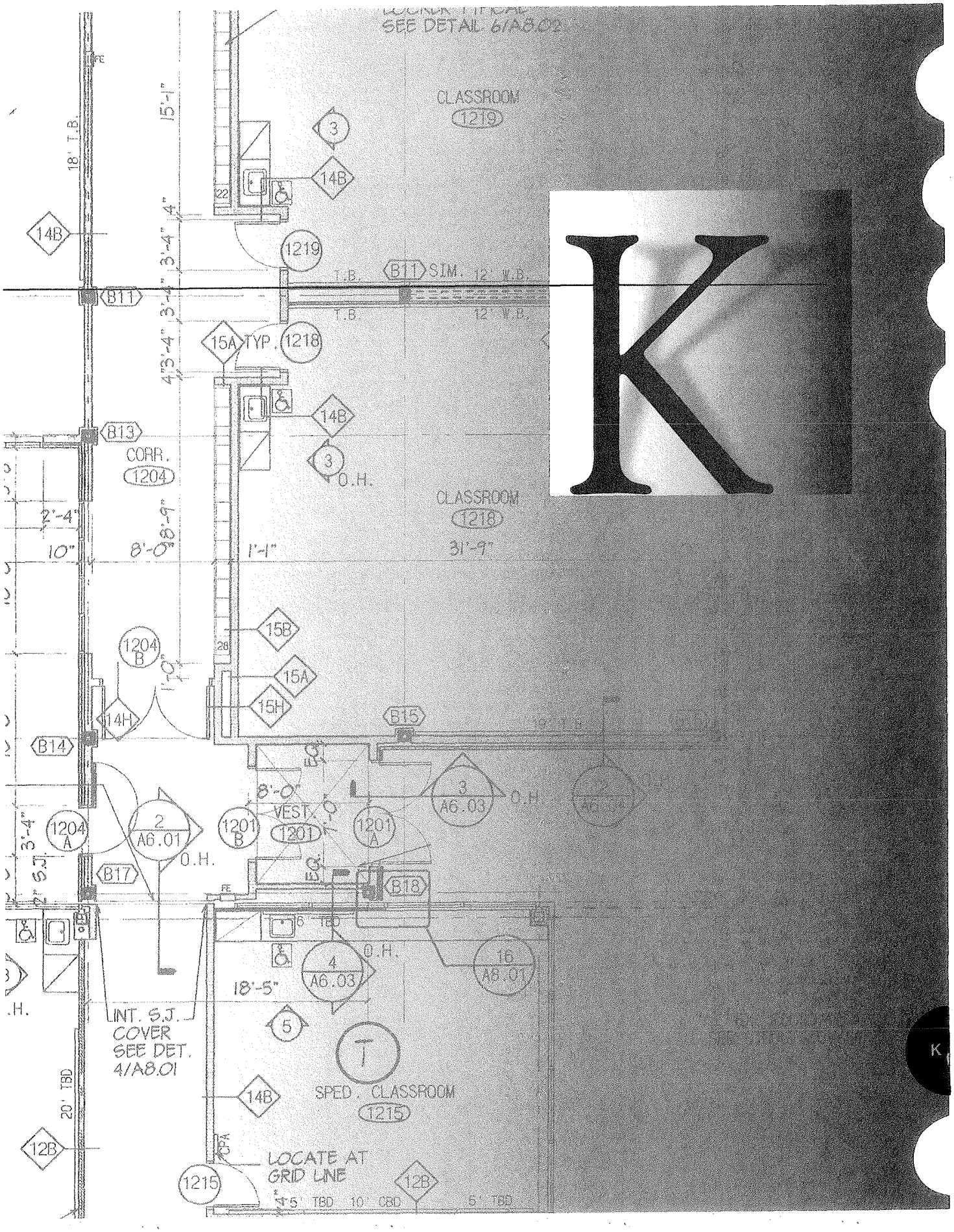
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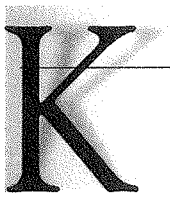
INT. S.J.
COVER
SEE DET.
4/A8.01
K

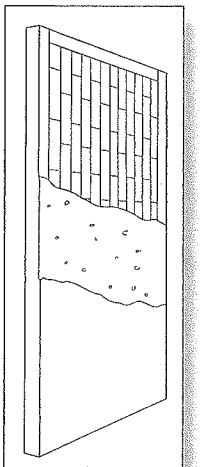


Abbreviations

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

k kilo, knot, thousand, Kelvin
K Kalium
Ka cathode
kc kilocycle
kcal kilocalorie
kc/s kilocycles per second
KD kiln-dried
KDN knocked down
kg keg, kilogram
kHz kilohertz
Kip 1,000 pounds
KIT kitchen
kl kiloliter
KLF kips per lineal foot
km kilometer
kmps kilometers per second
kn knot
Kr krypton
kv kilovolt
kVA kilovolt ampere
kvar kilovar
kw kilowatt
kwhr/kwh kilowatt-hour

kalamein door A fire door whose solid wood core is usually covered with galvanized sheet metal.

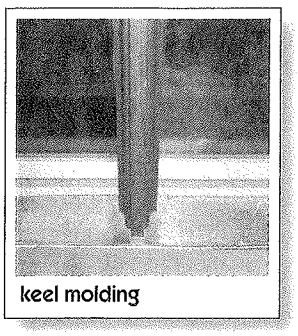

kalamein door

kalsomine *See* **calcimine.**

kaolin A usually white mineral found in rock formations, composed primarily of low-iron hydrous aluminum silicate, and used as a basic ingredient in the manufacture of white cement and as a filler or coating for paper and textiles.

Kata thermometer An alcohol thermometer used to measure the cooling effect of air speed or atmospheric conditions.

keel molding A molding having two ogee curves that meet at a point or fillet, forming a shape that resembles that of a ship's keel.


keel molding

Keene's cement **1.** A white cementitious material manufactured from gypsum that has been burned at a high temperature and ground to a fine powder. Alum is added to accelerate the set. The resulting plaster is hard, strong, and accepts and maintains a high polish; hence it is used as finishing plaster. **2.** Anhydrous calcined gypsum.

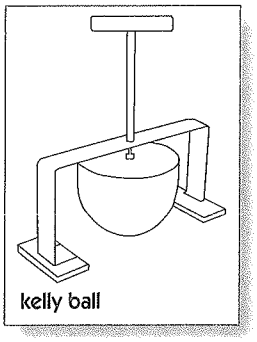
keeper *See* **strike plate.**

keeping the gauge In masonry, maintaining the proper spacing of courses of brick.

keeping the perpends In masonry, the accurate laying of the units so that the perpends (end joints) in alternating courses line up vertically.

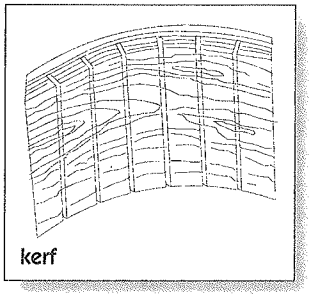
kellastone A rough stucco finish.

kelly ball A round-bottomed metal plunger that is dropped into fresh concrete, the degree of penetration indicating the consistency of the concrete.


kelly ball

Kelvin scale A temperature scale on which absolute zero is measured (0°K, equivalent to 273°C). It uses Celsius degrees.

kerf **1.** A saw-cut in wood, stone, etc., that is usually performed crosswise and usually not completely through the member. Cuts are usually made to allow for bending. **2.** A groove cut into the edges of acoustical tiles to accommodate the splines or supporting elements in a suspended acoustical ceiling system.


kerf

kerfed beam A beam in which several kerfs have been cut so as to permit bending.

kerfing The process of cutting grooves or notches (called *kerfs*) across a board to make it easier to bend. Kerfs are cut to about two-thirds the thickness of the board.

kettle **1.** The storage container for asphalt to be used for "hot mopped" roof construction. **2.** Any open vessel used to contain paint or in which glue is melted.

kevel An axe whose head has a flat face at one end and a pointed peen at the other. A kevel is used by stonemasons for removing angular projections or diminishing surfaces.

K

key **1.** The removable actuating device of a lock. **2.** A wedge of wood or metal inserted in a joint to limit movement. **3.** A *keystone*. **4.** A wedge or pin through the protruding part of a projecting tenon to secure its hold. **5.** A back piece on a board to prevent warping. **6.** The tapered last board in a sequence of floorboards that, when driven into place, serves to hold the others in place. **7.** The roughened underside of veneer or other similar material intended to aid in bonding. **8.** In plastering, that portion of cementitious material that is forced into the openings of the backing lath. **9.** A *joggle*. **10.** A *keyway*. **11.** A *cotter*. **12.** A small, usually squared piece that simultaneously fits into the keyways or grooves of a rotating shaft and the pulley.

key brick A brick whose proper fit in an arch is attained by tapering it toward one end.

key course A course of adjacent keystones as might be used in an archway too deep for a single keystone, or in the crown of a barrel vault.

key drop A pivoting cover of a keyhole, usually attached to the escutcheon above the hole and covering it when at rest.

keyed Fastened or fixed in position in a notch or other recess, as forms become keyed into the concrete they support.

keyed beam **1.** A lap-jointed beam with joggles or slots cut into both components. Keys are driven into the joggles or slots to increase the bending strength of the joint. **2.** A compound beam whose adjacent layers possess mating grooves to help resist horizontal shearing stress at the interfaces.

keyed brick A brick, one of whose faces has been supplied with a usually dovetail-shaped recess, that serves as a mechanical key for plastering or rendering.

keyed joint **1.** A joint between two timbers that employs a key to ensure its security. **2.** The concave pointing of a mortar joint.

keyhole saw (hole saw) A thin, narrow-bladed saw used to cut holes in panels or other surfaces.

keying **1.** A process used to add strength to mitered joints. **2.** Fastening or fixing in position in a notch or other recess.

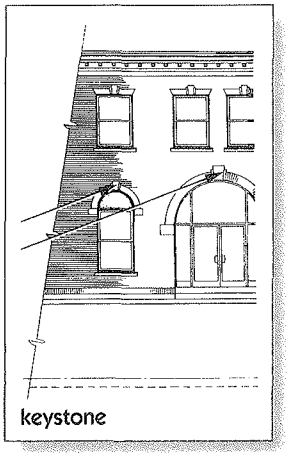
keying in The tying in or bonding of a brick or block wall to an existing one.

keyless A light fixture, often in closets, basements, and attics, that is turned on and off with a pull string.

key plan A small plan which depicts the units in a layout.

key plate An escutcheon.

keystone The usually wedge-shaped uppermost, hence last, set stone or similar member of an arch, whose placement not only completes the arch but also binds or locks its other members together.

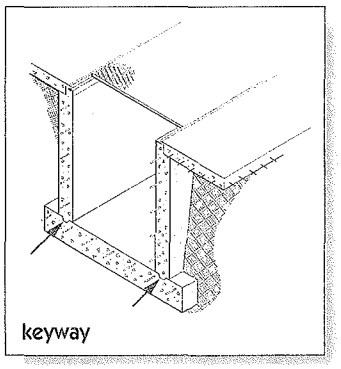


keystone

key switch An on-off switch in an electric circuit, that is actuated by a removable key rather than a toggle or button.

key valve A valve operated by a key rather than a handle or lever.

keyway **1.** A recess or groove in one lift or placement of concrete that is filled with concrete of the next lift, giving shear strength to the joint. Also called a *key*. **2.** In a cylindrical lock, the aperture that receives and closely engages the key for its entire length, unlike a keyhole of a common lock. **3.** A key-accepting groove in a shaft, pulley, sprocket, wheel, etc.



keyway

keyway attachment A metal accessory, in the shape of a keystone, used for concrete forming for floors and slabs.

keyway forms Metal forms for pouring connected concrete slabs. Holes allow a keyway to be bolted on, then removed.

keyword In building automation systems, an abbreviation used by system operators to communicate instructions in recognizable commands via a computer.

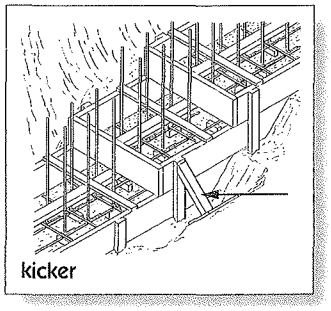
K factor The measure of a transformer's ability to withstand the heating effects of nonsinusoidal harmonic currents.

kibble A bucket-like device in which material, water, tools and/or men are raised from a shaft.

kick **1.** In brick, a shallow depression, fray, or panel. **2.** The raised fillet of a brick mold that forms the frog. **3.** The pitch variation between patent glazing and the surrounding roof.

kickback **1.** When a rotating sawblade is pinched by the material it is cutting, momentarily stopping the blade and causing it to pull away from the material. **2.** The illegal return of part of the purchase price by the seller to induce purchase or to improperly influence future purchase of goods or services.

kicker **1.** A wood block or board attached to a formwork member in a building frame or formwork to make the structure more stable. In formwork, a kicker acts as a haunch to take the thrust of another member. Sometimes called a *cleat*. **2.** A catalyst. **3.** An activator, as the hardener for a polyester resin. **4.** A luminaire used to accent or highlight a subject. **5.** An additional payment of rent or interest required as part of a contract.


kicker

kicker plate A timber used to anchor a stair to concrete.

kick hole A hole in the perimeter roof membrane at the bottom of a parapet wall, often the result of someone stepping on or kicking it.

kicking piece A short timber attached to a wale for absorbing the thrust of a raking shore.

kick lift A jacking wedge that raises or adjusts a piece of gypsum board into position for nailing.

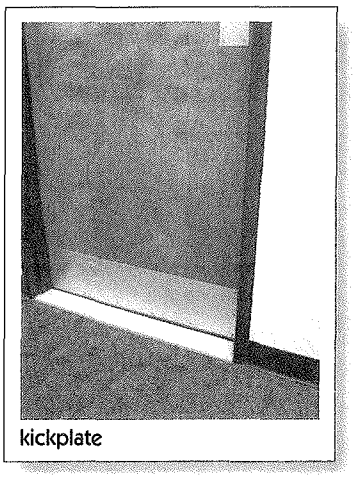
kick-off meeting A meeting that takes place at the beginning of a project. Its purpose is to introduce the project team members, review the overall project, and to discuss items such as construction site logistics, the phasing plan, and the schedule.

kickout **1.** In excavation work, the accidental release or failure of a shore or brace. **2.** In a downspout, the section (usually lowest) that directs the flow away from a wall.

kick-out clause A clause in a real estate purchase agreement that gives the seller the option to terminate an existing contract to accept a backup offer. A seller may demand such a clause if the present buyers must wait to sell their current home before completing purchase of the seller's home.

kickpipe A short length of pipe that provides protection for an electric cable where it protrudes from a floor or deck.

kickplate **1.** A metal strip or plate attached to the bottom rail of a door for protection against marring, as by shoes. **2.** A plate, of any metal, used to create a ridge or lip at the open edge of a stair platform or floor, or at the back edge or open ends of a stair tread.


kickplate

kick rail A usually short rail affixed near the bottom of a door to facilitate its opening by kicking. It is used primarily in institutions.

kick strip *See* **kicker.**

kill **1.** To terminate electrical current from a circuit. **2.** To shut off an engine. **3.** To prevent resin from bleeding through paint on wood by the preliminary application to knots of a shellac or other resin-resistant coating.

killesse A grooved or channeled piece of wood, such as one in which a frame slides.

kiln A furnace, oven, or heated enclosure for drying (wood), charring, hardening, baking, calcining, sintering, or burning various materials.

kiln-dried **1.** Control-dried or seasoned artificially in a kiln. **2.** Lumber that has been seasoned in a kiln to a predetermined moisture content.

kiln run Descriptive of bricks or tiles from one kiln that have not been sorted or graded for size or color variation.

kiloampere A unit of electric current equal to 1,000 amperes.

kilocalorie The amount of heat needed to raise the temperature of one kilogram of water one degree Celsius.

kilovolt A unit of electric potential difference equal to 1,000 volts.

kilovolt-ampere A unit of apparent power equal to 1,000 volts or amperes.

kilowatt A measurement or unit of power equal to 1,000 watts or approximately 1.34 horsepower.

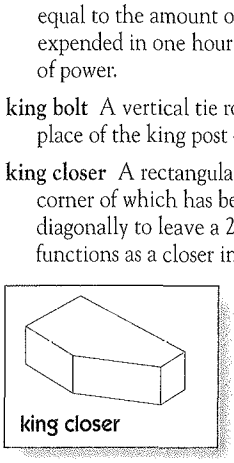
kilowatt consumption The amount of electrical power used over a specified time.

kilowatt demand The maximum electrical power usage required to operate a facility over a specified time.

kilowatt-hour A unit of measurement equal to the amount of energy expended in one hour by one kilowatt of power.

king bolt A vertical tie rod that takes the place of the king post of a truss.

king closer A rectangular brick, one corner of which has been removed diagonally to leave a 2" end, and that functions as a closer in brickwork.


king closer

K

king pile In strutted sheet pile excavation, a long guide pile driven at the strut spacing in the center of the trench before it is excavated.

kingpin A vertically mounted swivel, pivot, or hinge pin usually supported both above and below.

king post In a roof truss, a member placed vertically between the center of the horizontal tie beam at the lower end of the rafters and the ridge, or apex of the inclined rafters.

king stud In framing, a vertical support member that extends from the bottom to top plate alongside an opening for a door or window.

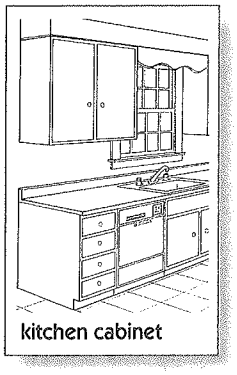
kiosk **1.** A small gazebo. **2.** A small, freestanding structure either open or partially enclosed, where merchandise is displayed, advertised, or sold.

kip **1.** A unit of weight equal to 1,000 pounds. **2.** Slang term for a bunkhouse on a construction site.

kiss mark Marks on the faces of bricks where they were in contact with one another during their firing in a kiln.

kitchen As defined for the purpose of building codes, a space whose designated purpose is food preparation.

kitchen cabinet In a kitchen, a case or box-type assembly, or similar cupboard-like repository, having shelves, drawers, doors, and/or compartments, and used primarily for storing utensils, cutlery, food, linen, etc.


kitchen cabinet

kitchenette A small kitchen.

kite A sheet of kraft paper applied to a sheet of coated roofing during manufacturing to measure the weight of the granules applied to the surface of the roofing.

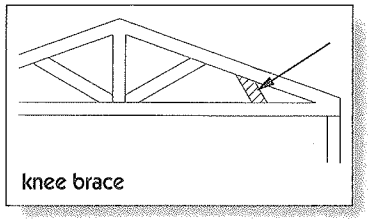
kite winder The center tread on a staircase winder with three steps. A kite winder is so named because its shape resembles that of a kite.

knapping hammer A steel hammer used for breaking and shaping stone, splitting cobbles, etc.

knee **1.** A naturally or artificially bent piece of wood, as used for a brace or haunch. **2.** A sharp, right-angled bend in a pipe. Also called an *elbow*. **3.** A convex handrail.

kneeboards Support pads worn by workers during concrete finishing that distribute the finisher's weight and minimize marring of the concrete surface.

knee brace A brace between vertical and horizontal members in a building frame or formwork to make the structure more stable. In formwork, it acts as a haunch.


knee brace

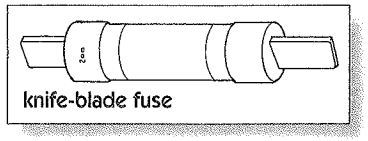
knee bracket A brace used to provide extra support under bow and angle bay projecting windows.

kneeler **1.** The pattern-breaking stone or brick at the point where a normal masonry wall changes and begins to form the curve or angle of an arch or vault. **2.** In a gable, the sloped-top, level-bedded stone which supports the inclined coping. **3.** Ecclesiastical furnishing that may be provided for kneeling in a pew. May be attached to the frontal or to the back of the pew.

knee rafter A rafter whose lower end is bent downward to rest more firmly against a wall. Sometimes called a *knee piece*.

knee wall **1.** A wall that shortens the span of the roof rafters by acting as a knee brace, in that it supports the rafters at some intermediate point along their length. **2.** A short wall constructed to extend the height of an existing foundation or other wall system.

knife-blade fuse A type of cartridge fuse in which the metal blades at each end of the cylinder make contact with the fuse within.


knife-blade fuse

knife consistency A compound whose degree of firmness makes it suitable for application with a putty knife.

knife switch A type of electric switch designed with a hinged or removable blade that enters or embraces the contact clips.

knife-type trencher A vibratory plow attachment used on a trenching machine to install telephone and power cable, television cable, irrigation systems or other light weight cable-type products in the ground without digging a trench.

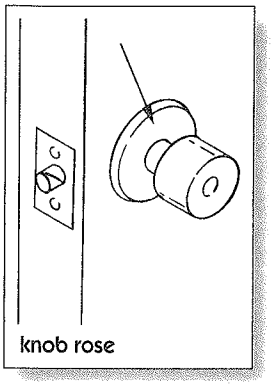
knob **1.** A usually round or somewhat spherical handle by which a latch, lock, or other device is operated. **2.** Any similarly shaped ornament.

knob bolt A door lock whose bolt is operated not by a key, but by a knob or thumb piece on either or both sides of the door.

knob latch A door latch whose spring bolt is operated not by a key, but by a knob on one or both sides of the door.

knob lock A door lock whose spring bolt is operated by one or more knobs, but whose dead bolt is actuated by a key.

knob rose The usually raised round plate that is attached to a door face so as to surround a hole in the door and form a knob socket.


knob rose

knob shank The stem of a doorknob, into whose hole or socket the spindle is received and fastened.

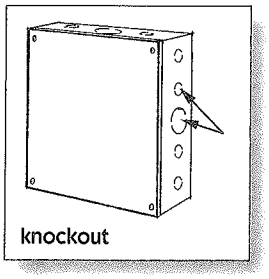
knob top The usually round or somewhat spherical terminal end of a knob that is grasped by the hand and turned.

knocked down Descriptive of precut, prefitted, and premeasured, but unassembled construction components, such as might be delivered to a job for on-site assembly.

knocked down frame A door frame that comes from the manufacturer in three or more parts.

knocker A hinged, usually metal fixture on the exterior face of a door, used for striking or knocking.

knockout A prestamped, usually circular section in an electrical junction box, panel box, etc., that can be easily removed to provide access for a fitting or raceway cable.


knockout

knot **1.** The hard, cross-grained portion of a tree where a branch meets the trunk. **2.** An architectural ornament of clusters of leaves or flowers at the base of intersecting vaulting ribs. **3.** Intentional or accidental compact intersection(s) of rope(s) or similar material.

knot brush A rather thick brush whose bristles or fibers are bunched into one, two, or three round or oval knots.

knot cluster A compact grouping of two or more knots surrounded by deflected wood fibers or contorted grain.

knot sealer Any sealer, such as shellac, used to cover knots in new wood to prevent sap or resin bleed-through.

knotting *See* **knot sealer**.

knotty pine Pine wood sawn so as to expose firm knots as an appearance feature. Knotty pine is used for interior paneling and cabinets.

knuckle One of the enlarged, protruding, cylindrical parts of a hinge through which the pin is inserted.

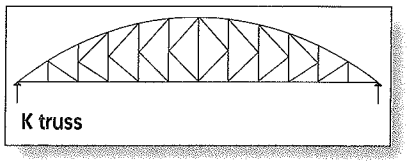
knuckle joint A hinged joint by which two rods are connected.

knurling Very small ridges or beads as machined on a surface to facilitate gripping.

kraft paper A strong brown wrapping paper made from sulfate wood pulp that is sometimes impregnated with asphalt or resin for better moisture resistance when used in construction.

K series A standard Steel Joist Institute designation for long-span steel joists.

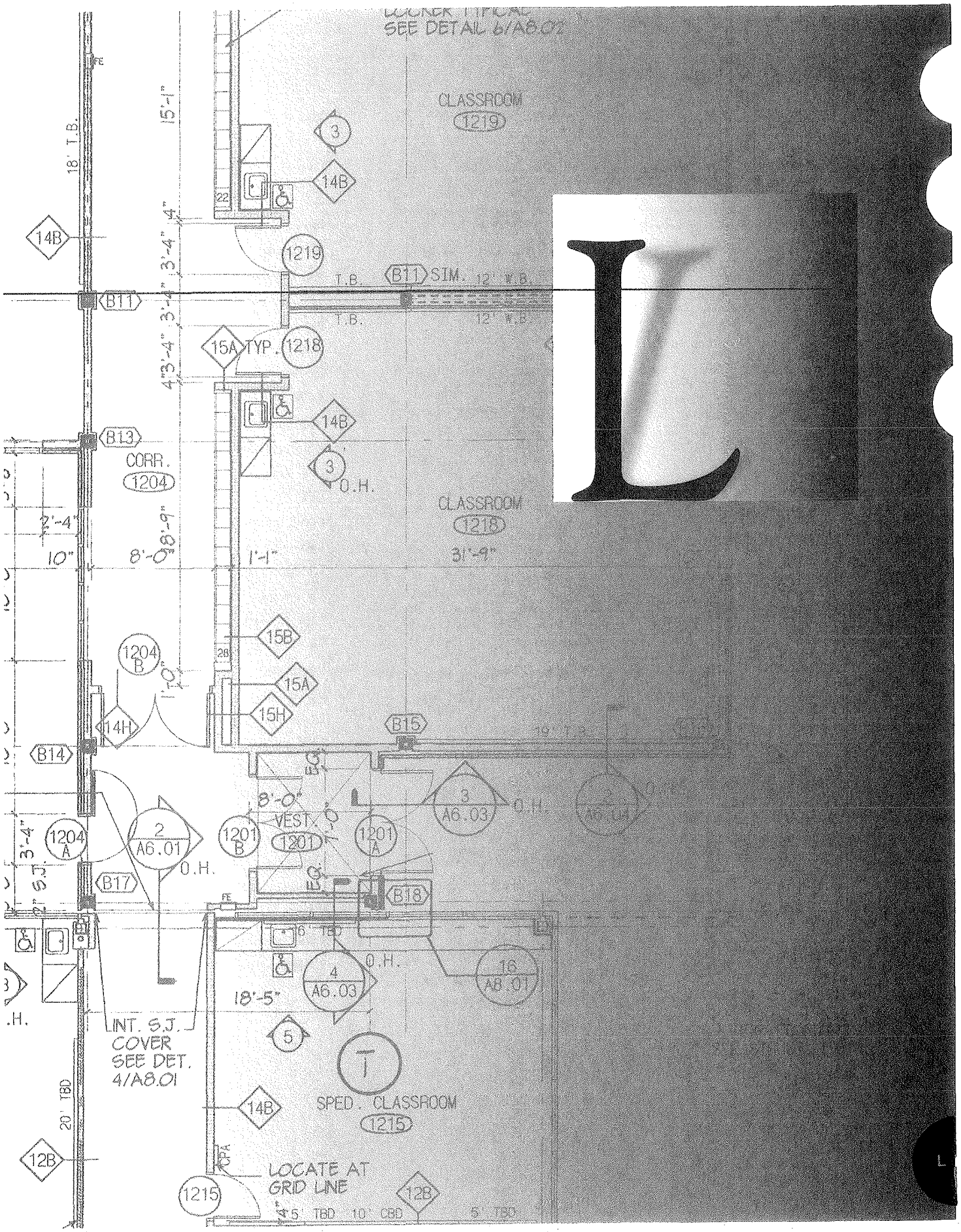
K truss A truss in which the arrangement of panels, chords, and web members resembles the letter "K."


K truss

k value The thermal conductivity of a substance or material.

kyanize Soaking or impregnating wood with a solution of mercuric chloride to preserve it against decay.

Kyoto protocol An international treaty adopted in 1997, and enforced in 2005 that requires a number of nations, including the U.S., to reduce their greenhouse gas emissions to specific levels by certain milestone dates.



SEE DETAIL 6/A8.02
CLASSROOM
1219
3
14B
22
1219
B11
SIM.
12' W.B.
T.B.
15A
TYP.
1218
14B
3
O.H.
B13
CORR.
1204
CLASSROOM
1218
31'-9"
10"
8'-0"
1'-1"
15B
15A
15H
1204
B
14H
B14
B15
19' T.B.
8'-0"
VEST.
1201
1201
B
1201
A
3
A6.03
O.H.
1204
A
2
A6.01
O.H.
B17
B18
6' TBD
4
A6.03
O.H.
16
A8.01
18'-5"
5
INT. S.J.
COVER
SEE DET.
4/A8.01
SPED. CLASSROOM
1215
14B
12B
LOCATE AT
GRID LINE
1215
12B
5' TBD
10' CBD
5' TBD
18' T.B.
15'-1"
20' TBD

L Abbreviations

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

l labor only, left, length, liter, long, lumen

L lambert, large, medium wall copper tubing

Lab labor, laboratory

Lad ladder

LAG lagging

LAM laminated, laminate

LAN local area network

L&CM lime and cement mortar

L&E labor and equipment

L&H light and heat

L&L latch and lock

L&O lead and oil (paint)

L&P lath and plaster

LAS laboratory analytical service

LAT latitude, lattice

Lath lather

LAV lavatory

lb, lbs pound, pounds

lbf/sq in pound-force per square inch

lb/hr pounds per hour

lbl label

LBL conduit body, load bearing

lb/LF pounds per linear foot

Lbr lumber

lc load center

lcd liquid crystal display

LCL less-than-carload lot

LCM least common multiple, loose cubic meter

LCY loose cubic yard

ld load

ldbrk loadbreak

ldg loading

LDG landing

LDPE low-density polyethylene

Ldr loader

LE leading edge, lead equivalent

LECA light expanded clay aggregate

LED light emitting diode

LEMA Lighting Equipment Manufacturers' Association

Len lens

lf lightface, light framing, lineal foot, linear foot, low frequency

lg large, length, long

Lg large, length, long

LG liquid gas

Lge large

LGLCS landfill gas & leachate control system

lgp low ground pressure

lgr longer

lgs lengths

lgt lighting

lgth length

LH left hand, long-span, high strength bar joist, labor hours

LIC license

LIFO last in, first out

lin lineal, linear

lin ft lineal feet, linear foot

lino linoleum

liq liquid

LJ obsolete designation for long- span, standard-strength bar joist

lknt locknut

LL live load

LL&B latch, lock, and bolt

LLD lamp lumen depreciation

LLRW low level radioactive waste

lm lumen

LM lime mortar

Lm³ loose cubic meter

lm/sf lumen per square foot

lm/W lumen per watt

lnd lined

lng, Lng lining

LNG liquefied natural gas

lnr liner

LOA length over all

log logarithm

L-O-L lateralolet

lox liquid oxygen

LP liquid petroleum, low pressure

LPF low power factor

LPG liquid petroleum gas

l-pull line pull

LR living room, law reports, long radius

L/s liters per second

LS left side, loudspeaker, lump sum

LSA low specific activity

LT long ton, light

ltd limited

ltg lighting

Lt Ga light gauge

LTL less than truckload lot

Lt Wt lightweight

LUST leaking underground storage tank

LV low voltage

lvl level

LVL laminated veneer lumber

lvr louver

LW low water

LWC lightweight concrete

LWM low water mark

label **1.** A projecting molding along the sides or top of a window.
2. Manufacturer identification located on a product that contains the manufacturer's name, the product's performance characteristics, and any testing information by inspection agencies.

labeled Descriptive of doors, windows, frames, and other building components that carry certification of approval from a recognized testing laboratory based on fire tests conducted on identical materials and articles.

labeled door A door that carries a certified fire-rating issued by Underwriters' Laboratories, Inc. **3-hour fire doors (A)** are used in walls separating buildings or dividing a single building into fire areas. **1-1/2-hour (B and D)** fire doors are used in openings in 2-hour rated vertical enclosures such as stairs, elevators, etc., or in exterior walls subject to severe fire exposure from outside the building. **1-hour fire doors** are for use in openings in 1-hour rated vertical enclosures. **3/4-hour fire doors (C and E)** are for use in openings in corridor and room partitions or in exterior walls that are subject to moderate fire exposure from outside the building. **1/2-hour fire doors** and **1/3-hour fire doors** are used where smoke control is a primary consideration, and for the protection of openings between a habitable room and a corridor when the wall has a fire-resistance rating of not more than one hour.

labeled frame A door frame that conforms to standards and tests required by Underwriters' Laboratories, Inc., and has received its label of certification.

labeled window A fire-resistant window that conforms to the testing standards of Underwriters' Laboratories, Inc., and bears a label designating its fire rating.

labor Effort expended by people for wages or salary. Generally classified as either direct or indirect. Direct labor is applied to meeting project objectives and is a principal element used in costing, pricing, and profit determination; indirect labor is a component of indirect cost, such as overhead or general and administrative costs. *

labor and material payment bond (payment bond) A bond procured by a contractor from a surety as a guarantee to the owner that the labor and materials applied to the project will be paid for by the contractor. Those who have direct contacts with the contractor may be considered claimants.

labor burden Taxes and insurances the employer is required to pay by law based on labor payroll on behalf of or for the benefit of labor. (In the U.S., these are federal old age benefits, federal unemployment insurance tax, state unemployment tax, and worker's compensation.) *

labor cost Gross direct wages paid to the worker (bare labor). *

laborer Ordinarily denotes a construction worker who has no specific trade and whose function is to support the activity of the licensed trades.

labor hour A worker hour of effort, synonymous with work hour. *

labor productivity A measure of production output relative to labor input. In cost estimating, inverse measures such as work hours/quantity or unit hours are common (where lower values reflect higher productivity or efficiency). Labor productivity (or efficiency) is improved by increasing production for a given work hour or decreasing work hours for a given production. *

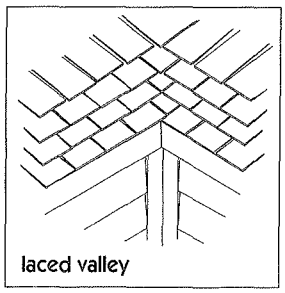
labor rate Labor cost expressed on a per unit of labor effort basis (e.g., labor costs/labor hour). *

labor union An organization or confederation of workers with the same or similar skills who are joined in a common cause (such as collective bargaining) with management or other employers for work place conditions, wage rates, and/or employee benefits.

labyrinth A maze of passageways or paths.

laced corner A method of laying shingles at interior and exterior corners on sidewalls. The corner shingles of each course are laid alternately on the faces of the two walls in order to overlap each other and eliminate the need for corner boards.

laced valley On a roof, the interweaving of shingles or tiles where two planes meet at a downward angle.


laced valley

lacing A system of members used to connect the different elements of a composite column or girder in such a way that they structurally act in unison. Also refers to securing insulation materials via hooks or wire, etc.

lacing course A continuous layer of brickwork built into a stone wall for the purpose of bonding and leveling.

lacquer A glossy enamel, composed of volatile solvents and dilutants, that evaporates and dries quickly upon application to a surface.

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L

lacunar Having sunken or recessed panels, as in a soffit or ceiling panel.

ladder core A hollow structure of wood or insulation board used as the core of interior doors and built with strips running vertically or horizontally through the core area.

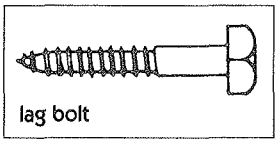
ladder ditcher Excavation equipment used in heavy construction to dig trenches. Rotating bucket-like shovels work to remove earth.

ladder jack scaffold A simple scaffolding system that uses ladders for support. The ladder jack is attached to the ladders to provide support for the staging plank.

ladder ties Long parallel reinforcing rods studded with cross rods so as to resemble a ladder. Used in masonry installations.

lag Time that an activity follows, or is delayed from the start or finish of its predecessor(s). Sometimes called an offset. *

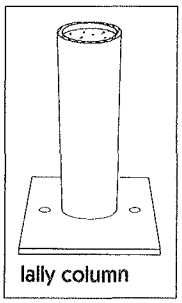
lag bolt (coach screw, lag screw) A threaded screw or bolt with a square head.


lag bolt

lagging **1.** Heavy wood boards used to line the sides of excavations and prevent cave-ins. **2.** Preformed insulation for pipes and tanks.

laitance In concrete, a weak, crumbly, and dusty surface layer caused by excessive water that has bled to the surface and subsequently weakened it. Over-working the surface during finishing can aggravate the problem.
If laitance forms between pours, it must be brushed and washed away.

lally column A trade name for a pipe column from 3" to 6" in diameter, sometimes filled with concrete.

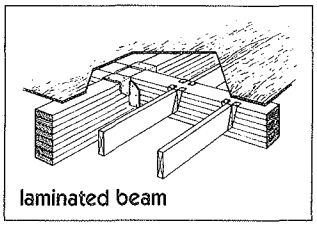

lally column

lambert A unit of measure for the brightness of reflective surfaces (1 lumen/sq. cm.).

lamb's tongue **1.** A quarter round molding with a fillet. **2.** A curve at the end of a handrail that resembles a tongue.

laminate **1.** To form a product or material by bonding together several layers or sheets with adhesive under pressure and sometimes with nails or bolts. **2.** Any material formed by such a method.

laminated beam (laminated veneer lumber) A straight or arched beam formed by built-up layers of wood. The method of lamination may be gluing under pressure, mechanical nailing or bolting, or a combination. *See also* **laminated wood.**


laminated beam

laminated glass (safety glass, shatterproof glass) A shatter-resistant safety glass made up of two or more layers of sheet glass, plate glass, or float glass bonded to a transparent plastic sheet.

laminated plastic Layers of synthetic resin-coated or resin-impregnated filler materials bonded together into a single piece by application of heat and pressure.

laminated wood (laminated veneer lumber) Any of several products formed by built-up layers (plies) of wood. Thin wood veneers may be laminated to a wood subsurface, several plies may be laminated together to form plywood, or thicker pieces may be used to form structural members such as beams or arches.

laminate floor A composite flooring product notable for its durability that is made of plastic resin and cellulose paper with a decorative finish layer. Its core material is a high density fiberboard.

laminboard A compound board consisting of a core of small strips of wood glued together and covered by veneer faces.

lamp Any device that converts electric energy into light. Types include **incandescent, fluorescent, metal halide** and **high pressure sodium.**

lamp ballast *See* **ballast.**

lampblack A black pigment composed of carbon from the soot of burning oil.

lamp depreciation The loss of luminous output in a lamp over time due to the accumulation of dirt on lamps, reflectors, and room walls and ceilings.

lamp life A rating that provides the life expectancy of a lamp. Obtained by testing a sample of lights and noting when 50% are no longer operating.

lamp post A supporting device, for an external light or luminaire, with wiring attachments concealed inside and with outside attachments for the bracket.

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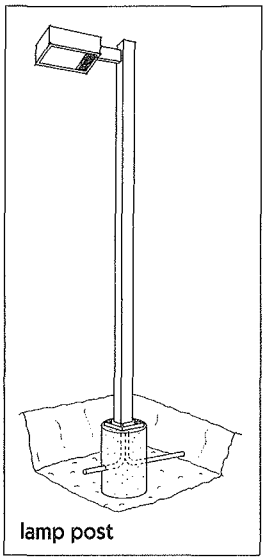

lamp post

lancet window A tall, narrow, window with a sharp arch.

land banking The purchase of land to hold for future need or use.

land-clearing rake A device outfitted with blades and attached to the front of a tractor to cut, collect, and remove brush from the site of proposed construction.

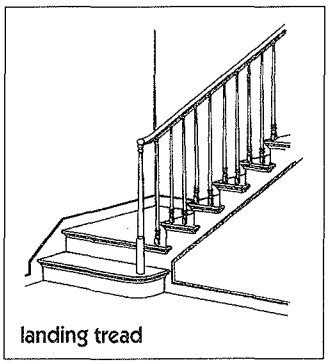
land drain *See* **agricultural pipe drain.**

landfill An engineered disposal system characterized by the burial of waste material in alternating layers with an approved fill material.

landing An intermediate platform between flights of stairs, or the platform at the top or bottom of a staircase.

landing newel (angle newel) A newel positioned on a stair landing or at any point where stairs change direction.

landing tread That board or portion of a stair landing that is closest to the next step down. The tread has an appearance and dimensions similar to the other treads, but it is actually part of the landing, and not a true tread.


landing tread

landmark In the context of historic proper ties, an historic property that is listed on a local, state or federal register. Also a geographic or other easily recognizable feature, such as a monument, building, or other structure, used to navigate through an area.

land reclamation Gaining land from a submerged or partially submerged area by draining, filling, or a combination of these procedures.

Landrum-Griffin Act Enacted by Congress in 1959, this act requires labor union management to be subject to audit for the funds of union members for which they are responsible.

landscape architect A person whose professional specialty is designing and developing gardens and landscapes, especially one who is duly licensed and qualified to perform in the landscape architectural trade.

landscaping The combined grounds work tasks that improve the appearance of a plot of land, including adding plantings and lawn, constructing walkways and patios, and regrading as necessary.

land survey *See* **boundary survey** *and* **survey.**

land surveyor A person (usually registered in the state where surveying is being done) whose occupation is to establish the lengths and directions of existing boundary lines, or to establish any new boundaries resulting from division of a land parcel.

land tie *See* **deadman.**

land tile Clay tile laid with open joints and usually surrounded by porous materials. *See also* **agricultural pipe drain.**

land treatment area A defined parcel of land on which wastes are deposited for the purpose of allowing natural cleansing actions to occur.

land-use analysis A systematic study of an area or region that documents existing conditions and patterns of use, identifies problem areas, and discusses future options. A part of the general planning process, such an analysis might cover topics such as traffic flow, residential and commercial zoning, sewer services, water supply, solid-waste management, air and water pollution, or conservation areas.

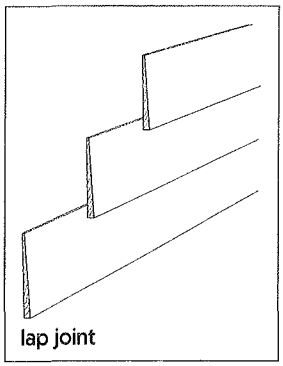
lane striping The application of lines on pavement to define parking spaces, traffic lanes, etc.

lanyard A safety line tying a worker to a stable element of a structure to prevent a fall in the event of an accident above ground level.

lap cement Asphalt used in roll roofing as an adhesive between the laps.

L

lap joint In construction, a type of joint in which two building elements are not butted up against each other, but are overlapped, with part of one covering part of the other. Typical examples include roof and wall shingles, clapboard siding, welded metal sheets or plates, and concrete reinforcing bars lapped together at their ends.



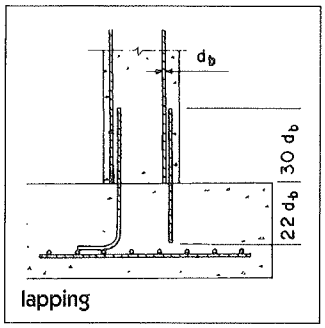
lap joint

lapped dovetail A carpentry joint commonly used in constructing the front of a drawer, on which the pegged end of one member does not pass completely through the thickness of the adjacent perpendicular members.

lapped joint A lapped joint, like a van stone joint, is a type of pipe joint made using loose flanges on lengths of pipe. The ends of this pipe are lapped over to give a bearing surface for a gasket or metal-to-metal joint.

lapped tenons Overlapping tenons that enter a mortise from opposite sides.

lapping **1.** The overlapping of reinforcing bars or welded wire fabric for continuity of stress in the reinforcing when a load is applied. **2.** The smoothing of a metal surface using a fine abrasive.



lapping

lap-riveted The riveting together of two metal members or plates where they have been deliberately overlapped, thus forming a lap joint.

lap seam The same as a lap joint, but typically used to refer to sheet metal, and sometimes plates, that are welded, soldered, or riveted at the overlapping joint.

lap siding Horizontal siding with each row covering part of the next, rather than butted up against each other.

lap splice In concrete construction, the simplest method for providing continuity of steel reinforcement. Ends of reinforcing bars are overlapped a specified number of diameters, usually no fewer than 30, and tied with wire.

lap weld A weld used to join two pieces of metal at their common joint.

lap weld pipe Pipe made by welding along a scarfed longitudinal seam in which one part is overlapped by another.

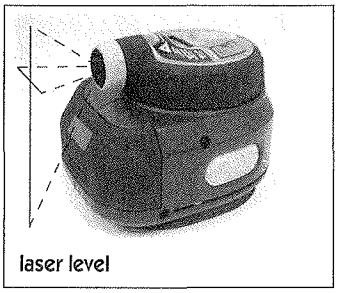
larch (tamarack) A heavier-than-average softwood from a coniferous tree, characterized by fine texture and hard, strong, straight-grained consistency.

large quantity generator A classification of the Resource Conservation and Recovery Act (RCRA). One is considered a large quantity generator (LQG) for a particular month if 2,200 pounds or more of hazardous waste is generated, or more than 2.2 pounds of acute hazardous waste per calendar month.

larmier (corona, lorymer) A specific drip strip or molding that is part of a cornice. By projecting from the surrounding cornice, it catches rain and forces it to drip off away from the wall.

laser An acronym for light amplification by stimulated emission of radiation, a device that amplifies radiation in the visible or infrared parts of the spectrum.

laser level Surveying tool that employs a laser as a reference for measurements or verifying alignment.



laser level

last in, first out (LIFO) A method of accounting for inventory in which it is assumed that goods bought last are sold first. This allows automatic updating of inventory values.

latch A fastening device for a door or window, usually operable from both sides and built without a dead bolt or provisions for locking with a key.

latch bolt In a door or window, a bolt that is spring-loaded and beveled. As the door or window is closed, the bevel forces the bolt into the member, and is then released when in the fully closed position as the spring forces the bolt into a notch in the frame.

latchkey A key used to open or raise the latch on a door.

latchstring A string that is attached to the inside latch of a door and passed through a hole above the latch to the outside in order to operate the latch from the exterior.

late dates Calculated in the backward pass of time analysis, late dates are the latest dates on which an activity can start and finish without delaying a successor activity. *

latent defect A defect in materials or equipment that would not be revealed under reasonably careful observation. A patent defect, on the other hand, is one which may be discovered by reasonable observation.

lateral buckling The failure of any structural column, wall, or beam which has undergone excessive side-to-side (lateral) deflection, movement, or twist.

lateral load *See* **wind load** *and* **earthquake load.**

lateral reinforcement *See* **reinforcement, lateral.**

lateral sewer A sewer that discharges into another sewer or branch, but is engineered without any other common tributary to it.

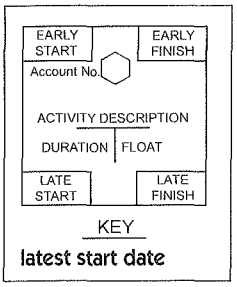
lateral support Any bracing, temporary or permanent, that provides greater support in resisting side-to-side (lateral) forces and deflections. Floor and roof members typically provide lateral support for walls, columns, and beams. Vertical pilasters or secondary walls may also provide support.

lateral thrust Any force applied at a right angle to a member.

latest event occurrence time In the CPM (Critical Path Method) of construction scheduling, the final deadline by which a particular item of work must be completed in order to avoid delaying the entire project.

latest finish date In the Critical Path Method of scheduling, a completion deadline for a particular activity. Work performed after this deadline will result in project delay.

latest start date In the Critical Path Method of scheduling, the deadline for starting a particular activity. A late start will throw off the schedule and delay the project.



latex **1.** The sap of a rubber tree. **2.** An emulsion in water of very fine particles of rubber or plastic.

latex caulk A semisolid caulk containing water, ground calcium carbonate, plasticizers, mineral spirits, ethylene, glycol, surfactants, and pigments. Used to close joints or cracks between material.

latex foam Sponge rubber manufactured with a latex base.

latex paint A paint with a latex binder, usually a polymeric compound, characterized by its ability to be thinned or washed from applicators with water.

latex patching compound A compound used to fill voids, large gaps or penetrations in a floor, especially a subfloor before application of a floor covering.

lath Strips of wood or metal used as a base for plaster.

lathe A machine used to shape circular pieces of wood, metal, or other material. The stock is rotated on a horizontal axis while a stationary tool cuts away the unwanted material or creates ornamental turned work.

lath hammer A hammer used chiefly for cutting and nailing wood lath, designed with a nail-driving hammer head, as well as a hatchet blade with a lateral nick that is used for pulling out nails.

lathing The process of assembling or placing laths.

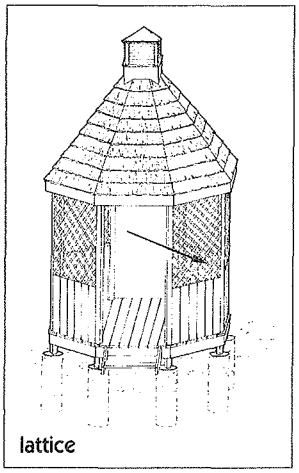
lathing hammer *See* **lath hammer.**

lath laid-and-set A two-coat method of plastering walls and ceilings. The first coat is called *laying* and is scratched so as to provide a rough bonding surface.

latrine A public toilet or privy.

latrobe A type of heater located inside a fireplace. Rooms above may be heated by hot air, but the room containing the stove is heated by direct radiation.

lattice Typically, a diagonal network or grid of strips of material. Lattice is often used as ornamental screening, or to provide privacy.


lattice

lattice truss (lattice beam, lattice girder) A structural truss in which the web is a latticework of diagonal members.

lattice window A window with diagonal glazing bars.

latticework Any item or member formed by the repetitive crossing of thin, diagonally placed strips, often of wood or metal.

lauan Philippine mahogany.

laundry chute A shaft running between the upper and lower floors of a building and used to convey soiled laundry to the lower level by gravity.

lavas Natural stone used in building as a facing, veneer, and decoration. Pink, purple, and black are typical shades.

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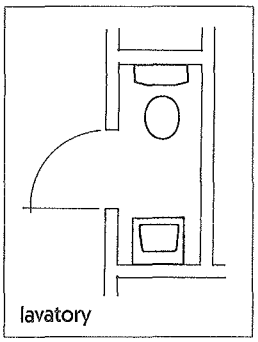
L

lavatory **1.** A basin, with running water and drainage facilities, used for washing the face and hands. **2.** A room with a wash basin and a toilet, but no bathtub. **3.** A room containing a toilet or water closet.



lay A term used to define the direction of twist of the strands or wires in wire rope. The strands or wires have either a right-hand or left-hand lay.

lay-in Describes tile or panels that are installed into metal channels in suspended ceiling systems.

laying line (laying guide) Lines printed on felt or roll roofing as a guide for the amount of lap required.

laying out **1.** Marking of materials in preparation for work, showing where they are to be cut. **2.** Marking the location for the placement of building members.

layout A design scheme or plan showing the proposed arrangement of objects and spaces within and outside a structure.

lay the leads A slang expression that means to build up the corners in a brick wall.

lay-up **1.** The reinforcing material that is placed into position in the mold during the manufacturing of reinforced plastics. Also, the resin-impregnated reinforcement. **2.** The method or process of assembling veneers to manufacture plywood.

lazy susan A revolving circular shelf or tray, often used in cabinets to utilize space more efficiently at blind corners.

L-beam A beam whose section has the form of an inverted "L", usually occurring in the edge of a floor, of which a part forms the top flange of the beam.

L-column The portion of a precast concrete frame composed of the column, the haunch, and part of the girder.

L/D ratio The relationship of the span (L) of a beam, column, slab or truss to its depth (D).

leachate Liquid from rainfall, groundwater, or other sources that has percolated through a landfill mass and that contains biological and/or chemical wastes and dissolved or suspended materials. This waste is often hazardous and may need to be collected and treated to avoid groundwater contamination.

leaching The process of separating liquids from solid materials by allowing them to percolate into surrounding soil.

leaching cesspool An underground storage tank or chamber for domestic wastes. The sides are made porous with small holes so that solids are retained but liquids may leach out into the surrounding earth.

leaching field *See* **absorption field.**

leaching pit *See* **leaching well.**

leaching well (leaching pit) Similar to a cesspool, a pit with porous walls that retain solids but permit liquids to pass through. It is not used to treat raw sewage but may be used to allow septic tank effluent to be absorbed into the surrounding soil.

lead **1.** (Pb) A soft, dense heavy metal easily formed and cut. Historically, lead was used for flashing and for the joints in stained glass windows. **2.** End sections of a masonry wall, usually at the corners, which are built up, in steps, before the main part of the wall is begun. Also, a string stretched between these end sections that serves as a guide for the rest of the wall. **3.** In electricity, conduction of electric current from the electric source to point of contact such as a welding lead. **4.** Time that an activity precedes the start of its successor(s). Lead is the opposite of lag. *

lead-based paint (LBPs) Toxic oil-based paint containing lead-based pigments often found on old buildings. Prohibited in residential construction by the federal government in 1978, as exposure poses a health hazard.

lead chromate One of a number of opaque pigments that range from orange to yellow in color and have strong tinting properties.

lead-covered cable (lead-sheathed cable) An electric cable protected from damage and excess moisture by a lead covering.

leaded glass *See* **leaded light.**

leaded light A window whose diamond-shaped or rectangular glass panes are set in lead frames called cames.

leader **1.** In a hot-air heating system, a duct that conveys hot air to an outlet. **2.** A downspout.

leader head That part of a drainpipe assembly that is placed at the top of a leader and serves as a catch basin to receive water from the gutter.

lead foil tape An acrylic, weather-resistant, highly malleable tape with good tack, bond, and resistance to solvents and heat. Used as a moisture barrier, a maskant in electroplating and chemical milling, and in thermopane window sealing. Also used in alarm systems, with conductive tape attached to a window to detect breakage.

lead glazing *See* **leaded light.**

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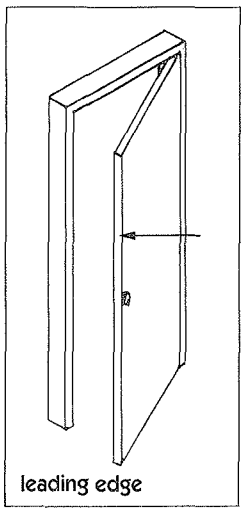
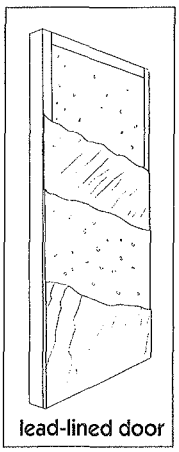
leading edge The vertical edge of a hinged swinging door or window which is opposite the hinged edge and in proximity to the knob or latch.


leading edge

lead joint A joint in a water pipe, such as a bell-and-spigot joint, into which molten lead is poured.

lead-lag ballast A ballast that serves to cut down on the stroboscopic effect of two fluorescent lamps, one of which is on a leading current and the other on a lagging current.

lead-lined door A door with lead sheets lining its internal core to prevent the penetration of x-ray radiation.


lead-lined door

lead-lined frame A frame that is used with lead-lined doors and is itself lined internally with lead sheets to prevent penetration of x-ray radiation.

lead-lined sheetrock Sheetrock internally lined with sheet lead to provide protection from x-ray radiation.

lead paint A paint having white lead as one of its pigments.

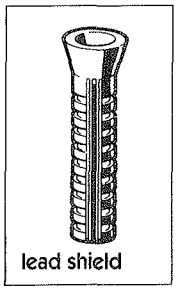
lead plug **1.** A cylinder of lead placed inside a hole in a masonry, plaster, or concrete wall. A screw or nail driven into it will then be firmly held in place. **2.** In stonemasonry, a piece of lead that holds adjacent stones together. Grooves are cut in both rock surfaces to be joined, and molten lead is poured into it.

lead roof A flat roof with a surface of sheet lead.

leads A collective term for short sections of electric conductors, generally insulated.

lead-sheathed cable *See* **lead-covered cable.**

lead shield A lead sleeve used to provide anchorage for expansion bolts or screws. Similar to a *lead plug.*


lead shield

lead slate (copper slate, lead sleeve) A cylinder of sheet lead or sheet copper that surrounds a pipe at the point where it passes through a roof, ensuring a watertight intersection.

lead sleeve *See* **lead slate.**

lead soaker A piece of lead sheeting that forms a weathertight joint at the intersection of a roof and of any vertical wall that passes through the roof at a hip or valley.

lead spitter The tapered part of a drainpipe assembly that connects a lead gutter with a downpipe.

lead tack **1.** A lead strip used to attach a lead pipe to some means of support. **2.** A lead strip placed along the edge of metal flashing. One side of the strip is attached to the structure, while the other side is folded over the free edge of the flashing.

lead wool Fine strands of lead formed into a wool-like consistency, often used as caulking at the joints of pipes.

leaf *See* **wythe.**

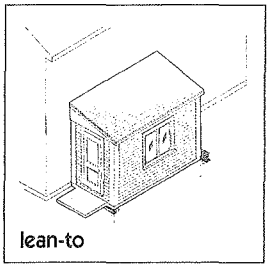
leakage current Unwanted electric current that remains in a circuit or device. Can occur with improperly grounded electrical equipment. Leakage current can be observed by wire or semiconductor detectors.

lean concrete Concrete of lower than usual cement content.

lean mix (lean mixture) **1.** A mixture of concrete or mortar with a relatively low cement content. **2.** A plaster with too much aggregate and not enough cement, which thus renders it unworkable. **3.** A mixture of gasoline and oil in which the gasoline portion is on the high side in relation to the oil.

lean mortar A mortar with a low cement content, which makes it sticky, overly adherent to the trowel, and difficult to apply.

lean-to A small shed or building addition with a single pitched roof attached to the exterior wall of the main building.


lean-to

L

lean-to roof A roof with one pitch, supported at one end by a wall extending higher than the roof.

learning curve A term applied to the time required for a new craftsman or crew to attain the productivity level of an experienced craftsman or crew.

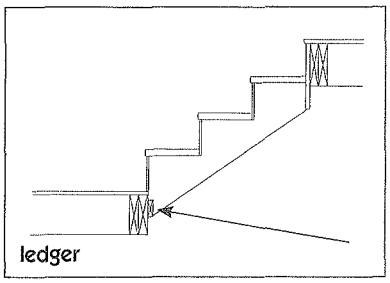
lease A contract that transfers the right of possession and use of buildings, property, vehicles, or items of equipment for a time agreed upon in the contract, in return for rent as monetary compensation.

leasehold A tenure established by lease. Also, real estate that is held under a lease.

ledge **1.** A molding that projects from the exterior wall of a building. **2.** A piece of wood nailed across a number of boards to fasten them together. **3.** An unframed structural member used to stiffen a board or a number of boards or battens. **4.** Bedrock.

ledged-and-braced door A batten door outfitted with diagonal bracing for extra strength.

ledger **1.** A horizontal framework member that carries joists and is supported by upright posts or by hangers. **2.** A slab of stone laid flat, such as that over a grave. **3.** A horizontal scaffold member, positioned between upright posts, on which the scaffold planks rest.



ledger

ledger board **1.** One of multiple boards attached horizontally across a series of vertical supports, as in the construction of a fence. **2.** A ribbon strip.

ledger plate *See* **ledger strip** *and* **ledger.**

ledger strip On a beam that carries joists flush with its upper edge, the strip of wood attached along the bottom edge of the beam that serves to seat the joists and to support them.

leech field A designated area of a lot where sewage is permitted to be filtered and discharged into. Leech fields are most commonly found in areas not accessible to a municipal sewer system.

LEED® Leadership in Energy and Environmental Design, a U.S. Green Building Council rating system for single family, commercial, institutional, and high-rise residential buildings. Used to evaluate environmental performance from a "whole building" perspective over a building's life cycle.

left-hand door *See* **hand.**

left-hand lock A lock designated for use on a left-hand door.

left-hand reverse door *See* **hand.**

left-hand stairway A stairway on which the handrail is positioned on the left-hand side in the direction of ascent.

left on the table The dollar difference between the low bid and the next bid above.

legal notice A covenant, often incorporated in the language of an agreement between two or more parties, that requires communication in writing, serving notice from one party to the other in accordance with terms of the agreement.

legitimate Ethical and legal.

leichtlehm Literally translated from German as "light loam," this mixture of clay and straw is pressed and hardened to create a strong, natural building material.

length The longest dimension of an object.

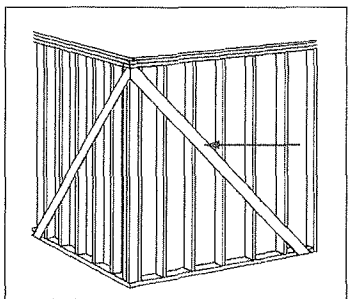
lessee A person who receives use and possession of property by lease.

lessons learned A project team's learning, usually defined during close out. Should be limited to capturing/identifying work process improvements. *

lessor The party who grants the use and possession of property by lease.

let in In joinery, to fasten a timber securely in place by inserting or embedding it in another.

let-in brace A diagonal brace inserted or let in to a stud.



let-in brace

let or sublet Issue a contract for a portion of the project.

letter chute *See* **mail chute.**

letter form of agreement (letter agreement) An agreement, in letter format, written by the sender, to be signed by the addressee, intended to be legally binding.

letter of credit Letter from a lender that promises to pay a beneficiary a specified sum of money for performance of a specific set of conditions, occasionally used in lieu of a payment bond.

letter of intent A letter that states the intent to enter into a formal agreement. Terms of the anticipated agreement may be stated in a general way.

letting of bid *See* **bid opening.**

level **1.** A term used to describe any horizontal surface that has all points at the same elevation and thus does not tilt or slope. **2.** In surveying, an instrument that measures heights from an established reference. **3.** A spirit level, consisting of small tubes of liquid with bubbles in each. The small tubes

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are positioned in a length of wood or metal that is hand-held and, by observing the position of the bubbles, used to find and check level surfaces.

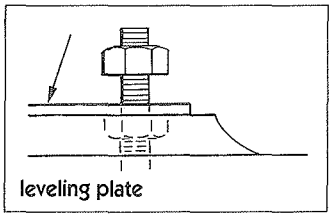
level A-D clothing The EPA's classification of personal protective equipment. Level A clothing offers the greatest amount of protection and should be worn whenever there is a risk to skin, eyes, or the respiratory system. It utilizes an encapsulated chemical protective suit. Level D offers little protection and should only be worn on a site with no hazards.

level control Benchmarks or other devices used to identify points of known elevation on a project site.

leveling The procedure used in surveying to determine differences in elevation.

leveling course *See* **asphalt leveling course.**

leveling plate A bearing plate set to an elevation used for setting structural steel.


leveling plate

leveling rod (leveling staff) A graduated straight rod used in construction with a leveling instrument to determine differences in elevation. The rod is marked in feet and fractions of feet, and may be fitted with a movable target or sighting disc. *See also* **New York leveling rod** *and* **Philadelphia leveling rod.**

leveling rule A long level used by plasterers to detect irregularities in the height of horizontal surfaces measured at various points.

leveling staff *See* **leveling rod.**

level spreaders A storm water management device installed parallel to a slope that changes concentrated flow to sheet flow.

leverage The ratio between the amount of financing and the amount of equity in real estate.

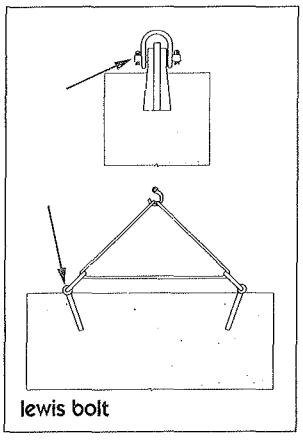
leveraged buyout Any acquisition of a company where the buyer uses the company's internal assets and cash flows to provide the collateral for the loans required to make the acquisition.

lever arm In a structural member, the distance from the center of the tensile reinforcement to the center of action of the compression.

lever tumbler In a lock, a type of pivoted tumbler.

lewis (lifting pin) A metal device used to hoist heavy units of masonry. A lewis is equipped with a dovetailed tenon that is made in sections and fitted into a corresponding recess cut into the piece of masonry to be moved.

lewis bolt (lewis pin) **1.** A bolt shaped into a wedge at its end, which is inserted into a prepared hole in a heavy unit or stone and secured in place with poured concrete or melted lead. **2.** An eyebolt inserted into heavy stones and used in the manner of a lewis to lift and move the stones.


lewis bolt

lewis hole A dovetailed hollow cut into a stone block, column, or heavy piece of masonry to receive a lewis.

L-head The top of a shore formed with a braced horizontal member projecting from one side and forming an inverted L-shaped assembly.

liability A situation in which one party is legally obligated to assume responsibility for another party's loss or burden. Liability is created when the law recognizes two elements: the existence of an enforceable legal duty to be performed by one party for the benefit of another, and the failure to perform the duty in accordance with applicable legal standards.

liability insurance Insurance designed to safeguard the insured from liability resulting from injury to another person or another person's property. *See also* **insurance.**

license The permission by competent authority to do an act which, without such permission, would be illegal.

licensed architect *See* **architect.**

licensed contractor An individual or a firm that has, where required by law, obtained certification from a government office, to practice construction contracting.

licensed engineer *See* **professional engineer.**

lid Slang term for ceiling.

lien A legal means of establishing or giving notice of a claim or an unsatisfied charge in the form of a debt, obligation, or duty. A lien is filed with government authorities against the title to real property. Liens must be adjudicated or satisfied before the title can be transferred. *See also* **mechanic's lien.**

lien waiver *See* **waiver of lien.**

life **1.** That period of time after which a machine or facility can no longer be repaired in order to perform its design function properly. **2.** The period of time that a machine or facility will satisfactorily perform its function without a major overhaul. *

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L

life cycle A term often used to describe the period of time that a building can be expected to actively and adequately serve its intended function.

life-cycle assessment The determination of the environmental burdens associated with a product or process, including materials used and wastes released. The assessment considers the extraction and manufacturing of the materials, transportation and distribution, use and maintenance, and final disposal or reuse.

life-cycle costing The determination of the value of a system, such as roof covering, amortized over the projected life of the system, as opposed to the value determined by the initial cost only. Life-cycle costs include such costs as service and maintenance.

Life Safety Code Developed by the NFPA, a standard that addresses fire protection measures regarding construction, egress, and occupancy. Also refered to as NFPA 101.

lift **1.** The concrete placed between two consecutive horizontal construction joints, usually consisting of several layers or courses, such as in slip forming. **2.** A metal handle or projection from the lower sash in a hung window, used as an aid in lifting the sash. **3.** The amount of grout, mortar, or concrete placed in a single pour. **4.** A British term for elevator. **5.** Slang for an amount of material bound together for ease of handling, such as a lift of 2x4s or a lift of cement.

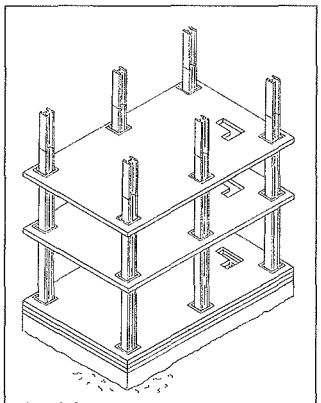
lifting block A combination of pulleys or sheaves that provide a mechanical advantage for lifting a heavy object.

lifting pin *See* **lewis.**

lift joint A surface at which two successive concrete lifts meet.

lifts (tiers) The number of frames of scaffolding erected one above each other in a vertical direction.

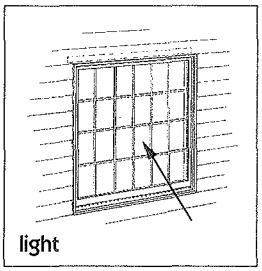
lift slab A method of concrete construction in which floor and roof slabs are cast at ground level and hoisted into position by jacking. Also, a slab that is a component of such construction.



lift slab

ligger **1.** A horizontal timber that supports floor boards or scaffolding. **2.** In thatched roofs, a strip of wood placed along the ridge.

light **1.** A man-made source of illumination, such as an electric light. **2.** A pane of glass.



light

light bulb *See* **incandescent lamp.**

light dimmer *See* **dimmer.**

light-framed construction Building construction that features vertical and horizontal structural components made up of wood or light-gauge steel framing.

light framing Lumber that is 2" to 4" thick, 2" to 4" wide, and is graded Construction, Standard, or Utility No. 3.

lighting A system for providing illumination to an area.

lighting cost The total of the cost of a system's lamps, operating energy, and lamp replacement.

lighting fixture *See* **luminaire.**

lighting outlet An electrical outlet that serves to accommodate the direct connection of a lighting fixture or of a lamp holder and its pendant cord.

lighting panel An electric panel housing fuses and circuit breakers that serves to protect the branch circuits of lighting fixtures.

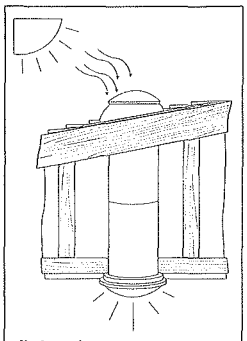
lighting unit *See* **luminaire.**

light loss factor In illumination calculations, an adjustment factor that estimates losses in light levels over time due to aging of the lamp, dirt on the room surfaces, and other causes. Losses corrected by lamp replacement or cleaning are termed recoverable. Non-recoverable losses would be due to deterioration of the fixture or voltage drops.

lightning arrester A device that connects to and protects an electrical system from lightning and other voltage surges.

lightning conductor (lightning rod) A cable or rod built of metal that protects a building from lightning by providing a direct link to ground.

light pipes Pipes lined with highly reflective film used to reflect light from a roof aperture to a space that may not be directly beneath the roof and that cannot therefore accommodate a standard skylight. Light pipes are generally used in small spaces like bathrooms or hallways.

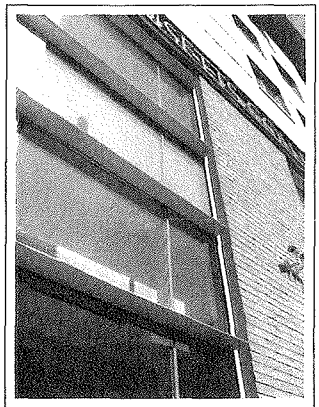


light pipes

light pollution The glare from inefficient outdoor lights, especially around highly populated areas, making it difficult to discern the features of the night sky.

light-reflective glass *See* **reflective glass.**

light shelves A daylighting system based on sun path geometry used to bounce light off a ceiling, project light deeper into a space, distribute light from above, and diffuse it to produce a uniform light level below.



light shelves

light source A *See* **standard source A.**

light source B *See* **standard source B.**

light source C *See* **standard source C.**

light to solar gain ratio (LSG) The ratio of visible light transmittance to the solar heat gain coefficient (SHGC). LSG measures the ability of glazing to provide light without excess solar heat gain.

lightweight aggregate *See* **aggregate, lightweight.**

lightweight block A cement masonry unit manufactured using lightweight aggregate and often used to reduce the weight of partitions.

lightweight concrete Concrete of substantially lower unit weight than that made using gravel or crushed stone aggregate.

light well An inside shaft with an open top through which light and air are conveyed from the outdoors to windows opening on the shaft.

lignin **1.** A substance that occurs naturally in wood and joins with cellulose to make up the chief constituents of wood tissue. **2.** A crystalline by-product of paper pulp, used in manufacturing plastics, wood chipboard, and protective chemical coatings that prevent corrosion.

lime Specifically, calcium oxide (CaO). Also, a general term for the various chemical and physical forms of quicklime, hydrated lime, and hydraulic hydrated lime.

lime-and-cement mortar A lime, cement, and sand mortar used in masonry and cement plaster. In addition to imparting a favorable consistency to the mix, the lime also increases the flexibility of the dried mix, thus limiting cracks and minimizing water penetration.

lime concrete A lime, sand, gravel, and concrete mix made without Portland cement. Lime concrete is found in older structures, but is no longer in general use.

lime mortar An uncommon mix of lime putty and sand that is not often used because it hardens at a very slow rate.

lime putty A thick lime paste used in plastering, particularly for filling voids and repairing defects.

limestone A sedimentary rock composed mostly of calcium carbonate, calcium, or dolomite. Limestone can be used as a building stone, with its commercial grades being A. Statuary, B. Select, C. Standard, D. Rustic, E. Variegated, and F. Old Gothic. It is also crushed into aggregate, crushed for agricultural lime, or burned to produce lime.

limewash (whitewash, whiting) A milk-like mixture of water and lime used to coat the exterior or interior surfaces of a structure.

limit control A safety device for a variety of mechanical systems that detects unsafe conditions, sounds an alarm, and shuts off the system.

limit design Any of a number of structural design methods based on limits related to stability, elasticity, fatigue, deformation, and other structural criteria.

limited combustible material A material that is noncombustible, as defined by the National Fire Protection Agency, yet fails to meet the NFPA's definition of combustible material. Must not exceed a potential heat value of 3500 Btu per pound.

limited partners Partners in a limited partnership who contribute capital and share profits, but have no decision-making power and no control over the day-to-day operations of the business.

limited partnership A form of partnership that is a hybrid between a general partnership and a corporation, and which is composed of both general partners and limited partners.

limit of liability The greatest amount of money that an insurance company will pay in the event of damage, injury, or loss.

L

limit switch **1.** An electrical switch that controls a particular function in a machine, often independently of other machine functions. **2.** A safety device, such as a switch that automatically slows down and stops an elevator at or near the top or bottom terminal landing.

line A marked or defined limit or border.

lineal foot A straight-line measurement of one foot, as distinguished from a cubic foot volume or a square foot area.

linear diffuser An elongated diffuser with parallel slots with deflectors to divert airflow in various directions.

linear heat detector A cable-like component of a fire detection system that detects heat anywhere along its length.

linear measurement (long measure) A unit or system of units for measuring length: 12" = 1', 3' = 1 yard, 1 yard = 0.9144 meters, 1 mile = 5,280 feet.

linear prestressing Prestressing as applied to linear structural members, such as beams, columns, etc.

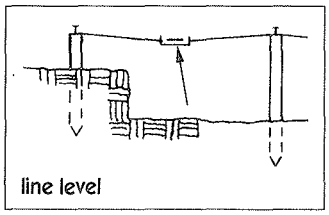
line drawing A graphic representation made with lines and solids, as opposed to one made with tone gradations, such as a photograph or rendering.

line drilling In the blasting of rock, the boring of a series of holes along the desired line of breakage. Holes are spaced several inches apart to create a plane of weakness.

line drop A decrease in voltage caused by the resistance of conductors in an electric circuit.

line item Any item specifically called for on a plan or specification price-out sheet and listed with all of the quantities, unit prices, and extensions.

line level A spirit level used in excavation and pipe laying. Each end of the level has a hook used to hang it from a horizontal line.


line level

linemen's pliers Pliers used to work with heavy-gauge wire.

line of credit A fixed amount of credit granted to cover a series of transactions.

line of levels A series of differences in elevation as measured and recorded by surveyors.

line of sight (sight line) The line extending from a telescope or other long-distance sighting device, along which distant objects can be viewed.

line pin A metal pin used in masonry work to support a horizontal string or line. The mason positions the line and then uses it as a guide in maintaining proper alignment of the work.

line pipe A welded or seamless pipe typically used to convey gas, oil, or water.

liner Extra stone bonded or otherwise attached to the back face of thin stone veneers. The purpose is to add strength and to create a deeper joint.

liner panel An interior finish panel.

lining Any sheet, plate, or layer of material attached directly to the inside face of formwork to improve or alter the surface texture and quality of the finished concrete.

lining panel A strip that secures the lower edges of sheet metal roofing sheets along the eaves of a roof.

lining paper A waterproof or water-resistant building paper placed under siding and roofing shingles.

link **1.** The circuit that connects two points. **2.** An enclosed connector between two buildings.

link dormer A dormer that is formed around a chimney. Also, a dormer that connects one roof area to another.

linked switch A series of mechanically connected electrical switches designed to act simultaneously or sequentially.

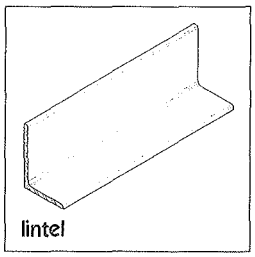
link fuse A type of exposed fuse attached to electrically insulated supports.

linoleum An inexpensive form of resilient floor covering that is manufactured of ground cork and oxidized linseed oil. Linoleum is applied to a coarse fabric backing and possesses a low resistance to staining, dents, and abrasion.

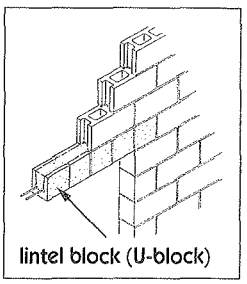
linoleum knife *See* **hook knife.**

linseed oil A drying oil processed from flaxseed and used in many paints and varnishes.

lintel A horizontal supporting member, installed above an opening such as a window or a door, that serves to carry the weight of the wall above it.


lintel

lintel block (U-block) A special U-shaped concrete block used with other blocks to form a continuous-bond beam or lintel. Reinforcing steel is placed in the void followed by mortar or grout.


lintel block (U-block)

lintel course A course of stonemasonry set level to a lintel, but different from the rest of the wall by virtue of size or finish.

lip A rounded, overhanging edge or member.

lip union A pipe connection with a lip on the inside to keep the gasket from being forced into the pipe.

liquation The separation of metals based on their melting point.

liquefaction The sudden failure of a loose soil mass due to total loss of shearing resistance. Typical causes are shocks or strains that abruptly increase the water pressure between soil particles, causing the entire mass to behave similarly to a liquid.

liquid adsorption A natural process in which molecules of a liquid are physically attracted to and held at the surface of a solid.

liquid asphaltic material An asphaltic product too soft to be measured by a penetration test at normal temperatures. The material is principally used for cement surface treatments. *See also* **liquid roofing.**

liquidated damages An amount, specified in a contract for construction, to cover damages incurred by the owner as a result of the contractor's failure to complete the work within the time frame set forth in the contract.

liquid indicator A device located in the liquid line of a refrigerating system and having a sight port through which flow may be observed for the presence of bubbles.

liquid limit The water content at which soil passes from the plastic to the liquid state under standard test conditions. The limit is expressed as a percentage of the dry weight of the soil. *See also* **Atterberg limits.**

liquid line In a refrigeration system, the pipe transporting refrigerant away from the condenser.

liquid membrane forming compound A material sprayed or rolled on a fresh concrete surface to restrict the loss of moisture from the concrete.

liquid petroleum gas (LPG) A general term referring to propane, butane, and other similar hydrocarbons stored as liquids and used as fuel.

liquid roofing Any of a number of different liquid or semi-liquid roofing materials used to create a seamless waterproof membrane.

liquid volume measurement A measurement of grout on the basis of the total volume of solid and liquid constituents.

liquid waste The discharge from any plumbing fixture, area, appliance, or component that does not contain fecal matter.

listed Refers to approved equipment or material that has been evaluated to meet appropriate testing and standards.

liter A metric measure of capacity equal to 61.022 cubic inches, or 2.113 American pints.

litharge A pipe thread sealant of lead powder mixed with glycerine.

lithium bromide A chemical compound (salt) with the ability to absorb water and cool it by evaporation.

lithologic log A log of the structure and content of soils and rock recorded during a drilling or excavating operation.

litigation The process by which parties submit their disputes to the jurisdiction and procedures of federal or state courts for resolution.

litmus A piece of test paper containing a chemical indicator that changes color when exposed to liquids. Litmus paper is used to determine acidity or alkalinity values expressed as pH variations.

live **1.** Descriptive of a wire or cable connected to a voltage source. **2.** A descriptive term for a room with a very low level of sound absorption.

live-front Descriptive of an item of electrical equipment constructed so that one or more of its *live parts* can be touched from the front of the device.

live load The load superimposed on structural components by the use and occupancy of the building, not including the wind load, earthquake load, or dead load.

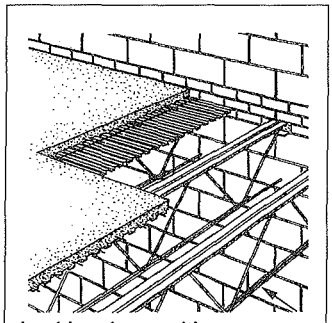
live part Any part or component of an electrical device or system that is engineered to function at a voltage level different from that of the earth.

live steam Steam that has not condensed and still retains its energy, such as steam issuing from a boiler or radiator.

living unit A dwelling place or any self-contained area or part thereof that comprises complete living facilities for a family, including space and fixtures for sleeping, cooking, eating, living, bathing, and sanitation.

load **1.** The force, or combination of forces, that act upon a structural system or individual member. **2.** The electrical power delivered to any device or piece of electrical equipment. **3.** The placing of explosives in a hole.

load-bearing partition A partition that can support a load in addition to its own weight.

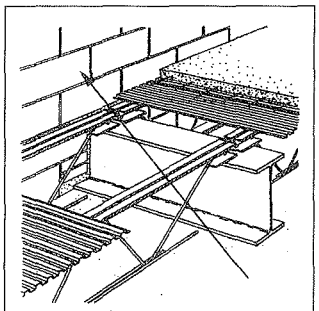


load-bearing partition

L

load-bearing tile A form of tile used in masonry walls that is capable of supporting loads superimposed on the wall structure.

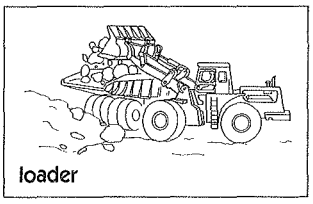
load-bearing wall A wall specifically designed and built to support an imposed load in addition to its own weight.


load-bearing wall

load binder A device used to tighten chains that are holding loads in place on a truck bed.

load center *See* **panel box.**

loader A construction machine used to push or transport earth, crushed stone, or other construction materials. The bucket, or scoop, is located on the front of the vehicle and can be raised, lowered, or tilted.


loader

load factor **1.** In structural design, the factor applied to the working load to determine the design's ultimate load. **2.** In a drainage system, the percentage of the total flow that occurs at a particular location in the system. **3.** A ratio of the average air-conditioning load on a system to the maximum capacity.

load-indicating bolt A bolt that permits measurement of its tension. Upon tightening, a small projection on the bolt compresses and is measured by a feeler gauge.

loading cycles A calculation of the number of repetitions of load that a structure is expected to support in its lifetime. The calculation is used as a determining criterion in measuring the structure's fatigue strength.

loading dock leveler Typically, an adjustable mechanized platform built into the edge of a loading dock. The platform can be raised, lowered, or tilted to accommodate the handling of goods or material to or from trucks.

loading dock seal A flexible pad installed around the door of a loading dock to form a tight seal between the receiving doors and the opening of a truck that is backed into the dock.

loading hopper A hopper in which concrete or other free-flowing material is placed for loading by gravity into buggies or other conveyances.

loading platform (loading dock) A platform adjoining the shipping and receiving door of a building, usually built to the same height as the floor of the trucks or railway cars on which shipments are delivered to and from the dock.

loading ramp A fixed or adjustable inclined surface that adjoins a loading platform and is installed to ease the conveyance of goods between the platform and the trucks or railway cars that transport goods.

loam Soil consisting primarily of sand, clay, silt, and organic matter.

loan-to-value ratio (LVR) The percentage that a lender will lend a borrower against the appraised value of a property.

local area network (LAN) A type of distance-limited communications network used for data transfer, text, facsimile, and video applications.

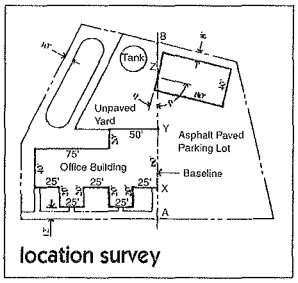
local buckling In structures, the failure of a single compression member. The local failure may cause the failure of the whole structural member.

local lighting Lighting used to illuminate a limited area without significantly altering the illumination of its wider surroundings.

location factor An instantaneous (current—has no escalation or currency exchange projection) overall total project factor for translating the summation of all project cost elements of a defined construction project scope of work, from one geographical location to another. Location factors include given costs, freights, duties, taxes, field indirects, project administration, and engineering and design. Location factors do not include the cost of land, scope/design differences for local codes and conditions, and the cost for various operating philosophies. *

location plan *See* **site plan.**

location survey The establishment of the position of points and lines on an area of ground, based on information taken from deeds, maps, and documents of record, as well as from computation and graphic processes.



location survey

locator One who locates land, or sets boundaries of a mining claim.

lock bevel In a door lock, the angled surface of the latch bolt.

lock corner A corner held together by interlocking construction of adjacent members, such as the dovetail joint on the front panel of a drawer.

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Locke level A *hand level.*

lock face The surface of a mortise lock, which remains visible in the edge of a door when the lock is installed.

lock front On a door lock or latch, the plate through which the lock or latch bolt projects.

lock front bevel A lock front that is installed flush with the beveled edge of a door.

locking device In scaffolding, a device used to secure a cross brace to the frame or panel.

locking pliers Pliers with clamping jaws that can be tightened with a screw attachment on one handle. A common brand name is Vise Grip®.

lock jamb *See* **strike jamb.**

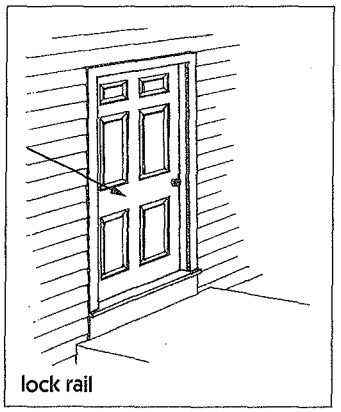
lock joint *See* **lock seam.**

lock keeper The box on a door jamb that accommodates the extending bolt on a lock.

locknut **1.** A special nut that locks when tightened so that it will not come loose. **2.** A second nut used to prevent a primary nut from loosening.

lock plate *See* **strike plate** *and* **box strike plate.**

lock rail On a door, the horizontal structural member situated between the vertical stiles at the same height as the lock.



lock rail

lock reinforcement A metal plate installed inside the lock stile or lock edge of a door and designed to receive a lock.

lock reinforcing unit In a metal door, a metal device that houses and supports a lock.

locksaw A saw used for cutting the seats for locks in doors. The saw is designed with a tapering blade that can be flexibly maneuvered. *See also* **compass saw.**

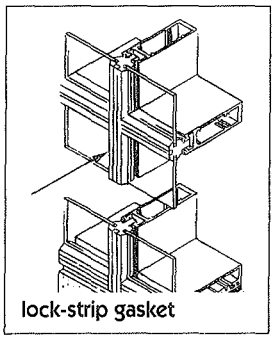
lock seam (lock joint) In sheet metal roofing, a joint or seam formed by bending the two adjoining edges over in the form of hooks, which are interlocked. The hooks are then pressed down tightly to form a seam.

lockset A complete system including all the mechanical parts and accessories of a lock, such as knobs, reinforcing plates, and protective escutcheons.

lock stile (closing stile, locking stile, striking stile) On a door or a casement sash, the vertical member that closes against the jamb of the frame that surrounds it. The stile is located on the side away from the hinges.

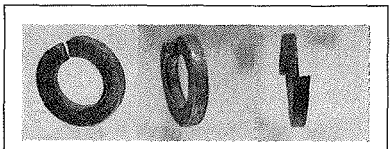
lock strike *See* **strike plate.**

lock-strip gasket (structural gasket) Typically, a thick and stiff black neoprene glazing gasket that holds and attaches panes of glass to each other or to the surrounding structure. During installation the gasket is tightened by the insertion of a wedge-like strip (the lock-strip) along the entire length of the gasket.



lock-strip gasket

lock washer A circular washer with a break that helps it keep a nut tightly in position.



lock washer

locus A small map included on a site plan that shows the general location of a project with respect to local highways, roads, and recognized landmarks.

locust The coarse-grained wood of the locust tree, which is used in construction because of its strength, hardness, durability, and resistance to decay.

loess Silty material that is deposited by the wind, but maintains significant cohesion due to the presence of clay or other cementitious materials.

loft **1.** Space beneath a roof of a building, most commonly used for storage of goods. **2.** In a barn, the upper space at or near the ceiling with an elevated platform on which hay and grains are stored. **3.** The upper space in a church or auditorium, sometimes enclosed and cantilevered, which accommodates a pipe organ or area for a choir. **4.** The space between the grid and the upper part of the proscenium in a theatre stagehouse. **5.** Within a loft building, the unpartitioned upper spaces visible from the floor immediately below. *See also* **attic** *and* **garret.**

loft building A commercial/industrial building containing large, open, unpartitioned floor areas.

loft ladder *See* **disappearing stair.**

logic panel Any electronic control panel that is designed to perform a specific control sequence.

log mean Refers to the value of insulation thickness for curved piping in order to produce the same resistance to heat flow as a straight, flat area.

L

long-and-short work In rubble masonry, quoins that are alternately placed horizontally and vertically.

long column In structural design, a column of sufficient slenderness to necessitate a reduction of its load-bearing capacity.

long float A concrete finishing float designed to be handled by two men.

long header A header that runs a wall's full depth.

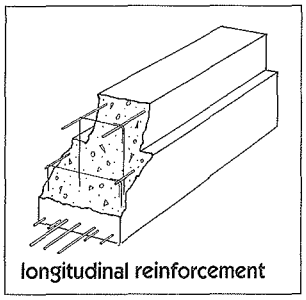
longitudinal bar *See* **longitudinal reinforcement.**

longitudinal bond In masonry, a bond in which a number of courses are laid only with stretchers and used principally for thick walls.

longitudinal bracing Bracing that extends lengthwise or runs parallel to the center line of a structure.

longitudinal joint Any joint parallel to the long dimension of a structure or pavement.

longitudinal reinforcement Steel reinforcement placed parallel to the long axis of a concrete member.



longitudinal reinforcement

long lead items Those components of a system or piece of equipment for which the times to design and fabricate are the longest and for which an early commitment of funds may be desirable or necessary in order to meet the earliest possible date of system completion. *

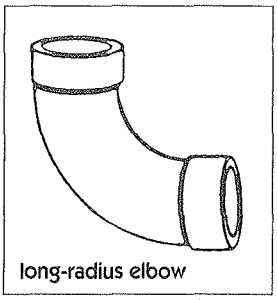
long lead procurement Early procurement of material or parts to accommodate early use or long procurement spans. Contractors may choose to seek buyer-approved pre-award commitments of funds to meet long lead requirements. *

long-life lamp An incandescent lamp that has a lower luminous output than standard lamps of equal wattage, but a longer design life than the value set for lamps of its general class.

long measure *See* **linear measurement.**

long nipple (space nipple) A nipple with a long unthreaded middle section.

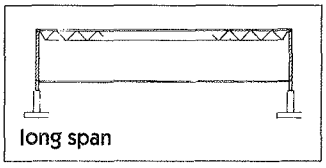
long-radius elbow In plumbing, a pipe elbow with a larger radius than is standard. The elbow is designed to mitigate losses from friction and to facilitate the flow of liquids through the pipe.



long-radius elbow

long screw A nipple, usually measuring 6" long, with one thread that is longer than average.

long span **1.** The distance between supports in a structure, usually spanned by a truss or heavy timber. **2.** A logging operation where logs are yarded over a long distance.



long span

long span lintel A lintel used in light-gauge metal stud framing that has a steel channel for extra support over an opening.

long span steel joist A structural framing joist that provides large open areas within a building. It is usually a very deep beam due to the nature of the building system.

long span structure A building that uses long span roof joist systems in its design to create large unobstructed areas within the structure, e.g., a domed stadium.

long-term liabilities Debts of a business that are not due for at least one year.

long ton A unit of weight equal to 2,240 pounds (1,016 kilograms).

lookout A short wooden brace or block that supports an overhanging portion of a roof.

loop **1.** Sometimes called a local line or subscriber loop, the local circuit between a subscriber station and the exchange. **2.** *See* **loophole** *and* **circuit vent.**

loophole An aperture in a wall or parapet to provide air, light, and a view of the outside.

looping in In interior electrical wiring, the connection of an outlet by two conductor cables, one to and one from the outlet. Splices (junction boxes) are thus avoided, but more wire is used.

loop vent In plumbing, a venting configuration for multiple fixtures, as in a public restroom. The vent pipe is connected to the waste branch in only two places, before the first and last fixtures. The fixtures are not individually vented. The two vents are connected together in a loop, and the loop is then connected to the vent stack.

loose cubic yard (meter) A unit of measure with which to express the volume of loose soil, rock, or blasted earth material.

loose estimate An estimate that allows for contingencies, sometimes referred to as a "safe" or high estimate.

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loose-fill insulation Any of several thermal insulation materials in the form of granules, fibers, or other types of pieces that can be poured, pumped, or placed by hand.

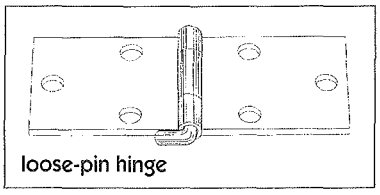
loose-joint hinge A door hinge that can be separated by lifting. The door can thus be removed without unscrewing the hinges.

loose knot A knot on a piece of lumber that is not fixed firmly and is likely to fall out.

loose lintel A lintel that is placed across a wall opening during construction to support the weight of the wall above, but which is not attached to another structural member.

loose material Soil, rock, or earth materials in loose form, whether blasted or broken by artificial or natural means.

loose-pin hinge A hinge, usually for a door, that can be separated by the removal of a vertical pin.



loose-pin hinge

loose-tongue (cross tongue) In a timber joint, the piece of wood that extends into the opposite member, thus strengthening a tenoned frame.

loose yards A term defining the cubic measurement of earth or blasted rock after excavation, as when loaded on a truck. Equal to a volume of 27 cubic feet.

lorymer *See* **larmier.**

Los Angeles Abrasion Test A test for abrasion resistance on concrete aggregates.

loss of prestress In prestressed concrete, the reduction in prestressing force which results from the combined effects of strain in the concrete and steel, including slip at anchorage, relaxation of steel stress, frictional loss due to curvature in the tendons, and the effects of elastic shortening, creep, and shrinkage of the concrete.

loss of use Insurance coverage for any financial loss that may be incurred while property, damaged or destroyed by an insured hazard, is being replaced or repaired.

loss on ignition The percentage loss in weight of an ignited sample to constant weight at a specified temperature, usually 900°C –1,000°C.

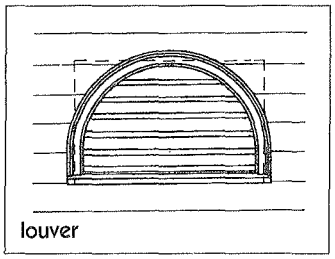
loss payable clause A clause in insurance policies protecting the financial institution that holds the mortgage on the insured property. Any payment that the insurance company makes will be made payable to both the policyholder and the lender.

lot A parcel of land that is established by a survey or delineated on a recorded plot.

lot line The limit or boundary of a land parcel.

lot size The number of units in the lot. *

louver A framed opening in a wall, fitted with fixed or movable slanted slats. Though commonly used in doors and windows, louvers are especially useful in ventilating systems at air intake and exhaust locations.



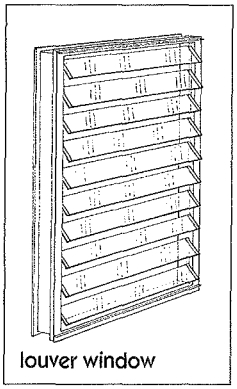
louver

louver board (luffer board) One of multiple narrow boards or slats on a louver door, window, or ventilator. The boards are installed at an angle.

louver door A door or louver, usually assembled with its blades in a horizontal position, which allows air to pass through the door when it is closed.

louver shielding angle The angle, measured from the horizontal, above which objects are concealed by a louver.

louver window A window composed of a series of sloping, overlapping blades or slats that may be adjusted to admit varying degrees of air or light.



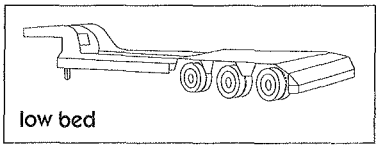
louver window

louvre *See* **louver.**

low-alkali cement A cement containing smaller than usual amounts of sodium and/or potassium. Its use is necessary with certain types of aggregate that would otherwise react with high levels of alkali.

low-alloy steel Steel composed of less than 8% alloy.

low bed (low boy) A flatbed trailer used to carry heavy equipment.



low bed

low bid In bidding for construction work, the lowest price submitted for performance of the work in accordance with the plans and specifications.

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L

low-carbon steel (mild steel) Steel with less than 0.20% carbon. This type of steel is not used for structural members, due to its ductility. It is good for boilers, tanks, and objects that must be formed.

low consumption toilet (low-flow) Any toilet designed to use 1.6 gallons of water or less per flush.

low-density concrete Any concrete with a unit weight lower than 50 pounds per cubic foot.

low-density polyethylene (LDPE) A widely used thermoplastic that is inexpensive and easy to process. Low density polyethylene is the softest and most flexible version of this material, and is commonly used in packaging and injection molding.

low emissivity glass (low e glass) Insulating glass with a coating or special component that keeps heat in during winter and out during summer. Low e glass reflects internal long wave radiation, as that from a heat source, back into a home while keeping the short wave radiation of the sun out.

lowest qualified bidder *See* **lowest responsible bidder.**

lowest responsible bidder (lowest qualified bidder) The bidder who has submitted the lowest legitimate bid. The owner and architect must agree that this person (or firm) is capable of performing the work covered by the bid proposal.

lowest responsive bid The lowest bid that meets the requirements set forth in the bid proposal.

low-flow toilet An economically and environmentally efficient toilet that uses less water per flush than a conventional model.

low-hazard contents Building contents with such an exceptionally low level of combustibility that they are unable to propagate or sustain a fire in and of themselves.

low-heat cement (type IV cement) A special cement that minimizes the amount and rate of heat generation during hydration (setting). Strength is also achieved at a slower rate. Use is limited to structures involving large masses of concrete, such as dams, where the heat generated would be excessive if normal cement were used.

low impact development The integration of site ecological and environmental goals and requirements into all phases of urban planning and design from the individual residential lot level to the entire watershed.

low-iron glass Glass with a low iron content that has a higher visible transmittance and thus a greater ability to collect solar energy.

low-lift grouting The common and simple method of unifying concrete masonry, in which the wall sections are built to a height of not more than 4' (1.2 meters) before the cells of the masonry units are filled with grout.

low-pressure mercury lamp A mercury-vapor lamp, including germicidal and fluorescent lamps, whose partial pressure during operation is no more than 0.001 atmosphere.

low-pressure sodium lamp A lamp that produces light via radiation from sodium vapor. Because it renders most colors gray, it is considered a monochromatic light source.

low-pressure steam curing *See* **atmospheric-pressure steam curing.**

low steel A characteristically soft steel that contains less than 0.25% carbon.

low-temperature supply air Supply air below 50°F.

low VOC Building materials and finishes that exhibit low levels of off-gassing, the process by which volatile organic compounds (VOCs) are released from the material, impacting health and comfort indoors and producing smog outdoors. Low (or zero) VOC is an attribute to look for in an environmentally preferable building material or finish.

low-voltage lamp A lamp, typically compact halogen, that operates at 12V and requires a transformer.

low-voltage lighting control A remote control system that controls a number of lighting circuits. Lights are turned on or off automatically by electronic controls located within the low-voltage lighting control panel.

L runner The fastener used at the base of solid gypsum lath.

L-shore A shore with an L-head. *See also* **L-head.**

lubricant A substance used to minimize friction between two areas.

Lucite The trade name for a strong, clear plastic material manufactured in sheets and other forms.

luffing boom (live boom) A crane boom with the ability to move vertically while slewing 360 degrees.

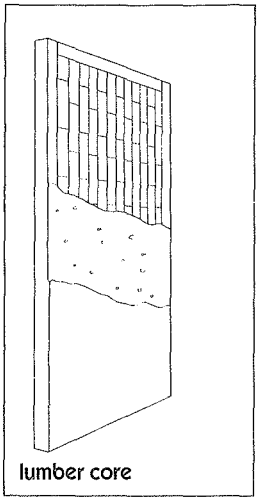
lug **1.** Any of several types of projections on a piece of material or equipment. Such projections are used during handling and installation. **2.** A connector for fastening the end of a wire to a terminal.

lug bolt A bolt with a flat iron bar welded to it.

lug sill A windowsill or doorsill with ends that extend beyond the window or doors, converging with and built into the masonry of the jambs.

lumber Timbers that have been split or processed into boards, beams, planks, or other stock that is to be used in construction and is generally smaller than heavy timber.

lumber core (stave core) Wood core made up of narrow strips of lumber glued together at the edges and commonly held together by a veneer, which is glued to both faces with its grain at 90° to that of the core wood.


lumber core

lumber, matched Lumber whose side or end edges are cut to form tongue-and-groove joints that fit together when laid side by side or end to end.

lumen A unit of luminous flux that defines the quantity of light.

lumen-hour A measurement of light equal to one lumen for one hour.

lumen method A simple way to calculate the luminaires required to achieve a desired lighting intensity for an area.

luminaire A lighting fixture, with or without the lamps in it.

luminaire dirt depreciation *See* **lamp depreciation.**

luminaire efficiency In lighting calculations, a special ratio of the light emitted by a light fixture to the light emitted by the lamps inside the fixture.

luminaire shielding Any device such as a louver, lens, or baffle that controls or directs light from a lamp.

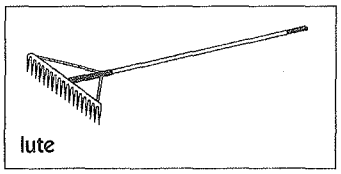
luminous ceiling An area lighting system, mounted on a ceiling, that has a surface of light-transmitting materials with light sources installed above it.

luminous paint A phosphorescent or flourescent paint that glows in the dark after exposure to direct light. Has many safety applications, including use on light switch plates, exit signs, stair edges, and fuse boxes.

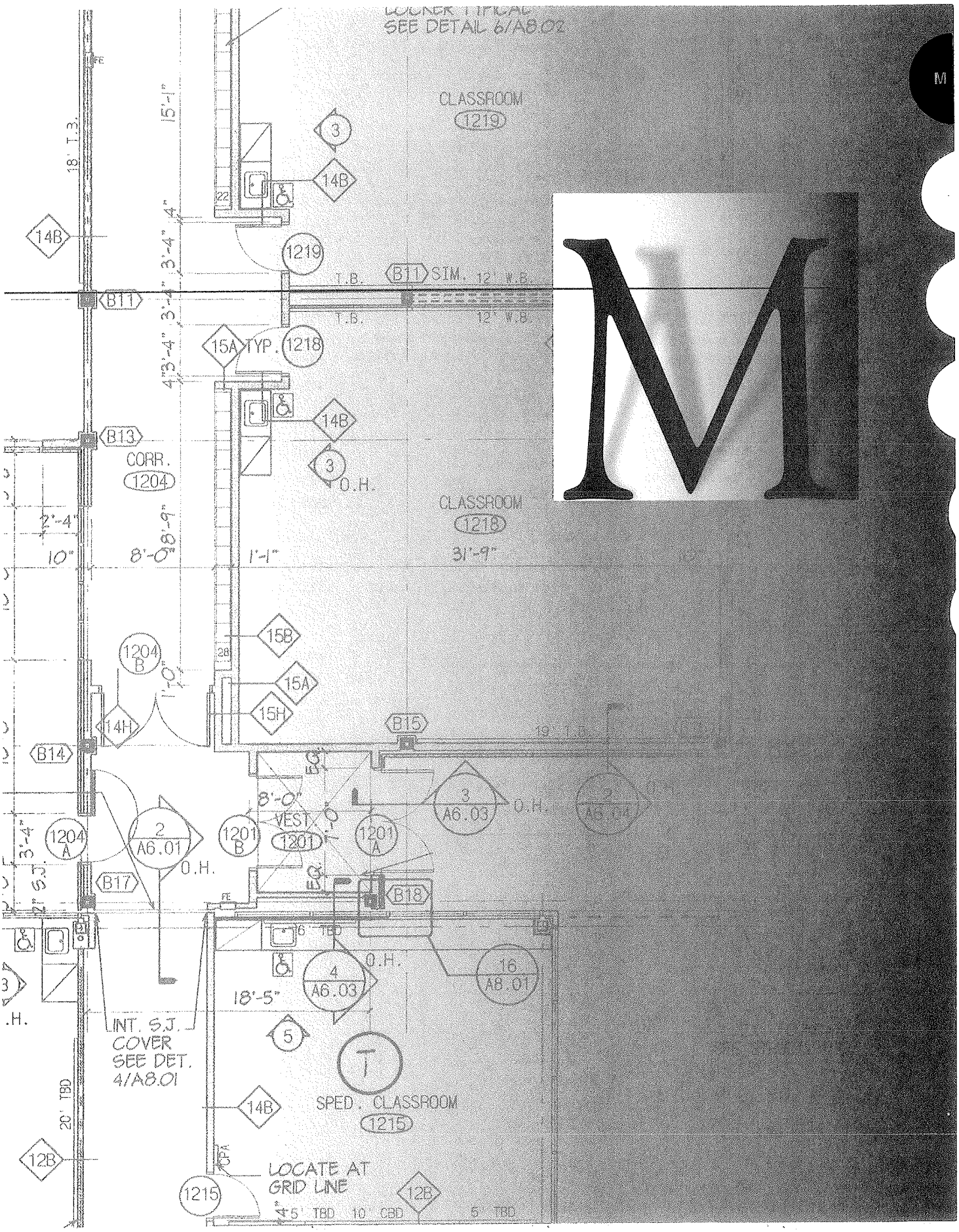
lump sum An item or category priced as a whole rather than broken down into its elements.

lump sum agreement *See* **stipulated sum agreement.**

lute **1.** A long-handled scraper used to level asphalt or wet concrete. **2.** A straightedge used to strike off clay from a brick mold.


lute

lux A measure of illumination striking a surface. One lux is equal to one lumen per square meter.



LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
3
14B
22
1219
T.B.
B11 SIM.
12' W.B.
B11
15A TYP.
1218
14B
3
O.H.
B13
CORR.
1204
CLASSROOM
1218
2'-4"
10"
8'-0"
8'-9"
1'-1"
31'-9"
15B
28
1204 B
1'-0"
15A
15H
14H
B15
19' T.B.
B14
EQ.
8'-0"
VEST.
1201
1'-0"
3
A6.03
O.H.
2
A6.04
1204 A
2
A6.01
O.H.
1201 B
1201 A
3'-4"
21' S.J.
B17
B18
6' TBD
4
A6.03
O.H.
16
A8.01
18'-5"
INT. S.J.
COVER
SEE DET.
4/A8.01
5
SPED. CLASSROOM
1215
14B
20' TBD
12B
LOCATE AT
GRID LINE
1215
12B
5' TBD
10' CBD
5' TBD
18' T.B.
15'-1"
4"
3'-4"
3'-4"
4"
3'-4"

M Abbreviations

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

m meter

M thousand, bending moment (on drawings)

ma milliampere

MA mechanical advantage, mixed air

MAC media access control; message authentication code; moves, adds and changes

mach machine, machinist

mag magazine, magneto

MAN manual, metropolitan area network

M&V measurement (or monitoring) and verification

manuf manufacture

mas masonry

MAT mixed air temperature

mat, matl material

max maximum

mb millibar

MBF 1,000 board feet

MBH 1,000 Btus per hour

MBM, mbm thousand feet board measure

MBMA Metal Building Manufacturer's Association

MC moisture content, metal-clad, mail chute

MDF medium density fiberboard

MDO medium density overlay

me marbled edges

ME mechanical engineer

meas measure

mech mechanic, mechanical

med medium

memb member

MEMS micro-electro-mechanical systems

mep mean effective pressure

MEP mechanical, electrical, plumbing

MER mechanical equipment room

MERV minimum efficiency reporting value

met metallurgy

mezz mezzanine

mf mill finish

MF04 MasterFormat 2004

mfg manufactured

Mg magnesium

MG motor generator, mixed grain

mgt management

MH manhole

MHW mean high water

mi mile

mid middle

min minimum, minor, minute

MIS Management Information System

misc miscellaneous

mix, mixt mixture

mks meter-kilogram-second

ml, ML material list

mldg, MLDG molding

MLS multiple listing service

MLW mean low water

MMF magnetomotive force

Mn manganese

MN magnetic North, main

Mo molybdenum

MO month

mod, modif modification

MOD model

MOE modulus of elasticity

MOL maximum overall length

MOT motor

MOU memorandum of understanding

mp melting point

mpg miles per gallon

mph miles per hour

MPOE minimum point of entry

MPS master production schedule, materials and resources

mr moisture-resistant

MRL machine room less (elevator systems)

MRO maintenance, repair and operations

MRP manufacturing resource planning, materials resource planning

MRT mean radiant temperature

MSDS Material Safety Data Sheet

MSF per 1,000 square feet

MSG Model Support Group of the International Alliance for Interoperability

msl mean sea level

MSR machine stress rated

MTBF mean time between (system or device) failures

mtg, mtge mortgage

MTTR mean time to restore or repair (a system or device)

mult multiple, multiplier

mun, munic municipal

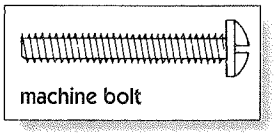
MUTOA multi-user telecommunications outlet assembly

mxd mixed (lumber industry)

M

macadam A method of paving in which layers of uniformly graded, coarse aggregate are spread and compacted to a desired grade. Next, the voids are completely filled by a finer aggregate, sometimes assisted by water (water-bound), and sometimes assisted by liquid asphalt (asphalt-bound). The top layers are usually bound and sealed by some specified asphaltic treatment.

machine bolt A threaded straight bolt usually specified by gauge, thread, and head type.

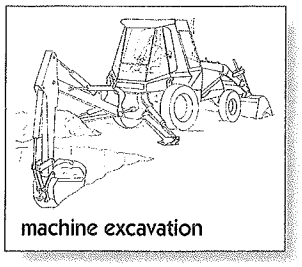


machine bolt

machine burn Any darkening or burning of a material during milling or other machining.

machined A term used to describe a smooth finish on a metal surface.

machine excavation Digging or scooping performed by a machine, as opposed to that performed by hand.

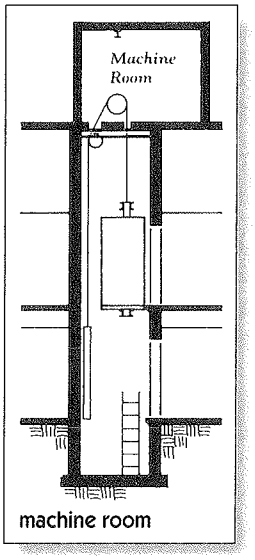


machine excavation

machine finish A finish on a stone surface produced by a smooth-edged planer.

machine rating A standard describing the power that an electric motor is designed to produce.

machine room The room in an elevator system that is designed to house an elevator-hoisting machine and control equipment.



machine room

machine room-less elevator systems Elevators that do not require an area to house equipment.

machine stress-rated lumber Lumber that is rated mechanically by a machine that evaluates its structural properties.

made ground Land or ground created by filling in a low area with rubbish or other fill material. Often, such created land is not suitable for building without the use of a pile foundation.

Madison clips (battleships) In electrical work, thin metal clips used to fasten switches and receptacles. Common in old electrical work.

magazine A building for storage of explosives.

magnesia Finely processed magnesium oxide.

magnesite flooring A finished surface material consisting of magnesium oxide, sawdust, and sand combined in various proportions, and subsequently applied to integral concrete floors.

magnesium A lightweight silver-colored metal that is highly flammable and immune to alkalies and is usually used in an alloy. A scale-forming element found in some boiler feed water.

magnesium float A hand tool with a flat magnesium base used to finish concrete flatwork.

magnetic bearing The horizontal angle from magnetic north for a given survey line.

magnetic catch A door catch that uses a magnet to hold it in the closed position.

magnetic driver A tool, employing a magnet, used to hold and drive nails.

magnetic overload relay An overcurrent protection switch or fuse.

magnetic switch An electric switch using an electromagnet for operation.

magnetite A naturally occurring, black iron oxide used as an iron ore and as a high-density aggregate in concrete.

mahlstick (maulstick) A long wooden stick, often padded, that painters use to support and steady the hand while painting ornamental work.

mahogany A straight-grained, medium-density wood originating in the West Indies and Central and South America and used principally in interior plywoods and cabinetry.

mail chute A shaft for dropping mail from upper floors of a building to a central collection box.

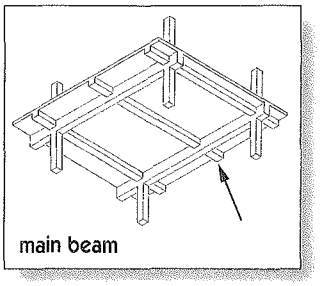
mail slot A slot in a wall or door for receiving incoming mail. The slot usually has a cover to prevent draft.

main **1.** In electricity, the circuit that feeds all sub-circuits. **2.** In plumbing, the principal supply pipe that feeds all branches. **3.** In HVAC, the main duct that feeds or collects air from the branches.

main bar (main reinforcement) A reinforcing bar in a concrete member designed to resist stresses from loads and moments, as opposed to those designed to resist secondary stresses.

M

main beam A structural beam that transmits its load directly to columns, rather than to another beam.



main contractor *See* **prime contractor.**

main cross-connect The connecting point (in a structured cabling system) between entrance cables, equipment cables, and inter-building backbone cables.

main couple The main truss in a timber roof.

main divisions **1.** General contractor's work. **2.** Each subcontractor's work.

main member *See* **primary member.**

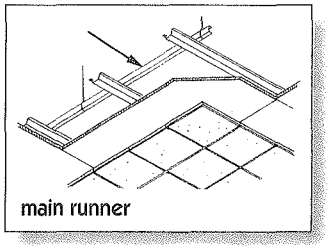
main object line A thick, heavy line in construction drawings that outlines the structure or object. Used for the main outlines of walls, floors, elevations, details, or sections.

main office expense A contractor's main office expense consists of the expense of doing business that is not charged directly to the job. Depending on the accounting system used, and the total volume, this can vary from 2 to 20 percent, with the median about 7.2 percent of the total volume.

main rafter A structural roofing member that extends from the plate to the ridge pole at right angles.

main reinforcement *See* **main bar.**

main runner In a suspended ceiling system, one of the main supporting members.



main sewer In a public sanitary sewer system, the trunk sewer into which branch sewers are connected.

main stack In plumbing, a vent that runs from the building drains up through the roof.

maintainer A small motor grader used for driveways and for repairing the fine grade inside buildings.

maintenance The process of implementing measures to conserve a site, building, structure, or object over an extended period of time to prevent deterioration.

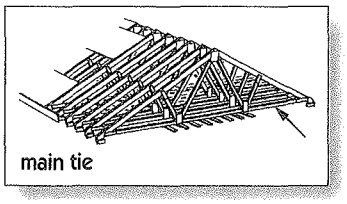
maintenance bond A contractor's bond in which a surety guarantees to the owner that defects of workmanship and materials will be rectified for a given period of time. A one-year bond is commonly included in the performance bond.

maintenance curve For a light source, a plot of lumens vs. time.

maintenance factor In lighting calculations, the ratio of illumination of a light source or lighted surface at a given time to that of the initial illumination. This factor is used to determine the depreciation of a lamp or a reflective surface over a period of time.

maintenance period The period after completion of a contract during which a contractor is obligated to repair any defects in workmanship and materials that may become evident. *See also* **maintenance bond.**

main tie In a roof truss, the bottom straight member that connects the two feet.



main vent *See* **vent stack.**

major diameter The largest diameter of a screw thread.

makeup air unit A unit to supply conditioned air to a building to replace air that has been removed by an exhaust system or by combustion.

makeup water Water that is added to a system to replace water that has been lost through evaporation or leaking.

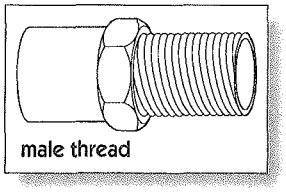
malachite A copper-bearing ore also used as ornamental stone.

male connector An electrical connector with contacts that fit into a female connector.

male nipple A short length of pipe with threads on the outside of both ends.

male plug An electrical plug that inserts into a receptacle.

male thread A thread on the outside of a pipe or fitting.



mall **1.** A shaded or covered walk for pedestrians that is often lined with shops. **2.** The median strip dividing a highway.

malleability The property of a metal that enables it to be hammered, bent, and extruded without cracking.

malleable iron Cast iron that has been heat-treated to reduce its brittleness.

mallet A small wooden hammer used to drive another tool, such as a chisel or a gouge.

mallet-headed chisel A steel mason's chisel with a rounded head.

mall front A glazed store front facing an enclosed mall.

management host computer A computer that serves as a management-machine interface in a building automation system.

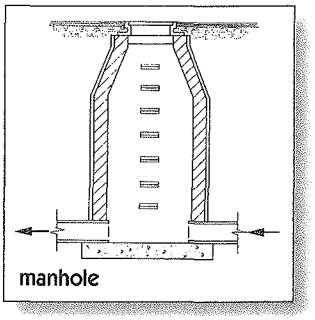
managing partner A partner who is responsible for a wide variety of day-to-day decisions on behalf of the partnership.

mandate A court-authorized command or direction that a person is bound by law to obey.

mandrel A retractable insert for driving a steel pile.

manganese An alloy that is added to most steels as a hardener and deoxidizer.

manhole A vertical access shaft from the ground surface to a sewer or underground utilities, usually at a junction, to allow cleaning, inspection, connections, and repairs.


manhole

manhole block Concrete block cast with curved faces and used to form a cylindrical manhole.

manhole cover A removable cast iron cover for a manhole. As many manholes are in paved areas, the cover must be strong enough to bear the weight of traffic.

manhole frame The cast iron frame into which a manhole cover fits.

manhole invert In a sewer manhole, the elevation or grade of the inlet or outlet pipes.

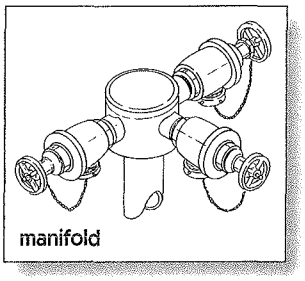
manhole removal An item of work in site preparation that includes demolition and/or filling in an existing manhole.

manhole step A preformed metal or fiberglass step that is permanently fixed to the inside of a manhole or catch basin.

man-hour A unit describing the work performed by one person in one hour.

manifest **1.** A list of the contents or the cargo of any shipment. **2.** A specific form used by a generator of hazardous waste to track the waste from the site of generation to the site of final treatment or disposal.

manifold A distribution or collection pipe or chamber having one inlet and several outlets, or one outlet and several inlets.


manifold

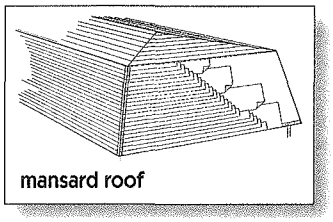
manipulative joint A joint in copper tubing where the ends of the tubing are belled outwards.

man lift A motorized scaffold characterized by a bucket or platform. Motorized buckets, also known as "cherry pickers," can hold up to three people. Motorized platform capacity is limited only by weight.

man lock A chamber in which personnel pass from one environmental pressure to another, such as when entering or leaving a caisson.

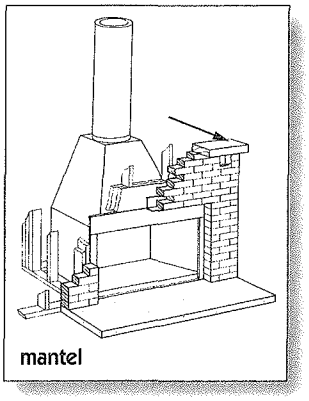
manometer A U-shaped tube filled with a liquid used to measure the differential pressure of gasses.

mansard roof A roof with a double pitch on all four sides, the lower level having the steeper pitch. *See also* **curb roof.**


mansard roof

mansion An extremely large and imposing residence.

mantel (mantelpiece) The shelf above and the finished trim or facing around a fireplace.


mantel

manual A system of controls that can be operated by hand.

manual batcher A batcher with gates and scales that can be operated by hand.

manual fire alarm box A device that initiates an alarm signal when activated by hand.

manual fire pump A pump for water supply to a sprinkler or standpipe system that must be activated by hand.

Manual of Practice Documents containing information about preparing written and graphic construction documents and coordinating drawings and specifications.

M

manufactured homes (mobile homes) Manufactured homes are factory-finished inside and out, and usually have wheeled chassis.

manufactured sand A fine aggregate that is produced by crushing stone, gravel, or slag.

manufactured wood A joist, truss, beam, or other product made from smaller pieces of wood, usually glued together. Manufactured wood can provide greater strength and has the environmental benefit of using waste material rather than virgin lumber.

manufacturer's specifications Documented installation or maintenance instructions produced by a product manufacturer. Often these instructions must be carefully followed in order to maintain a product warranty.

map cracking *See* **checking.**

maple A hardwood that grows in North America and Europe and has a dense uniform texture. Maple is used primarily in flooring and furniture.

marble A metamorphic rock, chiefly calcium carbonate, with various impurities that give it distinctive colors. Marble is used in the architectural facing of both interior and exterior walls.

marbling The application of paints to a surface to give it the appearance of marble.

marezzo A cast imitation of marble used extensively for commode tops and wall facing.

margin **1.** The amount added to the cost of materials as a markup. **2.** An edge projecting over the gable of a roof. *See also* **verge.** **3.** The space between a door and the jambs. **4.** The measurement of the exposure of overlapped shingles.

marginal bar A glazing bar that separates a large glazed area in the middle of a window from smaller panes around the outside.

margin draft In stonemasonry, a dressed border on the edge of the face of a hewn stone.

margin light *See* **side light.**

margin strip In wood flooring, a narrow strip that forms a border.

margin trowel A plasterer's hand trowel on which the edges are turned up to finish plaster in corners.

marigold window *See* **rose window.**

marine glue A waterproof glue used on exterior plywoods and other wood-gluing applications where water may be encountered.

marine paint A paint containing elements to withstand exposure to sunlight, salt, and fresh water.

marine plywood A high-grade plywood especially adaptable to boat hull construction. All inner plies must be B grade or better.

marked face The front or veneer side of a wood building product.

marketable title A title that is free of any defects.

market approach An appraisal method that values property based on the market value of similar buildings sold in a recent time period in a comparable market area.

market price The price at which both seller and buyer are ready and willing to commit to a sale in the ordinary course of trade.

market value The monetary price upon which a willing buyer and a willing seller in a free market will agree to exchange ownership, both parties knowing all the material facts but neither being compelled to act. The market value fluctuates with the degree of willingness of the buyer and seller and with the conditions of the sale.*

marking gauge A carpenter's hand tool for scribing a line parallel to an edge. The gauge has a scribe on a rod whose distance is adjustable at the head, and rides along the edge of the material.

mark out To lay out the locations where cuts are to be made on lumber.

markup A percentage of other sums that may be added to the total of all direct costs to determine a final price or contract sum. In construction practice, the markup usually represents two factors important to the contractor. The first factor may be the estimated cost of indirect expense often referred to as *general overhead*. The second factor is an amount for the anticipated profit for the contractor.

marl A silty clay, found in the bottom of lake beds or swamps, with a high percentage of calcium carbonate.

marl brick A high-grade brick made from marl.

marquee A canopy extending out from an entrance for protection from the weather.

marquetry Mosaics of inlaid wood and sometimes ivory and mother of pearl.

martin lock A lock designed to be mortised into a door stile rather than mounted on the surface.

Martin's cement Similar to Keene's cement and used in plaster. This type of cement contains potassium carbonate as an additive in place of the alum used in Keene's cement.

mash hammer A heavy, short-handled mason's hammer with two striking faces. Used with a chisel to remove old mortar between bricks in preparation for repointing. This term is also used regionally as another name for a sledge hammer.

masking The temporary covering of areas adjacent to those to which paint is to be applied. Masking is applied either by sticking something on, as with masking tape, or by covering with a firm mask.

masking sound Background noise used to cover unwanted sounds, or provide privacy.

masking tape An adhesive-backed tape used for masking that comes in rolls and various widths. The tape is

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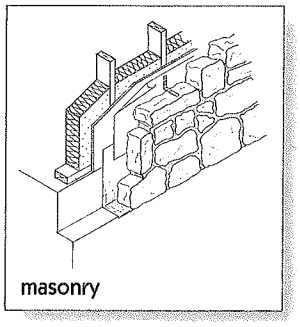
applied to the surface that is to be left unpainted and removed after the painting has been done, leaving a clean, straight line.

mason A workman skilled in the trade of masonry and/or the finishing of concrete floors.

Masonite® A trade name for a nonstructural building board about 1/4 inch thick, usually with one surface hard and smooth. Masonite can be either tempered or untempered, the tempered form being harder and more water-resistant.

masonry Construction composed of shaped or molded units, usually small enough to be handled by one man and composed of stone, ceramic brick, or tile, concrete, glass, adobe, or the like. The term *masonry* is sometimes used to designate *cast-in-place concrete*.


masonry

masonry anchor A metal device attached to a door or window frame that is used to secure it to masonry construction.

masonry block *See* **masonry unit.**

masonry bonded hollow wall A hollow masonry wall in which the inner and outer wythes (thicknesses) are tied together with masonry units rather than metal ties.

masonry cement A mill-mixed mortar to which sand and water must be added.

masonry drill *See* **star drill.**

masonry fill Insulation material used to fill the voids in masonry units.

masonry filler unit Masonry units that are placed between joists or beams prior to placing the concrete for a concrete slab. The filler unit is used to reduce the amount of concrete required and the weight of the slab.

masonry guard *See* **plaster guard.**

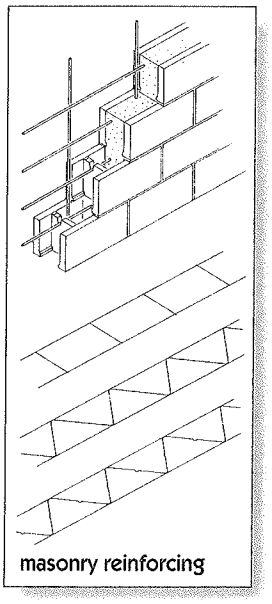
masonry insulation Sound and thermal insulation used in masonry walls. The material can be either rigid insulation, or an expanded aggregate such as perlite.

masonry nail A hard steel nail with a fluted shank that can be driven into masonry or concrete.

masonry panel A prefabricated masonry wall section that is constructed on the ground or in a shop and erected by crane.

masonry pointing Troweling mortar into a masonry joint after the masonry units have been laid.

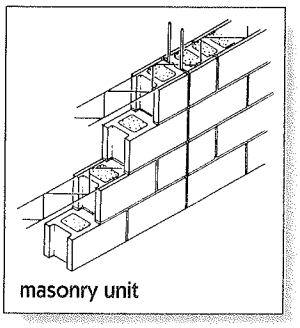
masonry reinforcing Refers to both the lateral steel rods or mesh laid between the courses of masonry units and the vertical rods that are grouted into the voids.


masonry reinforcing

masonry tie *See* **wall tie.**

masonry toothing Cutting or leaving out of alternate masonry units in a wall to provide a bond for new work.

masonry unit Natural or manufactured building units of burned clay, stone, glass, gypsum, concrete, etc.


masonry unit

masonry veneer A single wythe of masonry for facing purposes.

mason's adjustable multiple-point suspension scaffold A scaffold with a platform supported by bearers that are suspended from wire rope and overhead supports. This type of scaffolding is designed and operated in such a way as to permit the platform to be raised or lowered to any desired working position.

mason's ax *See* **ax hammer.**

mason's hammer A steel hammer having one square face for striking and one curved chisel face for trimming masonry units.

mason's joint A projecting V-shaped masonry joint.

mason's level Three separate levels set in a straight bar of wood or metal for determining level or plumb lines. The level is usually about 4 feet long.

mason's lime Lime used in preparing plaster or mortar.

mason's line A heavy string or cord used by masons to align courses of masonry.

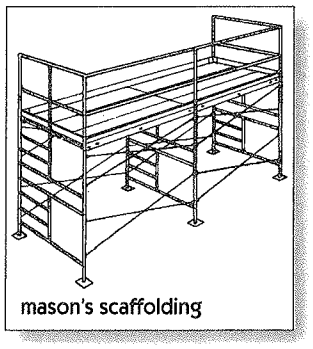
M

mason's measure A method of making a quantity survey of masonry units required for a job that counts corners twice and does not deduct for small openings.

mason's miter A corner formed out of a solid masonry unit, the inside of which looks like a miter joint. The joints are actually butt joints away from the corner.

mason's putty A lime-based putty mixed with Portland cement and stone dust, and used in ashlar masonry construction.

mason's scaffold A self-supporting scaffold for the erection of a masonry wall. The scaffold must be strong enough to support the weight of the masons, the masonry units, and the mortar tubs during construction.



mason's scaffolding

mass Property of a body that resists acceleration and produces the effect of inertia. The weight of a body is the result of the pull of gravity on its mass.

mass concrete Any volume of concrete with dimensions large enough to require that measures be taken to cope with generation of heat from hydration of the cement and attendant volume change, to minimize cracking.

mass curing Adiabatic curing in sealed containers.

mass diagram A plotted diagram of the cumulative cuts and fills at any station in a highway job. The diagram is used in highway design and to determine haul distances and quantities.

mass foundation A foundation that is larger than that required for support of the structure and one that is designed to reduce the effects of impact or vibration.

mass haul curve A curve developed from the mass diagram to display haul distances and quantities in a highway job.

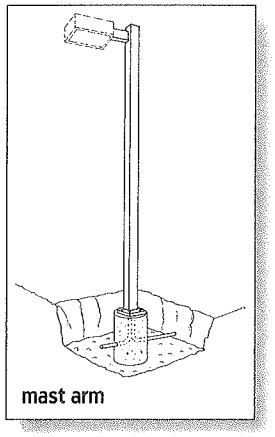
massing The general composition of the exterior of the major volumes of a structure.

mass profile A road profile graphically showing volumes of cut and fill between stations.

mass shooting The simultaneous detonation of explosives in blast holes, as opposed to detonation in sequence with delay caps.

mast The vertical member of a tower crane that carries the load lines.

mast arm The bracket attached to an exterior lamp post that supports a light.



mast arm

master A term applied to the third and highest level of achievement for a tradesman or mechanic, who by supervision, experience, and examination has earned a master's license attesting that he is a master of the trade and no longer requires supervision of his work, as is the case with the journeyman and apprentice levels.

Master Builder A term applied to one who performs the functions of both design and construction. The Master Builder approach to building construction has been a practice commonplace in much of the world for many centuries. In the United States, design and construction are traditionally seen as two separate and distinct functions.

master clock system An electrical system that synchronizes all the clocks in a building.

MasterFormat The name owned and created by the Construction Specifications Institute (CSI) of the United States and Construction Specifications Canada (CSC) denoting a numerical system of organization for construction-related information and data, based on a 16-division format.

master key A key that operates all the locks in a master-keyed series.

master-keyed lock A locking system intended for use in a series, each lock of which may be actuated by two different keys, one capable of operating every lock of the series, and the other capable of operating only one or a few of the locks.

master lease The basic lease between the owner of real estate and his tenant, which has priority over other leases and subleases that arise subsequently.

master list A list of a construction project's duty-free materials provided by an owner for use by the foreign country's customs officers at the port or ports of import.

master plan A zoning plan of a community classifying areas by use, or zoning code used as a guide for future development.

master plumber A plumber licensed to install and assume responsibility for contractual agreements pertaining to plumbing, and to secure needed permits. A journeyman plumber is licensed to install plumbing only under the supervision of a master plumber.

master schedule The most complete schedule for a project, it covers not only the construction portions, but also items that are not strictly construction-related, such as financing deadlines and community board reviews. The master schedule includes all the details of the project, but can be presented in a summary or executive-level format, with the ability to "drill down" into specific parts to get more detailed information, as needed.

MASTERSPEC® A widely used master specification system, developed by the American Institute of Architects, for design professionals and members of the construction and building industries.

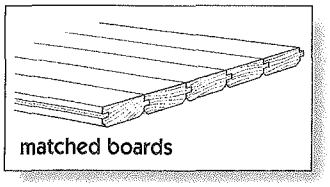
master switch An electrical switch that controls two or more circuits.

mastic **1.** A thick bituminous-based adhesive used for applying floor and wall tiles. **2.** A waterproof caulking compound used in roofing that retains some elasticity after setting.

mastic asphalt *See* **asphaltic mastic.**

mat **1.** A heavy, flexible cover for retaining blasted rock fragments that is usually made of wire, chain, or cordage. **2.** A grid of reinforcing bars.

matched boards Boards having been worked with a tongue on one edge and/or end, and a groove at the opposite edge and/or end to provide a tight joint when two pieces are fitted together.



matched lumber *See* **lumber, matched.**

matched siding *See* **drop siding.**

material Any product or substance specified for use in the construction of a project.

material cost The cost of everything of a substantial nature that is essential to the construction or operation of a facility, both of a direct or indirect nature. Generally includes all manufactured equipment as a basic part.*

material hose *See* **delivery hose.**

materialman A term applied to a person through whom the contractor may obtain the materials of construction. The materialman may be a manufacturer's representative or he may be a distributor or salesman of the tools, products, materials, assemblies, and equipment vital to the process of construction.

material safety data sheet (MSDS) A form published by manufacturers of hazardous materials to describe the hazards thereof.

materials cage The platform on a hoist used for transporting materials to upper floors.

materials lock The chamber through which materials are passed from one environmental pressure to another.

mat foundation A continuous thick-slab foundation supporting an entire structure. This type of foundation may be thickened or have holes in some areas and is typically used to distribute a building's weight over as wide an area as possible, especially if soil conditions are poor.

Matheson joint A bell-and-spigot joint in wrought iron pipe.

matrix In concrete, the mortar in which the coarse aggregate is embedded. In mortar, the cement paste in which the fine aggregate is embedded.

mat sink The depression at an entrance door into which a floor mat is placed.

matte A dull surface finish with low reflectance.

matte dip A treatment given to metals to produce a matte finish. The dip is a mixture of sulfuric and nitric acid and zinc oxide or sulfate.

matte-surfaced glass Glass that has been etched, sandblasted, or ground to create a surface that will diffuse light.

mattock A heavy digging tool with a hoe blade on one side of the head and a pick or ax on the other. *See also* **grub axe.**

mattress A grade-level concrete slab used to support equipment, such as transformers and air conditioning units, outside a building.

maturing The curing and hardening of construction materials such as concrete, plaster, and mortar.

maul A long-handled heavy wooden mallet. *See also* **beetle.**

maximum demand **1.** The greatest anticipated load on an electrical system during a given period of time. **2.** The greatest anticipated load on a sanitary waste system during a given period of time.

maximum density The largest unit weight to which a material may be compressed.

maximum power point (MPP) In photovoltaic systems, the point at which the most possible current is drawn from a cell, and the voltage subsequently drops off. The MPP changes slightly with temperature and intensity of sunlight. Most photovoltaic (PV) systems have power conditioning electronics, called maximum power point trackers (MPPT), that constantly adjust the voltage in order to maximize power output. Simpler systems operate at a fixed voltage close to the optimal voltage.

maximum rated load The greatest live load, plus dead load, which a scaffold is designed to carry, including a safety factor.

maximum size of aggregates The maximum size of aggregate permitted in a concrete mix design determined by the thickness of slab, distance from the reinforcing steel to the face of the concrete, and the method of placement.

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M

meager lime A low purity lime commonly used in plaster. Contains at least 15% impurities.

mean roof height The distance from average grade to average roof elevation.

means of egress Any continuous exit path from a building to the outside.

measurement A quantity survey from plans or a field survey of work to be done.

measurement standard Any standard set to ensure that measurements are recorded in a reliable, uniform manner.

measuring chain *See* **chain.**

mechanic **1.** A person skilled in the repair and maintenance of equipment. **2.** Any person skilled in a particular trade or craft.

mechanical advantage The ratio of the weight lifted by a machine divided by the force applied.

mechanical analysis *See* **sieve analysis.**

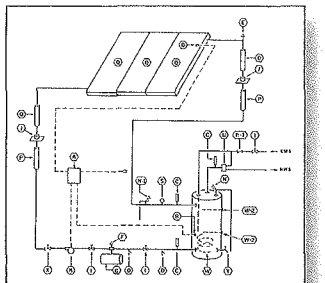
mechanical application The placing of plaster or mortar by pumping or spraying, as opposed to placement by hand with a trowel.

mechanical bond (mechanical connection) A bond formed by keying or interlocking as opposed to a chemical bond by adhesion, as plaster bonding to lath or concrete bonding to deformed reinforcing rods.

mechanical completion Unit is essentially complete for start-up operation and test run. All major work is completed. Minor work not interfering with operation may not be completed, such as punch list and minor touch-up work.*

mechanical draft The movement of air through a cooling tower by means of a fan or other mechanical device.

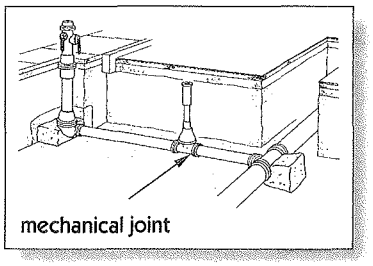
mechanical drawing **1.** A graphic representation made with drafting instruments. **2.** Plans showing the HVAC and plumbing layout of a building.



mechanical drawing

mechanical equivalent of heat A measure of mechanical energy that equates work (measured in Joules) and thermal energy (measured in calories). Equal to one Btu of heat and 778 foot-pounds.

mechanical joint A plumbing joint that uses a positive clamping device to secure the sections, such as a flanged joint using nuts and bolts.



mechanical joint

mechanical plan In construction documents, the print that shows piping, ductwork, HVAC equipment, and fire safety systems.

mechanical properties The properties of a material defining its elasticity and its stress-strain relationships.

mechanical room A room or space that houses HVAC, plumbing, and electrical equipment, as well as controllers for a building automation system.

mechanical trowel A machine with interchangeable metal or rubber blades used to compact and smooth plaster.

mechanics lien A lien on real property against the value of services or materials provided in the construction of a building or facility.

media filtration A physical process that removes suspended solids from an aqueous waste stream by forcing the fluid through a porous medium.

median The untraveled portion in the center of a divided highway that separates the traffic traveling in opposite directions. *See also* **mall (2.)**.

mediation A method of trying to resolve a dispute by the use of an impartial intermediary to suggest ways to settle the dispute, rather than imposing a decision upon the parties.

medium **1.** Any material used for the transmission of signals (radio, light, and sound waves). A medium could be cable or wire (radio); optical fiber (light); or water, air, or free space (sound). **2.** In paint, the liquid in which the other ingredients are suspended or dissolved.

medium carbon steel Steel with a carbon content from 0.3 to 0.6 percent.

medium curing asphalt Liquid asphalt composed of asphalt cement and a kerosene-type dilutent (thinner) of medium volatility.

medium curing cutback An asphalt that has been liquefied using a kerosene-based solvent.

medium density fiberboard (MDF) A fiberboard made of compressed wood fibers glued together. The smooth and stable surfaces of MDF provide an excellent substrate for painting or the application of decorative lamination or wood veneers. Commonly used to manufacture furniture, cabinets and flooring systems.

medium density overlay (MDO) An exterior-grade plywood or fiberboard with a fiber resin veneer on both sides. An ideal base for paint, MDO is commonly used for signs.

medium density polyethylene (MDPE) A widely used, inexpensive thermoplastic that is easy to process

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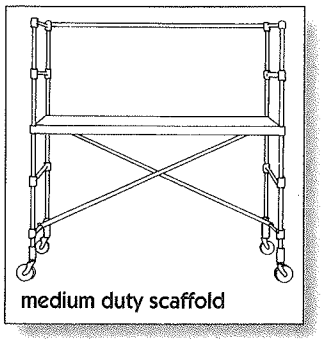
and has good to excellent chemical resistance. It is also soft and cannot be used in temperatures much above 150°F. MDPE combines the characteristics of low and high density polyethylene. It is less translucent than LDPE but more flexible than HDPE.

medium duty scaffold A scaffold designed and constructed to carry a working load not to exceed 50 psf.


medium duty scaffold

mediumscope A term established by the Construction Specifications Institute (CSI) to denote a section of the specifications that describes a family of related or integrated materials and workmanship requirements. (Narrowscope specifications denote a single product; broadscope specifications denote a section describing differing materials used in a related manner.)

medium-temperature water-heating system A water heating system with a boiler that heats water to between 250°F and 350°F before it is supplied to heating devices.

meeting of the minds A mutual agreement to the terms and conditions of a contract.

meeting posts With a double gate, the stiles that meet in the middle.

meeting rail With a double-hung window, the horizontal rails that meet in the middle.

meeting stile Any abutting stiles in a pair of doors or windows.

megabit Approximately one million bits.

megahertz One million hertz (Hz).

megalith A very large hewn or unhewn stone used in architecture or as a monument.

melamine A plastic laminate made by fusing a resin-impregnated surface material, under heat and pressure, into a dense, 5/8" board. Has superior scratch and water resistance and is not prone to delamination.

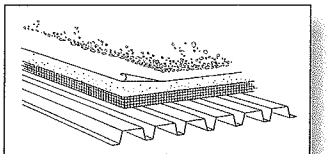
member A general term for a structural component of a building, such as a beam or column.

membrane The impervious layer or layers of material used in constructing a flat roof.

membrane curing A process of controlling the curing of concrete by sealing in the moisture that would be lost to evaporation. The process is accomplished either by spraying a sealer on the surface or by covering the surface with a sheet film.

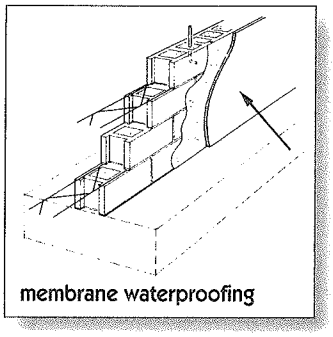
membrane fireproofing A lath and plaster layer applied as a fireproofing barrier.

membrane roofing A term that most commonly refers to a roof covering employing flexible elastomeric plastic materials from 35 to 60 mils thick, that is applied from rolls and has vulcanized joints. The initial cost of an elastomeric-membrane roof covering system is higher than a built-up roof, but the life cycle cost is lower.


membrane roofing

membrane theory In thin-shell design, the assumption that a shell has no strength in bending because of deflection, and, that the only stresses in any section are in tension, compression, and shear.

membrane waterproofing The application of a layer of impervious material, such as felt and asphaltic cement, to a foundation wall.


membrane waterproofing

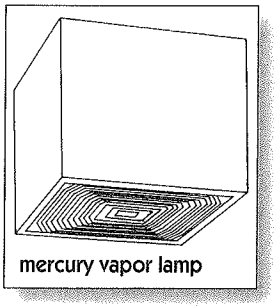
mending plate A steel strap with predrilled screw holes used to span and strengthen wood joints.

mensuration The determination of length, area, and volume.

merchant pipe A lightweight pipe that is up to 8% lighter than standard pipe.

mercury switch An electrical switch that contains mercury in a vial to make a silent contact.

mercury vapor lamp A high intensity discharge (HID) lamp that produces a blue-white light by creating an arc in mercury vapor enclosed in a globe or tube.


mercury vapor lamp

mesh **1.** A network of wire screening or welded wire fabric used in construction. **2.** The number of openings per lineal inch in wire cloth.

mesh reinforcing *See* **welded wire fabric.**

M

mesothelioma A rare form of cancer linked in almost all cases to asbestos exposure.

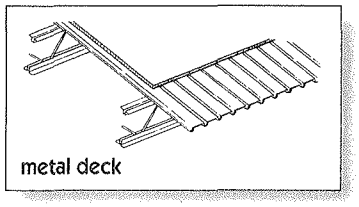
metal-clad cable *See* **armored cable.**

metal-clad fire door A flush door with a wood core or stiles and rails and heat-insulating material covered with sheet metal.

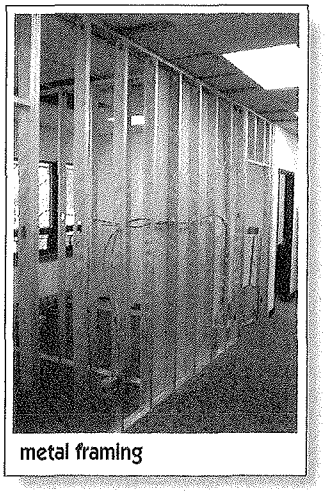
metal crating Open metal flooring for pedestrian or vehicular traffic used to span openings in floors, walkways, and roadways.

metal curtain wall A metal exterior building wall that is attached to the structural frame but does not support any roof or floor loads.

metal deck Formed sheet-metal sections used in flat-roof systems.


metal deck

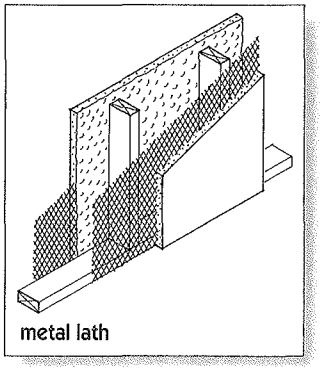
metal framing Metal framed partitions commonly used for fire-rated construction around columns and at beams.


metal framing

metal gutter Typically, a preformed aluminum or galvanized steel trough attached at the eaves of a sloped roof.

metal halide lamp A high intensity discharge (HID) lamp that produces light from a metal vapor such as mercury or sodium.

metal lath Any of a variety of metal screening or deformed and expanded plate used as a base for plaster. The metal lath is attached to wall studs or ceiling joists.


metal lath

metallic insulation A heat shield of thin metal applied over insulating board or sheathing.

metallic paint A paint containing metal flakes that reflect light.

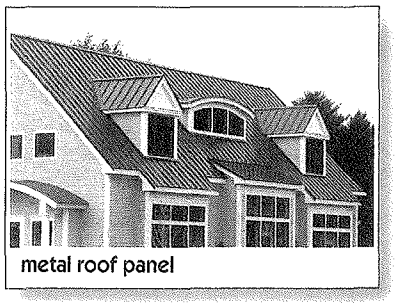
metallize To coat with a metal, usually by spraying with molten metal.

metal nosings Metal enclosures over the cut ends of acoustic lining sections in ductwork.

metal pan A form used for placing concrete in floors and roofs. A metal pan may also be made of molded fiberglass. *See also* **perforated metal pan.**

metal primer The first coat of paint on a metal surface. Primer usually contains rust inhibitors and/or agents to improve bonding.

metal roof panel A metal roof sheet that interlocks and has a weather exposure after installation less than 3 SF per sheet.


metal roof panel

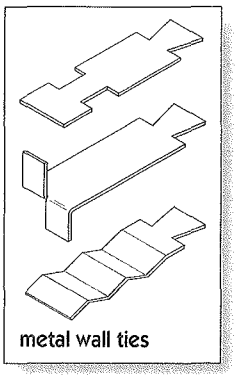
metal sash block A concrete masonry unit with a groove in the end into which a metal sash can fit.

metal track In metal stud construction, a U-shaped channel member used along floors, ceilings and walls as a brace for metal studs.

metal trim Grounds, angle beads, picture rails, and other metal accessories that are attached prior to plastering.

metal valley A roof valley gutter lined with sheet metal flashing.

metal wall ties The prefabricated metal strips that secure a masonry veneer to a structural wall.


metal wall ties

metal window A solid metal-framed window such as those used in factories.

metamerism The differences in the appearance of paint colors when exposed to different light sources.

metamorphic rock A rock mass whose crystalline structure, composition, or texture has been altered by great heat or pressure during its formation.

meter **1.** The base unit of length in the metric system of measurement. A meter is equivalent to 39.37 inches. **2.** A device for measuring the flow of liquid, gas, or electrical current. *See* **Table of Equivalents** *in Appendix.*

meter stop A valve in a water service line that cuts off the flow of water before it reaches the meter.

metes and bounds The limits or boundaries of property, as identified by measured distances and compass bearings.

methyl methacrylate (MMA) A rigid, transparent material widely used in the manufacture of acrylic resins and plastics, as well as in surface-coating resins, emulsion polymers, and impact modifiers.

metrication The process of converting to the metric system.

metric ton A weight equal to 1,000 kilograms or 2,205 pounds.

metropolitan area network A network that covers a city or a facility encompassing multiple buildings.

mezzanine A suspended floor, usually between the first floor and the ceiling, that covers less area than the floor below.

mezzanine financing A nontraditional method of financing the shortfall amount between a loan and the deposit characterized by shorter terms and high interest rates.

mica A naturally occurring, clear silicate used in thermal and electrical insulation, paint suspensions, and composite roofing materials.

mica pellets *See* **exfoliated vermiculite.**

microcell A cell within a cellular phone network—with a low-power base station that covers a facility such as a hotel, transportation hub, or mall.

micro-hydro power Power generated by moving water, usually on a fairly small scale, such as energy harnessed from a local river to power a small town.

microlam Refers to high-strength, construction-grade engineered wood beams constructed of wooden strands bonded with adhesive under pressure. Also known as laminated veneer lumber (LVL). *See also* **laminated wood.**

micrometer **1.** Instrument used for accurately measuring extremely small distances. **2.** Unit of linear distance equal to one-millionth of a meter.

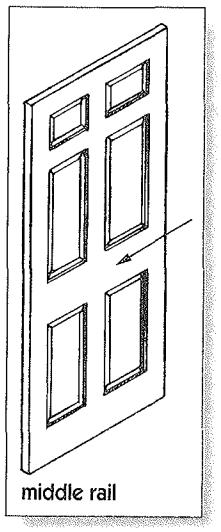
micron A metric unit of measure equal to one-one millionth of a meter, commonly used in particle measurement. One micron is approximately 1/25,400 (0.00004) of an inch.

microwave A very short electromagnetic wave with a wavelength range from one millimeter to one meter.

microwave motion detector A device that detects motion by sending out a microwave signal and looking for a return. A moving object will reflect back some microwave energy, triggering a response. Applications include security, lighting and automatic door systems.

middle lap joint A T-shaped joint formed when the end of one member and the middle of another are joined. Each member is halved along the area of the joint to form a flush connection.

middle rail The intermediate horizontal rail between two door stiles that can be either exposed as in a panel door or concealed as in a flush door.



middle strip In flat-slab framing, the slab portion that occupies the middle half of the span between columns. *See also* **column strip.**

mil A measure of thickness typically used to describe materials such as plastic sheeting, trash bags, or vinyl, equal to 0.001 inch. Used to measure coating, wire, and material thickness.

mildew A fungus that grows on damp fabric and other materials, particularly when there is a lack of air circulation.

mildewcide A product used to retard or prevent the growth of mildew.

mildewstat A mildew-inhibiting chemical.

mild steel A steel having a low carbon content, and therefore being relatively soft and ductile. This type of steel is sometimes used for the manufacture of boilers and tanks, but not for structural beams, columns, or lintels. Mild steel is not as resistant to corrosion as wrought or cast iron and corrodes faster if not regularly maintained.

M

mile A distance measure equal to 5,280 feet, 1,760 yards, or 8 furlongs.

mileage A rate per mile established as an allowance for traveling expenses.

mileage tax A license tax levied on intrastate transportation business to compensate for use of the state's public roads.

milestone A specific, predetermined measurement of the completion of a project typically used for progress payment purposes.

milkiness A whitish haze caused by moisture and often occurring in a varnish finish.

milk of lime A hydrated lime slaked in water to form a lime putty.

mill To shape metal or wood to a desired dimension by a machine that removes excess material.

mill construction Historically, a type of construction used for factories and mills and consisting of masonry walls, heavy timbers, and plank floors. *See also* **heavy timber**.

Miller Act A federal labor law that requires general contractors working on federally funded construction projects to obtain performance bonds and labor and material payment bonds to protect the interests of subcontractors and suppliers. The Miller Act applies to all United States government construction contracts valued at more than $25,000.

mill finish The type of finish produced on metal by the extrusion or cold rolling of sections.

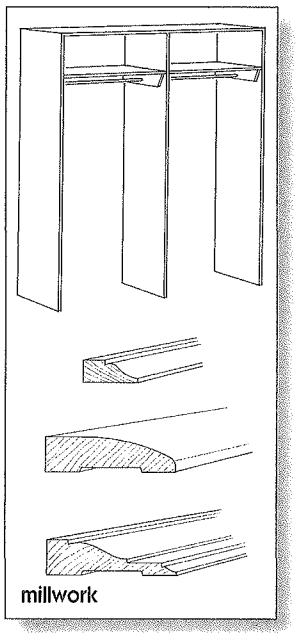
milling **1.** In metal, the process of shaping an item by rotary cutting machines. **2.** In stonework, the shaping of a stone to the desired dimensions.

mill length (random length) Refers to length of pipe, usually for power plant or oil field use, often made in double random lengths of 30 to 35 feet. (The usual run-of-the-mill pipe is 16 to 20 feet in length.)

mill run Products from a mill, such as a sawmill, that have not been graded or sized.

mill scale A thin, loose coat of iron oxide that forms on iron or steel when heated.

millwork All the building products made of wood that are produced in a planing mill, such as moldings, door and window frames, doors, windows, blinds, and stairs. Millwork does not include flooring, ceilings, and siding.


millwork

millwright A carpenter skilled in the layout, installation, and alignment of heavy equipment such as that used in manufacturing.

mineral admixture A substance added to concrete as both a filler, improving the physical structure by occupying the spaces between the cement particles, and as a "pozzolan," reacting chemically to impart far greater strength and durability.

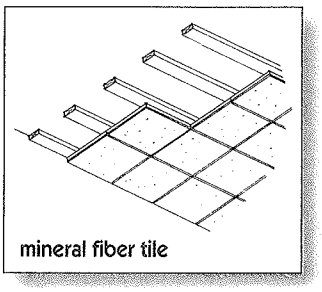
mineral aggregate *See* **aggregate**.

mineral dust Aggregate passing the No. 200 screen, usually a by-product of crushed limestone or traprock.

mineral fiber A fibrous material produced from glass, rock or slag.

mineral fiber insulation Insulation primarily comprised of rock, slag, or glass fibers.

mineral fiber tile A preformed ceiling tile composed of mineral fiber and a binder with good acoustical and thermal properties.


mineral fiber tile

mineral-filled asphalt Asphalt with mineral dust in suspension to improve its body and plasticity.

mineral filler *See* **mineral dust**.

mineral-insulated cable Seamless copper tubing carrying one or more conductors that is embedded in refractory minerals and used in areas that may be subjected to high heat.

mineral right A legal interest or right to the minerals in a parcel of land, with or without ownership of the surface of that land.

mineral spirits A liquid paint thinner and solvent obtained from a petroleum distillation process.

mineral-surfaced felt A roofing felt used on flat or sloped roofs that has a mineral-aggregate surface that improves its wearing and heat-reflecting properties.

mineral wool Fibers formed from mineral slag, the most common being glass

wool, which is used in loose or batt form for thermal and sound insulation and for fireproofing.

miner's dip needle An instrument with a magnetic needle that indicates the presence of magnetic material in the ground.

minimum acceptable pressure The lowest pressure in an air and water distribution system that still allows for safe and efficient operation.

Minimum Efficiency Reporting Value (MERV) A classification used for air filters, determined by a standard ASHRAE test. A higher number MERV indicates a filter that traps more contaminants.

Minimum Point of Entry (MPOE) The point at which carrier lines terminate, usually 12" inside of a building's foundation wall.

Minimum Wage Law Common term used to describe the Fair Labor Standards Act enacted by Congress in 1938. This act established a minimum wage for workers and the 40-hour work week.

minor change A job change requiring field approval only. No change order is necessary.

minor diameter The smallest diameter of a screw thread.

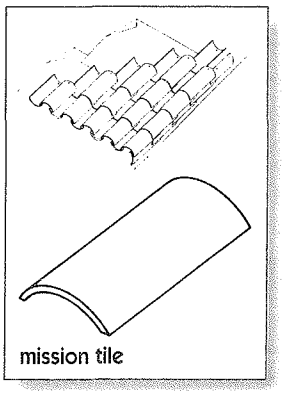
minority business enterprise (MBE) A business that is at least 51% owned and operated by African Americans, Asian Americans, Hispanic Americans and/or Native Americans.

minute An angle measurement equal to 1/60 of a degree.

mirror glazing quality A definable high standard of quality used in the glass industry.

misfire An explosive charge that has failed to detonate.

mission tile A clay roofing tile shaped like a longitudinal segment of a cylinder. The tile is used on sloped roofs with the concave side alternately up, then down.



mist coat A very thin sprayed coat of paint or lacquer.

miter box A device used by a carpenter or cabinetmaker to cut the bevels for a mitered joint.

miter brad A corrugated fastener that spans a mitered joint.

miter clamp A clamping device that holds a mitered joint during fastening and gluing.

miter cut The beveled cut, usually 45°, made at the end of a piece of molding or board that is used to form a mitered joint.

miter dovetail A dovetail joint in which the pins do not project all the way through, so that it looks like a mitered joint.

mitered hip A roofing hip that has been close cut.

mitered valley A roofing valley that has been close cut.

miter gauge A gauge that measures the angle of a miter.

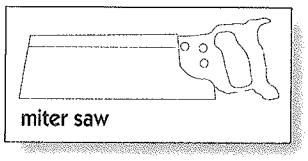
miter joint A joint, usually 90°, formed by joining two surfaces beveled at angles, usually 45° each.

miter knee The miter joint formed when the horizontal handrail at a landing is joined to the sloping handrail of the stairs.

miter plane A carpenter's planing tool used for preparing the surfaces for miter or butt joints.

miter rod A flat metal plate with one end cut at a 45° angle that plasterers use to finish inside corners.

miter saw *See* **tenon saw.**



miter square A carpenter's square with one edge having an angle of 45° for laying out miter joints.

miter valve A valve with a disk that sits at a 45° angle to the valve axis.

mitigation of damages A duty that the law imposes on an injured party to make a reasonable effort to minimize his or her damages after an injury.

mix A general term referring to the combined ingredients of concrete or mortar. Examples might be a five-bag mix, a lean mix, or a 3,000-psi mix.

mix design The selection of specific materials and their proportions for a concrete or mortar batch, with the goal of achieving the required properties with the most economical use of materials.

mixed glue A premixed synthetic resin glue including the hardener.

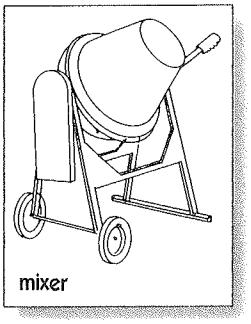
mixed in place An asphalt course of mineral aggregate and emulsified asphalt mixed at the site by special road-mixing equipment.

mixed occupancy Two or more classes of occupancy in a single structure.

M

mixed use project A development project in which at least two different types of real estate uses are planned, e.g., residential and retail.

mixer A machine for blending the ingredients of concrete, mortar, or grout. Mixers are divided into two categories: batch mixers and continuous mixers. Batch mixers blend and discharge one or more batches at a time, whereas continuous mixers are fed the ingredients and discharge the mix continuously.



mixer

mixer efficiency The ability of a mixer to produce a homogeneous mix within a given number of revolutions or a given period of time.

mixer truck *See* **transit mix concrete.**

mixing box In HVAC systems a chamber, usually located upstream of the filters, that collects outside air and return air.

mixing cycle The elapsed time between discharges of a batch mixer.

mixing plant *See* **batch plant.**

mixing speed In mixing a batch of concrete, the rate of rotation of a mixer drum or of the mixing paddles expressed in revolutions per minute (RPM). The rate can also be expressed as the distance traveled, in feet per minute (FPM), of a point on the circumference of a mixer drum at its maximum diameter.

mixing time The elapsed time for mixing a batch of concrete or mortar.

mixing valve A valve that mixes two liquids or a liquid and a gas, such as steam with water or hot water with cold water.

mixing water The water used in mixing a batch of concrete, mortar, or grout, exclusive of water previously absorbed by the aggregates. As a general rule, the water should be clean enough to drink.

mix proportions The quantities of cement, coarse aggregate, fine aggregate, water, and other additives in a batch of concrete by weight or volume.

mobile crane Any crane mounted on wheels or tracks. They are classified by lifting capacity.

mobile gantry A movable framework housing a work platform or means to support equipment.

mobile hoist A personnel or material platform hoist that can be towed to and around the site on its own wheels.

mobile home A term commonly applied to any prefabricated dwelling, whether or not wheels are attached.

mobile scaffold A scaffold that can be moved on wheels or casters.

mock-up A model, either full size or to scale, of a construction system or assembly used to analyze construction details, strength, and appearance. Mock-ups are commonly used for masonry and exposed concrete construction projects.

mock-up testing Controlled structural testing of glazing systems.

model **1.** A scale representation of an object, system, or building used for structural, mechanical, or aesthetic analysis. **2.** A compilation of parameters used in developing a system.

model codes Professionally prepared building regulations and codes, regularly attended and revised, designed to be adopted by municipalities and appropriate political subdivisions by ordinance. Model codes are used to regulate building construction for the welfare and safety of the general public.

modeling lighting Use of light for three-dimensional effects that creates highlights and shadows.

modem Short for *modulator/demodulator.* An electronic device that transmits data to or from a computer via telephone lines. A modem translates between digital signals (used by data processing equipment) and analog signals (used in voice switching equipment). Once the data is sent through the telephone lines, it is retranslated back into digital form in the computer at the receiving end.

modification (to construction contract documents) **1.** A change to a contract that is made after the contract has been signed by both parties. **2.** A change order.

Modified Accelerated Cost Recovery System (MACRS) The method currently required for determining the calculation of asset depreciation for tax purposes. MACRS comprises two subsystems: the General Depreciation System (GDS) and the Alternative Depreciation System (ADS).

modified asphalt Asphalt whose binder has been modified by additives such as rubber or polymers for specific applications.

modified bitumen A heavy roofing material employing multiple layers of asphalt and reinforcers around a core of plastic or rubber modifiers. Installed with a special torching apparatus, a cold adhesive or hot mopped into place using methods of asphalt application.

modified wood Wood processed by a chemicals, heat, compression, or other means to increase strength and resistance properties.

modular buildings Buildings that are constructed in sections, or "boxes," in a factory and then moved to the final site.

modular construction **1.** Construction in which similar units or subcomponents are combined repeatedly to create a total system. **2.** A construction system

in which large prefabricated units are combined to create a finished structure. **3.** A structural design which uses dimensions consistent with those of the uncut materials supplied. Common modular measurements are 4 inches to 4 feet.

modular masonry unit A brick or block manufactured to a modular dimension of 4".

modular ratio The ratio of the modulus of elasticity of steel to that of elasticity of concrete, denoted by n in the formula: n = Es/Ec.

modulation The tendency of a control to adjust by increments and decrements, rather than in an "on/off" fashion.

module A unit representing a dimension or item used in planning, estimating, or recording the construction of a project.

modulus of compression The measure of a material's resistance to inward pressure.

modulus of elasticity The unit stress divided by the unit strain of a material that has been subjected to a strain below its elastic limit.

modulus of resilience The measure of the elastic energy absorbed by a unit volume of a material when it has reached its elastic limit in tension.

modulus of rigidity The measure of a material's resistance to shear. The ratio of unit shearing stress to unit shearing strain.

modulus of rupture The measure of a beam's maximum load-carrying capacity. The ratio of the rupture's bending moment to the beam's section modulus.

modulus of toughness The measure of energy per unit volume that is absorbed by a material when subject to impact, up to the point of fracture.

modulus of volume *See* **bulk modulus of elasticity.**

moellon Stone rubble used as fill placed inside a masonry wall.

mogul base A screw-in type base for a large incandescent lamp usually of 300 watts or more.

Mohs scale An arbitrary scale devised to determine the relative hardness of a mineral by its resistance to scratching by another mineral. Talc is rated No. 1, and diamond is rated No. 10.

moist room An enclosure maintained at a given temperature and relative humidity and used for curing test cylinders of concrete or mortar.

moisture barrier A dampproof course or vapor barrier, but not necessarily waterproof. *See also* **vapor barrier.**

moisture content The weight of water in materials such as wood, soil, masonry units, or roofing materials, expressed as a percentage of the total dry weight.

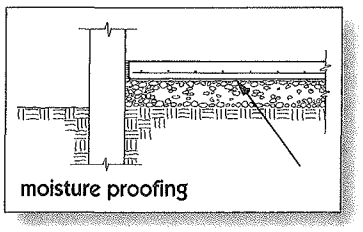
moisture expansion The increase in dimensions of a material as a result of the absorption of water. *See also* **bulking.**

moisture gradient The difference in moisture content between the inside and the outside of an object, such as a wall or masonry unit.

moisture migration The movement of moisture through the components of a building system such as a floor or wall. The direction or the movement is always from high-humidity areas to low-humidity areas.

moisture movement *See* **moisture migration.**

moisture proofing The application of a vapor barrier.



mold The hollow form in which a casting or pressing is made.

moldboard The curved shape or blade of a plow, bulldozer, grader, or other earth-moving equipment.

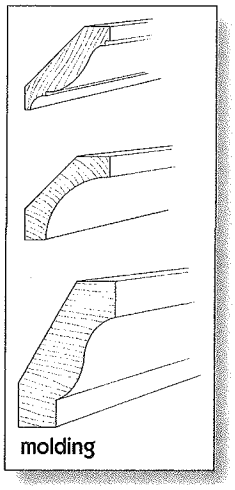
molded brick Brick that has been cast rather than pressed or cut, often with a distinct design or shape.

molded-case circuit breaker An electrical circuit breaker manufactured in a molded insulated housing.

molded insulation Thermal insulation premolded to fit plumbing pipes and fittings. Common materials are fiberglass, calcium silicate, and urethane foams, with or without protective coverings.

molded plywood Plywood that has been permanently shaped to a desired curve during curing.

molding An ornamental strip of material used at joints, cornices, bases, door and window trim, and the like, and most commonly made of wood, plaster, plastic, or metal.



mold stone (jambstone) A stone that serves as a window jamb.

mole An excavation machine used to bore tunnels.

mole ball An egg-shaped ball pulled behind a special subsoil plow to provide a water course for drainage.

M

molecular sieve A device for selective collection, by adsorption, of a substance in a gas or a liquid.

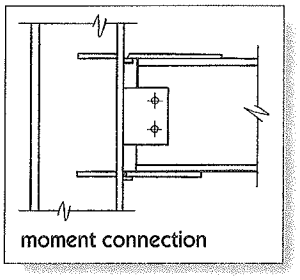
mole drain A subsurface drain created by a mole ball.

moler brick Brick, made from moler earth or diatomite, that has better insulation properties than common brick.

molly A threaded insert for plaster, sheetrock, or concrete walls for receiving a bolt, screw, or nail.

moment An applied load or force that creates bending in a structural member. It is numerically expressed as the product of the force times the length of the lever arm, and given in units such as foot-pounds.

moment connection A rigid connection between structural members that transfers moment from one member to the other, and thus resists the moment force. A pinned connection cannot resist moment forces, only shear forces.


moment connection

moment of inertia In a structural member, the product of each element of mass times the square of the distance from an axis.

momentum The mass times the velocity of a moving object.

Monel® The registered trademark name of a nickel alloy containing two-thirds nickel, one-third copper and small amounts of other metals. Monel®, which is ductile, stronger than mild steel and more resistant to corrosion than bronze, has been used for roofing, flashing and decorative elements. Excellent for making fasteners and anchors.

money damages A monetary award that a party who has breached a contract is ordered by a court to pay as compensation to the nonbreaching party.

monitor **1.** A raised section of a roof, often along the ridge of a gable roof, with louvers or windows in the side for ventilation or light. **2.** In closed-circuit television, a video display device used to check the quality of a picture or image transmitted by a camera.

monk bond A modified Flemish bond with two stretchers and a header.

monkey tail A vertical scroll at the bottom of a handrail.

monkey wrench A wrench with a fixed jaw and an adjustable jaw.

monolith A large architectural member or monument cut from one stone or cast as one unit from concrete.

monolithic In glazing, a window containing only one light or pane.

monolithic concrete Concrete that has been cast continuously with no joints other than construction joints.

monolithic construction The pouring of concrete grade beam and floor slab together to form a building foundation.

monolithic surface treatment A concrete finish obtained by shaking a dry mixture of cement and sand on a concrete slab after strike off, then troweling it into the surface.

monolithic terrazzo Terrazzo applied directly over a concrete surface instead of over a mortar underbed.

monomer A molecule of low molecular weight capable of reacting with other molecules of low molecular weight to form a polymer.

monopost An adjustable metal column that supports a bearing point or beam.

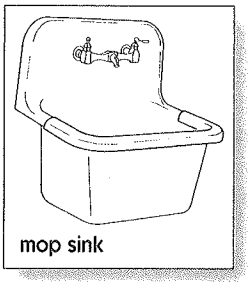
mono-slope roof A roof with a constant slope in one direction.

Monotube® pile A cold-processed steel pile with a fluted cross section for use in deep foundations.

mopboard *See* **baseboard.**

mop plate A protective plate at the bottom of a door, such as a kickplate.

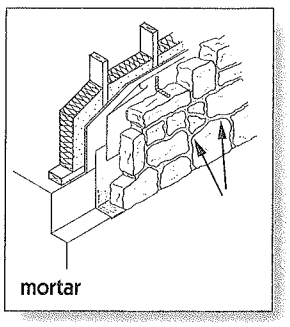
mop sink A low, deep sink used by janitors.


mop sink

mopstick A wood handrail with a circular cross section, except for a small flat section on the bottom for attaching the supports.

moratorium A temporary denial of permission to develop, used by local government to create an opportunity to formulate permanent growth policies and plans for an area.

mortar **1.** A plastic mixture used in masonry construction that can be troweled and hardens in place. The most common materials that mortar may contain are Portland, hydraulic, or mortar cement, lime, fine aggregate, and water. **2.** The mixture of cement paste and fine aggregate that fills the voids between the coarse aggregate in fresh concrete.

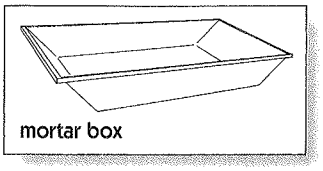

mortar

mortar aggregate (mortar sand) Natural or manufactured fine aggregate, usually washed screened sand.

mortar bed A layer of fresh mortar into which a structural member or flooring is set.

mortarboard A board about 3 feet square on which mortar is placed for use by a mason on a scaffold.

mortar box A shallow box in which mortar or plaster is mixed by hand.


mortar box

mortar cube A standard-sized cube made of mortar for testing the compressive strength of a mix.

mortar mill (mortar mixer) A machine with paddles in a rotating drum for mixing and stirring mortar.

mortar mixer *See* **mortar mill.**

mortar sand *See* **mortar aggregate.**

mortgage A loan in which property is pledged as collateral.

mortgagee The lender in a mortgage loan.

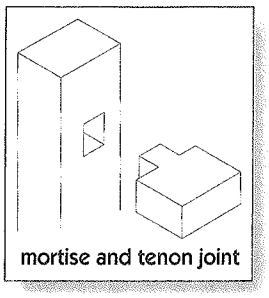
mortgage lien A filed charge using property as security. Often mortgage liens are obtained by contractors or material suppliers for a particular project.

mortgage origination fee A fee for the preparation and servicing of a mortgage application.

mortgagor The borrower in a mortgage loan.

mortise **1.** A recess cut in one member, usually wood, to receive a tenon from another member. **2.** A recess such as one cut into a door stile to receive a lock or hinge.

mortise and tenon joint A joint between two members, usually wood, which incorporates one or more tenons on one member fitting into mortises in the other member. Used on joints such as door stiles, door rails, window sashes, and cabinetry.


mortise and tenon joint

mortise chisel A carpenter's tool for cutting mortises.

mortised astragal A two-piece astragal door with two leaves. One piece of the astragal is mortised into the edge of each door.

mortise gauge A carpenter's tool for scribing the location on mortises. It is similar to a marking gauge, but scribes two parallel lines.

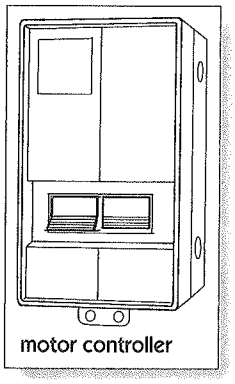
mortise machine A power-driven machine for cutting rectangular or round mortises in a wood member.

mortise pin A pin that secures a mortise and tenon joint by being driven through either the extension of the tenon or through the whole joint.

mosaic **1.** An aerial photographic map pasted up using the center portion of overlapping vertical photographs. **2.** A design created by inlaying pieces of stone, glass, or tile in a mortar bed. **3.** A design of inlaid pieces of wood.

motion detection equipment A device that detects motion by sending out a fixed electromagnetic or ultrasonic signal. A moving object will disrupt the frequency of the signal, triggering a response. Applications include security, lighting and automatic door systems.

motor controller A device that controls the power delivered to a motor or motors.


motor controller

motor grader *See* **grader.**

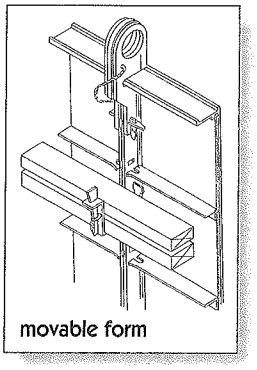
mottle A clouding, spotting, or irregular grain appearing in stone such as marble or in wood and wood veneers.

mottler A thick paintbrush used for creating a mottled or grained look.

mottling A defect in spray-painted surfaces appearing as round marks.

mouse **1.** A device with a piece of curved lead and string for pulling a sash cord over a pulley. **2.** A hand-held device that is moved around on a desk or surface to control the cursor in a computer and select functions.

movable form A large prefabricated concrete form of a standard size that can be moved and reused on the same project. The form is moved either by crane or on rollers to the next location.


movable form

M

movable partition A non-load-bearing demountable partition that can be relocated and can be either ceiling height or partial height.

moves, adds and changes The processes required for facility changes, including the communications network, when there is a new occupant or use of a building space, or movement of users from one space to another.

moving ramp A continuously moving belt or other system designed for carrying passengers on a horizontal plane or up an incline.

moving stairs *See* **escalator**.

moving walk *See* **moving ramp**.

M-roof Any roof that incorporates two adjacent pitched roofs in resemblance to the letter "M."

muck **1.** A soil high in organic material, often very moist. **2.** Any soil to be excavated.

mucking Rearward removal of heading excavation.

mud **1.** Soil containing enough water to make it soft and plastic. **2.** A slang expression for joint compound.

mudcapping The process of blasting boulders or rock surfaces by placing explosives in the surface and covering them with mud rather than placing the explosive in a blast hole.

mudjacking A method of raising a depressed concrete highway slab or slab-on-grade by boring holes at selected locations and pumping in grout or liquid asphalt.

mud pan Rectangular, angle-sided pan, shaped like a bread pan, used by joint finishers to handle portions of joint compound. The straight-cut lip of the pan ensures that the taping knife can be cleaned regularly.

mudroom An entrance, particularly to a rural residence, where muddy footwear can be removed and stored.

mud rotary drilling method A drilling method that uses mud as the lubricant for the drill.

mudsill A plank or beam laid directly on the ground, especially for posts or shores for formwork or scaffolding.

mud slab A base slab of low-strength concrete from 2" to 6" thick placed over a wet subbase before placing a concrete footing or grade slab.

mud sucker *See* **diaphragm pump**.

muffle A layer of grout over a plaster mold used to rough in the plaster. The muffle is chipped off when the final coat of plaster is applied.

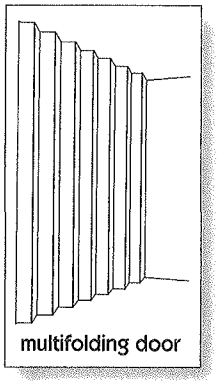
mulch Organic material such as straw, leaves, or wood chips spread on the ground to prevent erosion, to control weeds, to minimize evaporation as well as temperature extremes, and to improve the soil.

mule A template used to form concrete curbs and gutters.

mullion The vertical member separating the panels or glass lights of a window or door system.

multiconductor An electrical cable containing multiple wires inside a single outer jacket.

multifolding door A large door or room divider composed of hinged, rigid panels supported on an overhead track. When the door is open, the panels fold against each other.



multifolding door

multimedia filter A water supply system filter that incorporates several different filtering elements or materials.

multiple dwelling A building that houses two or more independent residential dwelling units.

multiple glazing Any glazing that incorporates two or more sheets of glass, as in a thermal or sound insulating application.

multiple-layer adhesive An adhesive film used as a bond between dissimilar materials.

Multiple Listing Service A database of information about properties for sale or lease.

multiple of direct personnel expense An accounting method used to pay for professional services. A factor (based on personnel cost) is applied to cover indirect and direct costs, as well as profit.

multiple of direct salary expense An accounting method used to pay for professional services. It is based on direct salary expenses multiplied by a factor that accounts for the cost of benefits that are linked to direct salary as well as indirect expenses, other direct expenses, and profit.

multiple ownership A form of ownership whereby two or more people or entities own interests in the same real property at the same time. There are three basic forms of multiple ownership of real property. *See also* **tenancy in common**, **joint tenancy**, *and* **tenancy by the entirety**.

multiple prime contract A contract used when one or more constructors are employed under separate contracts to perform work on the same project, either in a sequence or coincidentally.

multiple prime contracts A construction approach whereby the owner enters into separate contracts with different trade contractors, rather than one contract with a general construction contractor.

multiple surface treatments A term applied to successive pavement surface treatments of asphaltic materials and aggregate.

multiplex To send signals from more than one source simultaneously over a single channel. *See also* **frequency division multiplexing** *and* **time division multiplexing.**

multiplier A factor used to adjust costs for modifications, such as for location, time, or size of project.

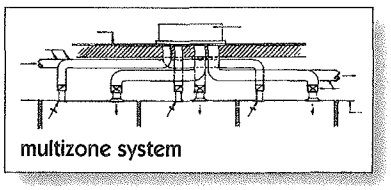
multistage stressing The prestressing of concrete members in stages as the construction progresses.

multistory A term commonly applied to buildings with five or more stories.

multiunit wall A masonry wall with two or more wythes.

multiuser telecommunications outlet assembly A connecting point within a structured cabling system—for multiple users for a work area.

multizone system **1.** An air conditioning system that is capable of handling several individual zones simultaneously. **2.** A heating or HVAC system having individual controls in two or more zones in a building.

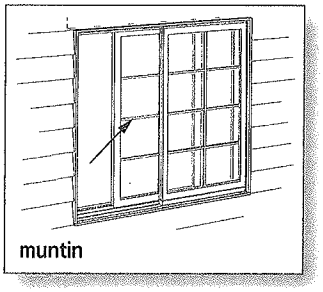

multizone system

multizone units Air-handling units with parallel heating and cooling air paths providing individual mixing of air-distribution circuits into a single duct for each zone.

municipality A political unit, legally incorporated for self-government or other public purposes.

municipal lien A claim or lien filed by a municipality against a property owner for collection of the property owner's proportionate share of a public improvement made by the municipality that also improves the property owner's land.

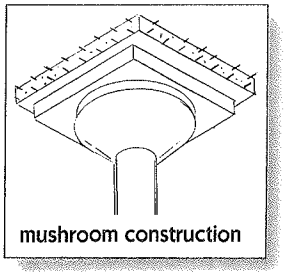
muntin A short vertical or horizontal bar used to separate panes of glass in a window or panels in a door. The muntin extends from a stile, rail, or bar to another bar. *See also* **vertical bar.**


muntin

muriatic acid An acid mixed with water to clean masonry. Muriatic acid is also commonly used to etch smooth concrete surfaces for painting.

mushroom The spreading out of concrete at the top of a caisson pier, causing it to be wider than the thickness of the foundation wall.

mushroom construction A system of flat-slab concrete construction, with no beams, in which columns are flared at the top to resist shear stresses near the column head.

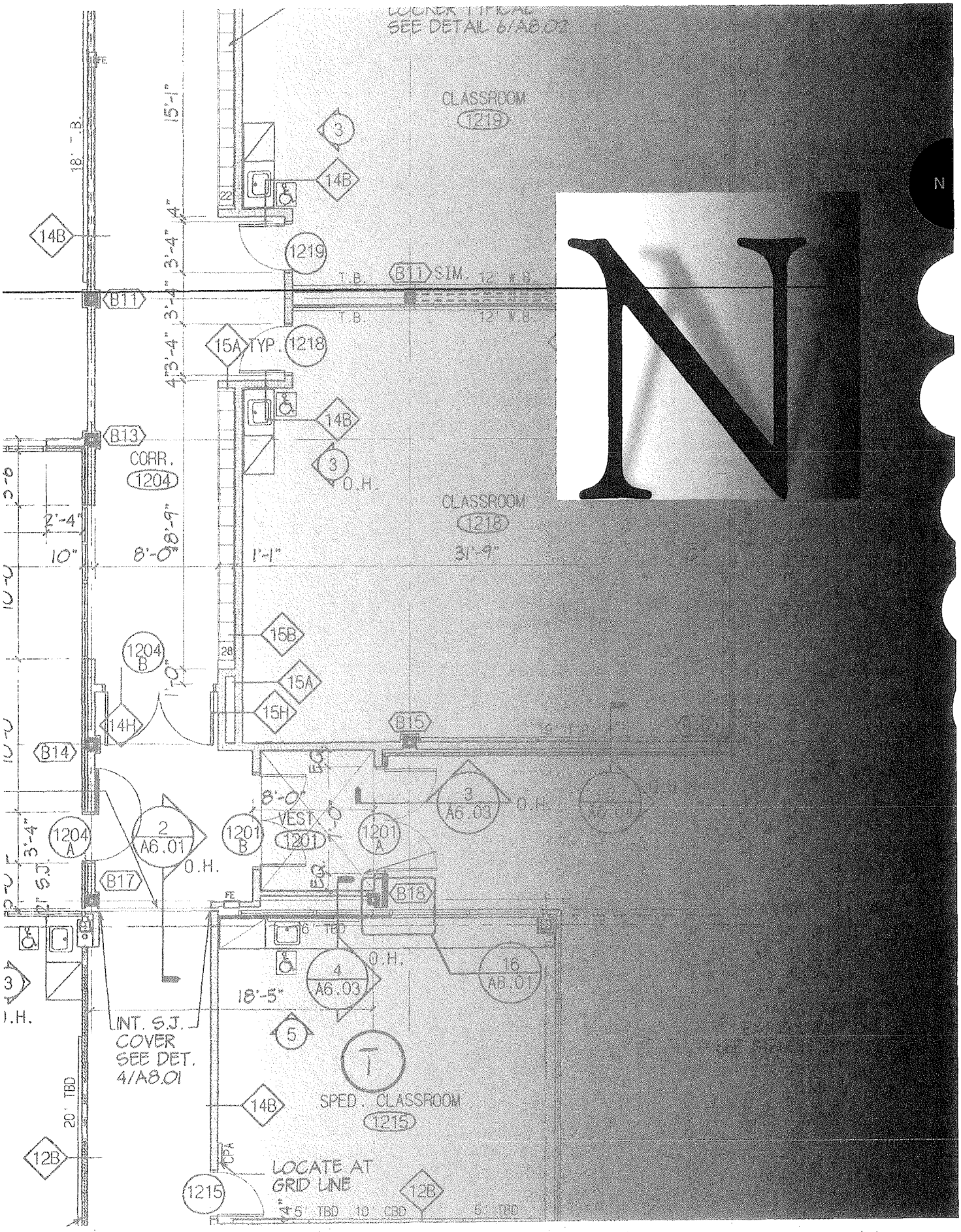

mushroom construction

music wire (piano wire) Steel wire used for alignment.

mute A mortised rubber silencing device for a door.

mutual assent The agreement of two or more parties to be bound to the terms of a contract. A contract is not legally enforceable without mutual assent.

mylar A thin, tough, smooth polyester film used as a drafting medium.



LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
3
14B
22
1219
B11
SIM.
12' W.B.
T.B.
15A
TYP.
1218
14B
3
O.H.
B13
CORR.
1204
CLASSROOM
1218
2'-4"
10"
8'-0"
8'-9"
1'-1"
31'-9"
15B
1204
B
15A
15H
14H
B15
B14
8'-0"
VEST.
1201
1201
B
1201
A
3
A6.03
O.H.
1204
A
2
A6.01
O.H.
B17
B18
16
A8.01
4
A6.03
O.H.
18'-5"
5
INT. S.J.
COVER
SEE DET.
4/A8.01
SPED. CLASSROOM
1215
14B
12B
LOCATE AT
GRID LINE
1215
12B
5' TBD
10' CBD
5' TBD
18' T.B.
15'-1"
3'-4"
3'-4"
3'-4"
3'-4"
4"
4"
3'-4"
3'-4"
20' TBD

N Abbreviations

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

n, N noon, number, North, nail, nitrogen, normal

Na sodium

NAAMM National Association of Architectural Metal Manufacturers

NAIOP National Association of Industrial Office Properties

NAT natural

NBC *National Building Code*

NBFU National Board of Fire Underwriters (now merged into the American Insurance Association)

NBIMS National Building Information Model Standard

nbm net board measure

NBS National Bureau of Standards

NC noise criterion

NCM noncorrosive metal

NCX fire-retardant treated wood

NDT nondestructive testing

NEC *National Electrical Code*

NECA National Electrical Contractors Association

NELMA Northeastern Lumber Manufacturers Association

NEMA National Electrical Manufacturers Association

NESC National Electrical Safety Commission

NESHAPS National Emission Standards for Hazardous Air Pollutants

NFC *National Fire Code*

NFIP National Flood Insurance Program

NFoPA National Forest Products Association

NFPA National Fire Protection Agency

NFRC National Fenestration Rating Council

NHLA National Hardwoods Lumber Association

NHPMA Northern Hardwood and Pine Manufacturers Association

Ni nickel

NIBS National Institute of Building Sciences

NIC not in contract

NIOSH National Institute of Occupational Safety and Health

NLRA National Labor Relations Act

NLRB National Labor Relations Board

NM nonmetallic sheathed

NOC network operations center

NOM nominal

NOP not otherwise provided for

norm normal

NPS nominal pipe size

NPV net present value

nr near, noise reduction

NRC noise reduction coefficient

NS not specified

ntp normal temperature and pressure

NTS not to scale

nt. wt., n.wt. net weight

num numeral

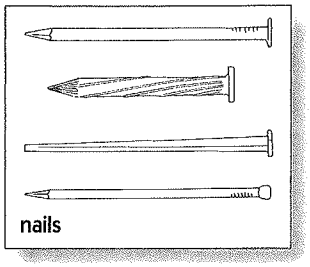
NWWDA National Wood Window and Door Association

N1E nosed one edge (lumber industry)

N2E nosed two edges (lumber industry)

nagging *See* **nogging.**

nail A slender piece of metal with a point on one end that is driven into construction materials by impact. Nails are classified by size, shape, and usage.


nails

nailable concrete Concrete, usually made with a suitable lightweight aggregate, with or without the addition of sawdust, into which nails can be driven.

nailer A strip of wood or other fitting attached to or set in concrete, or attached to steel, to facilitate making nailed connections.

nail float *See* **devil float.**

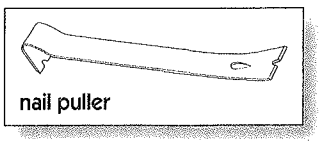
nailing block (nog) A wood block set into masonry or steel and used to facilitate fastening other structural members by nailing.

nailing ground A nailing strip to which trim is attached.

nailing schedule A specific pattern or configuration of nails, most often used for fastening components of a structural assembly.

nail pop The protrusion of a nail from a wall or ceiling, usually attributed to the shrinkage or use of improperly cured wood framing.

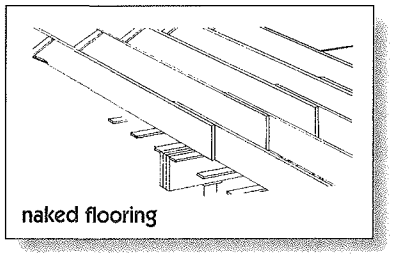
nail puller One of a variety of hand tools for pulling nails. The shape and size depends on the nails to be pulled.


nail puller

nail punch *See* **nail set.**

nail set A hand-held, tapered steel rod specifically designed to drive nail heads below the surface of wood. The rod is used specifically in finish carpentry work.

naked flooring The system of floor joists and beams over which flooring will be placed.

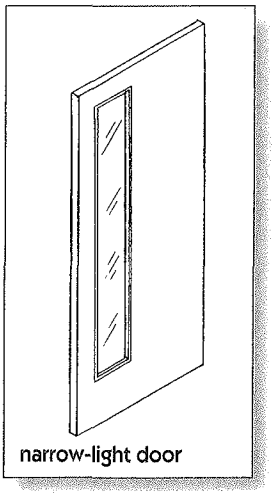

naked flooring

naked wall A wall or partition, with lath in place, ready for plastering.

NA number A classification code assigned to a particular material by the Department of Transportation.

naphtha-based oil Petroleum oil used as an additive in herbicides. Naphtha oil alone has herbicidal properties on some weeds and grasses.

narrow-light door A door with a narrow vertical light near the lock stile. *See also* **vertical vision light door.**


narrow-light door

narrow-ringed timber Lumber with fine-grained, closely spaced growth rings.

narrowscope A term established by the Construction Specifications Institute to denote a section of the specifications that describes a single product. *See also* **mediumscope** *and* **broadscope.**

National Building Information Model Standard A standard developed by a National Institute of Building Sciences Facility Information Council committee. It integrates life-cycle information for use by facility management and AEC professionals.

National Electric Code® (NEC) A nationally recognized code that addresses proper installation of electrical systems and equipment. Published by the National Fire Protection Association, the code is revised and reissued every three years.

National Emission Standards for Hazardous Air Pollutants (NESHAPS) Federal air pollution regulations instituted by the Clean Air Act and enforced by the Environmental Protection Agency (EPA).

National Fenestration Rating Council (NFRC) An organization that provides ratings for energy performance for windows and skylights, doors, and accessories.

National Fire Protection Association (NFPA) A non-profit organization that publishes the National Electrical Code®, the Life Safety Code®, the Fire Prevention Code™, the National Fuel Gas Code®, and the National Fire Alarm Code®.

N

National Historic Landmark A property listed in the National Register of Historic Places. Properties are assigned this designation by the Secretary of the Interior based on their national (as compared to state or regional) importance. The National Parks Service administers the process of designating properties as NHLs through the National Historic Landmarks Program.

National Institute of Building Sciences A non-profit organization that works with the government and private sector on "solutions for the built environment," including standards, new technologies, and dissemination of information.

National Labor Relations Act An act of Congress sometimes known as the Wagner Act, enacted in 1935. This act mandated a framework of procedure and regulation by which management-labor relations are to be conducted.

National Lumber Grades Authority One of seven regional grading agencies in North America that are authorized to write and publish grading rules for lumber. *See also* **grade stamp.**

National Register of Historic Places The inventory of places of historical, architectural, archeological, engineering, and cultural significance in the United States. Also serves as a repository of documentation of historic property types, significance, condition, ownership, and other pertinent information.

native landscape Plantings that are selected because they have adapted to thrive in the local environment without irrigation, fertilizer, or pesticides, and that provide storm water management. *See also* **xeriscaping.**

natural asphalt Asphalt occurring in nature through natural evaporation of petroleum. This type of asphalt can be refined and used in paving materials.

natural attenuation An environmental remediation process based on allowing naturally occurring processes to decompose or degrade wastes.

natural cement A hydraulic cement produced by heating a naturally occurring limestone at a temperature below the melting point, and then grinding the material into a fine powder.

natural convection The movement of air resulting from differences in density usually caused by differences in temperature.

natural draft Refers to the movement of air through a cooling tower by the force of air density differential.

natural finish A finish on wood that allows the grain to show; a clear finish.

natural gas A naturally occurring combustible gas used for industrial and domestic heating and power.

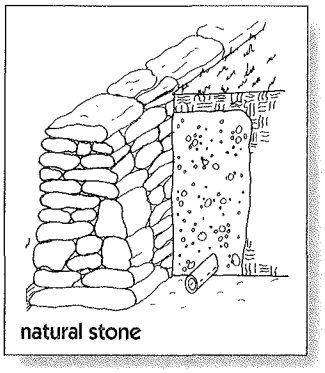
natural grade The undisturbed elevation of a property before any excavation operations.

naturally durable wood As defined for the purpose of building codes, the heartwood of certain species of decay-resistant wood, including black walnut, cedar, redwood, and black locust.

natural resin Any naturally occurring thermoplastic substance. Used in paints and varnishes, among other applications.

natural seasoning In the lumber industry, a curing process using natural air convection.

natural stone Stone shaped and sized by nature as opposed to stone that has been quarried and cut.


natural stone

NCX fire-retardant treated wood Treated wood generally used on exterior balconies, steps, and roof systems. Carries the Underwriters' Laboratories rating of FRS.

neat **1.** Idiom for exact dimensions, i.e., excavation to the designed width of the footing. **2.** A term referring to a process by which a material is prepared for use without addition of any other materials except water. Examples include neat cement or neat plaster.

neat cement A cement mortar or grout made without addition of sand or lime.

neat line The line or plane defining the limits of work, particularly in excavation of earth or rock. Excavation beyond the neat line is usually not a pay item in a unit price contract.

neat plaster Plaster mixed with no aggregate.

neat size The final size after trimming, planing, or finishing.

needle **1.** In underpinning, the horizontal beam that temporarily holds up the wall or column while a new foundation is being placed. **2.** In forming or shoring, a short beam passing through a wall to support shores or forms during construction. **3.** In repair or alteration work, a beam that temporarily supports the structure above the area being worked on.

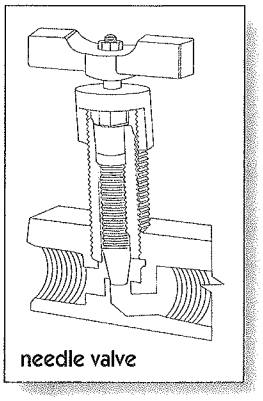
needle bath A shower bath in which many water jets are sprayed horizontally onto the bather.

needle beam *See* **needle**.

needle nose pliers Pliers that are outfitted with long thin jaws for use in narrow spaces.

needle scaffold A scaffold that is supported by needles passing through a wall.

needle valve A type of globe valve in which a long pin or needle, tapered at the end, moves in and out of a conical seat to regulate the flow of liquid.


needle valve

needling The placing of needles, or a support system using needles.

negative cash flow On a construction project, when the periodic payments a contractor receives from an owner for the performance of the contract's construction work amount to less than what he will pay out during the same period for expenses associated with the work. (The amount of money coming in is less than the amount going out.)

negative determination A determination that a project will not produce a significantly adverse impact on the environment.

negative easement A right of accommodation that allows its holder to prevent a land owner from actions on that land. For example, a landowner may be unable to build a structure on the property because a neighbor owns a negative easement requiring an unobstructed view of an adjacent body of water.

negative float The amount of delay that a task on the critical path of the schedule has incurred, expressed in days.

negative friction The additional load placed on a pile by the settling of fill placed around it. The effect of negative friction is to pull the pile down.

negative pressure ventilation system A method of providing low-velocity airflow from uncontaminated areas into contaminated areas by means of a portable exhaust system equipped with HEPA filters.

negative reinforcing Steel reinforcing for negative moment in a reinforced concrete structural member.

negligence The failure of a party to conform its conduct to the standard of care required by law. The law requires that a person exercise that degree of care that a reasonable person would exercise under the same or similar circumstances. *See also* **due care**.

negotiated procurement A procedure used by the U.S. government for contracting whereby the government and potential contractor negotiate on both price and technical requirements after submission of proposals. Award is made to the contractor whose final proposal is most advantageous to the government.

negotiating Arriving at an agreement by bargaining.

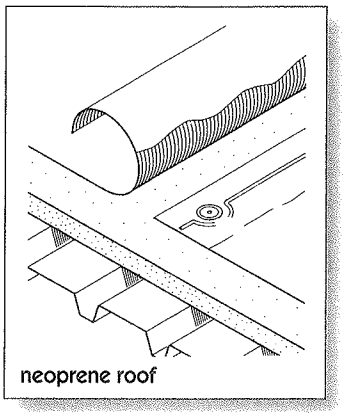
negotiation A process used to determine a mutually satisfactory contract sum, and terms to be included in the contract for construction. In negotiations, the owner directly selects the constructor and the two, often with assistance of the design professional, derive by compromise and a meeting of the minds the scope of the project and its cost.

negotiation phase *See* **bidding**.

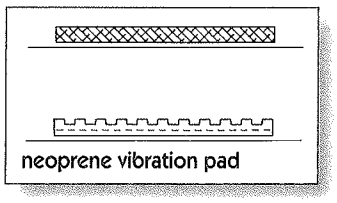
neon lamp A lamp that gains its illumination by electric current passing through neon gas.

neoprene A synthetic rubber with high resistance to petroleum products and sunlight. Neoprene is used in many construction applications, such as roofing and flashing, vibration absorption, and sound absorption.

neoprene roof A roof covering made of neoprene sheet material with heat-welded joints that can be either ballasted or non-ballasted. This type of roof covering has good elastic and durability properties over a long time span.


neoprene roof

neoprene vibration pad A vibration-absorbing device placed under permanently installed machinery.


neoprene vibration pad

neoprene waterproofing Sheet waterproofing material placed on the outside of a foundation wall with a mastic.

nephrotoxin A substance that causes kidney damage.

nestable joist Standard shape for a light gauge framing joist.

N

nested nails Nails having a crescent-shaped piece missing in the head to allow them to be fitted tightly together.

nested studs Two studs placed together for additional support in framing an opening.

net cross-sectional area In defining a masonry unit, the gross cross-sectional area minus the area of the ungrouted cores or cellular voids.

net cut In excavation, the total cut, minus the compacted fill required, between particular stations.

net fill In excavation, the compacted fill required, minus the cut material available, between particular stations.

net floor area The occupied area of a building not including hallways, elevator shafts, stairways, toilets, and wall thicknesses. The net floor area is used for determining rental space and fire-code requirements.

net load In heating calculations, the heating requirement, not considering heat losses, between the source and the terminal unit.

net metering Allowing electric meters of power generating facilities, such as solar or wind power, to turn backwards when more energy is produced than customers consume. Net metering allows customers to use the excess energy their own system generates to offset their consumption over an entire billing period, not just at the time the electricity is produced.

net mixing water *See* **mixing water**.

net present value (NPV) The current dollar value of future cash flow.

net price The lowest price, after all deductions, discounts, etc.

net savings (NS) A measure of long-run profitability of an alternative relative to a base case. It can be calculated as an extension of the life-cycle costing (LCC) method as the difference between the LCC of a base case and the LCC of an alternative.

net site area The area of a building site less streets and roadways.

net weight The weight of an article, cargo, or other load minus the transporting vehicle.

network In CPM (critical path method) terminology, a graphic representation of activities showing their interrelationships.

Network Operations Center A building space that houses equipment for monitoring and managing communications networks.

network schedule A method of scheduling the construction process where various related events are programmed into a sequential network on the basis of starting and finishing dates.

neurotoxin A substance that adversely affects the nervous system or brain.

neutral **1.** An electrical conductor used as the primary return path for current during normal operation of an electrical device. **2.** The center tap of a three- or four-wire transformer. Neutral cable will carry current when there is an unbalanced load between wires.

neutral axis In structural design, an imaginary line in a structural member where no tension, compression, or deformation exist. If holes are to be drilled through a structural member for conduits or pipes, they should be drilled at the neutral axis.

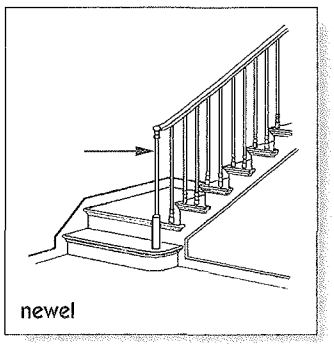
neutral cash flow On a construction project, when the periodic payments a contractor receives from an owner for the performance of the contract's construction work equal what will be paid out during the same period for expenses associated with the work. (The amount of money coming in equals the amount going out.)

neutralize To reduce the pH of an alkali, or to raise the pH of an acid, to approximately 7.0.

neutralizing The treatment of concrete, plaster, or masonry surfaces with an acid solution in order to neutralize the lime before application of paint.

neutralizing basin In a building drainage system, a device that neutralizes acid-bearing wastes before their entry into the system.

newel The post supporting a handrail at the top and bottom of a flight of stairs. Also, the center post of a spiral staircase.



newel cap The often decorative top or cap of a newel.

newel drop A decorative downward projection of a newel through a soffit.

newel joint The joint between a newel and the handrail.

newel post *See* **newel**.

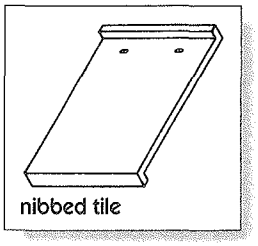
New Urbanism A movement in city planning that tries to recommit traditional town planning designs to a modern context. It seeks to lessen dependence on automobiles while encouraging a small-world lifestyle where jobs, shops, and homes are located near one another.

New York rod A two-piece surveyor's rod with narrow markings and a movable target.

N-grade wood **1.** In molding, stock intended for natural or clear finishes. The exposed face must be of one single piece. **2.** In plywood, cabinet quality panels for natural finishes.

nib Any particle or piece projecting from a surface, particularly used to describe a defect on a painted or varnished surface.

nibbed tile A small lug at the upper end of a roofing tile that hooks over a batten.



nib grade (nib guide, nib rule) A wooden straightedge nailed on the ceiling's base plaster coat as a guide for a cornice molding.

niche A recess in a wall, usually intended for statuary. Often a base and a canopy project out from the wall around the recess.

nickel A silver-colored, hard ductile metal used in alloys, batteries, and electroplating. Nickel is used extensively on plumbing fixtures, where its anti-corrosive properties are important.

nickel silver A silver-colored class of nickel alloys containing copper and zinc, but not silver.

nickel steel A steel alloy with 3% to 5% nickel content, which gives it greater strength, ductility, and anti-corrosive properties.

nidge (nig) To dress or shape the edge of a masonry stone with the sharp point of a hammer, as opposed to doing so with a chisel and mallet.

nidged ashlar Ashlar stone that has been shaped with the sharp point of a hammer.

nig *See* **nidge**.

night cycle program In a building automation system, an energy-saving computer program that maintains a reduced temperature in the heating season and an elevated temperature during the cooling season during unoccupied periods.

night latch A door lock with a spring bolt that cannot be operated from the outside except by a key.

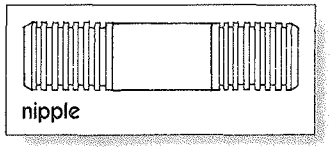
night purge program In a building automation system, a computer program that replaces building air with cooler outdoor air during the early morning hours of the cooling season.

night-time ventilation Cooling buildings with outside air at night to minimize the cooling load during the day. Ventilation can be achieved naturally via temperature drops, wind, cross-ventilation, and stack effect, or through use of wind towers and mechanical ventilation.

night vent A small light with horizontal hinges that is mounted in an operable sash to allow ventilation without opening the entire sash.

nippers A hand tool for cutting wire and small rods.

nipple A piece of pipe less than 12" long and threaded on both ends. Pipe over 12" long is regarded as a cut measure.



Nissen hut A semi-cylindrically shaped building made of corrugated metal. *See also* **Quonset hut**.

nobble The process of shaping building stone to the roughly desired dimensions while the stone is still at the quarry.

noble A technical term describing a metal's degree of resistance to corrosion.

no damages for delay clause A contract provision that states that a contractor's sole remedy for delay is an extension of time without any monetary compensation even if the delay is caused by the owner or its agents.

node **1.** In critical path method (CPM) scheduling, a junction of arrows containing the i-j number, early start, and late finish. **2.** In electrical wiring, a junction of several conductors.

no-fines concrete A concrete mixture with little or no fine aggregate.

nog *See* **nailing block**.

nogging The process of filling the space between timber framing members with bricks.

nogging piece A horizontal timber fitted between vertical studs or beams to give lateral support, especially when nogging is used.

"no hazard" designation A designation that indicates a particular site or medium poses no hazard to human health or to the environment.

no-hub pipe Cast iron pipe that is fabricated without hubs for coupling.

noise In closed-circuit television, interference detected on a cable circuit that reduces or destroys the clarity of the signal. Sometimes called snow.

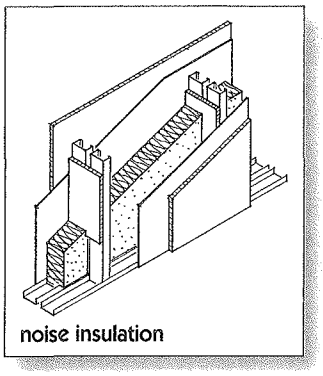
noise absorption The reduction of noise in an enclosure by introducing sound-absorbing materials or methods of construction that restrict the transmission of sound.

noise criterion curve Defines the limits that the octave band spectrum of a noise source must not exceed if a certain level of occupant acceptance is to be achieved.

noise energy The total sound from all sources within a room at a given time, including reverberations and echoes.

N

noise insulation Sound-absorbing materials installed in partitions, doors, windows, ceilings, and floors.



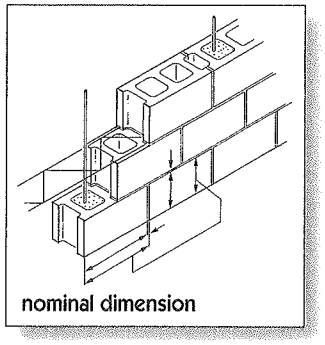
noise reduction **1.** The difference, expressed in decibels, between the noise energy in two rooms when a noise is produced in one of the rooms. **2.** The difference in noise energy from one side of a partition to another when a noise is produced on one side.

noise reduction coefficient The average sound absorption coefficient of a material to the nearest 0.05 at four frequencies: 250, 500, 1000, and 2000 cycles.

nominal Term indicating that the full measurement is not used. Usually slightly less than the full net measurement, as with 2" x 4" studs that have an actual size when dry of 1-1/2" x 3-1/2". Pipe size designations are also described as nominal. For example, 2" nominal is 2-3/8" O.D.

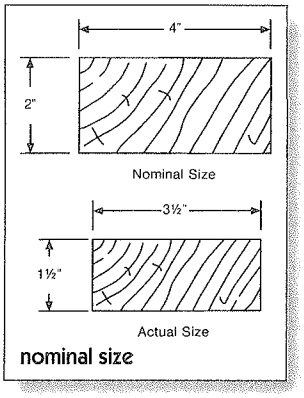
nominal diameter The size designation that specifies the size of a pipe, bolt, reinforcing bar, or rive. The actual dimension may vary.

nominal dimension **1.** The size designation for most lumber, plywood, and other panel products. In lumber, the nominal size is usually greater than the actual dimension, thus, a kiln-dried 2" x 4" ordinarily is surfaced to 1-1/2" x 3-1/2". In panel products, the size is generally stated in feet for surface dimensions and increments of 1/16" for thickness. Product standards permit various tolerances for the latter, varying according to the type and nominal thickness of the panel. **2.** In masonry, a dimension larger than the one specified for the masonry unit by the thickness of a joint.



nominal mix The proportions of the constituents of a proposed concrete mix.

nominal size The dimensions of sawn lumber before it is surfaced and dried. *See also* **nominal dimension**.

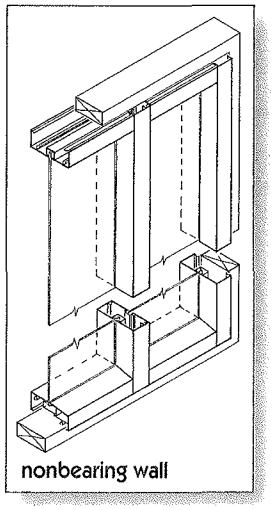


nonagitating unit A truck-mounted container for transporting central-mixed concrete, not equipped to provide agitation (slow mixing) during delivery.

non-air-entrained concrete Concrete in which neither an air-entraining admixture nor air-entraining cement has been used. *See also* **air-entraining agent**.

nonbearing partition A partition that is not designed to support the weight of a floor, wall, or roof.

nonbearing wall A wall designed to carry no load other than its own weight.



noncohesive soil A soil in which the particles do not stick together, such as sand or gravel.

noncollusion affidavit A notarized statement by a bidder that the bid was prepared without any kind of secret agreement intended for a deceitful or fraudulent purpose.

noncombustible Any material that will neither ignite nor actively support combustion in air at a temperature of 1200°F when exposed to fire.

noncombustible construction Construction in which the walls, partitions, and structural members are of noncombustible materials.

noncompensable delay A delay for which the contractor receives a time extension only, and may not recover delay-related costs from the owner.

nonconcordant tendons In a statically indeterminate structure, tendons that are not coincident with the pressure line caused by the tendons.

nonconductor A material that does not easily conduct electric current. Such materials are used as insulators.

nonconforming A building, or the use of a building, that does not comply with existing laws, rules, regulations, or codes.

nonconforming uses Existing uses of land or structures that do not conform to local zoning ordinances.

nonconforming work Work that does not fulfill the contractually agreed upon requirements.

noncorrosive flux A flux used in soldering operations that does not chemically attack the base metal.

nondestructive testing The examination of an object with technology that does not affect the object's future usefulness. Applications include the evaluation of the strength of concrete or a weld using ultrasonic measures. *See also* **borescope.**

nondrying A term applied to a material containing oils that do not oxidize or evaporate, and therefore do not form a surface skin. The term is often applied to glazing compounds.

nonelectric delay blasting cap A detonating cap with a delay device built in so that it detonates at a designated time after receiving an impulse or signal from a detonating cord.

nonevaporable water The water that is chemically combined during cement hydration and that is not removable by specified drying.

nonexcusable delay A delay that is the fault of the contractor for which the contractor will receive neither a time extension nor compensation.

nonferrous A term referring to any metal or alloy that does not contain iron, such as brass or copper.

nonfibered Roofing materials, including coating and primer, that do not contain asbestos fibers.

nonflammable A material that will not burn with a flame.

nonfreeze sprinkler system A fire protection sprinkler system that is designed to operate in freezing temperatures. *See also* **dry-pipe sprinkler system** *and* **preaction sprinkler system.**

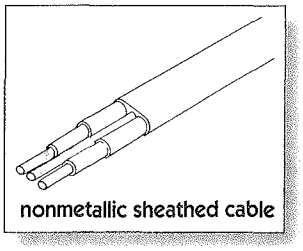
non-ionic surfactant An adjuvant with no electrical charge. Non-ionic surfactants are compatible with all types of pesticides.

non-load-bearing partition *See* **nonbearing partition.**

non-load-bearing tile Tile designated for use in masonry walls carrying no superimposed loads.

non-load-bearing wall *See* **nonbearing wall.**

nonmetallic sheathed cable Two or more electrical conductors enclosed in a nonmetallic, moisture-resistant, flame-retardant sheath.


nonmetallic sheathed cable

nonnailable decks In built-up roofing, a deck or substrate requiring the base sheet to be adhered rather than mechanically fastened.

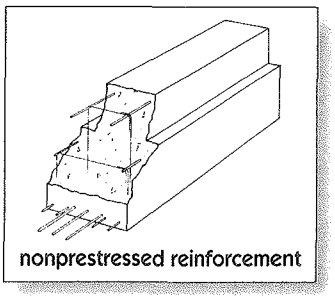
non-point-source pollution Runoff contamination from an overall site or land use and not discharged from a single pipe, such as sediment from construction sites, oils from parking lots, or fertilizers and pesticides washed from farm fields.

non-potable substitution system A system that uses by-product water to replace potable water for systems that do not require fresh water.

nonpressure pipe A pipe with no pressure rating, and therefore only suitable for conveying liquid by gravity.

nonpressure process A method of treating wood by allowing it to soak in a preservative and to absorb the preservative naturally.

nonprestressed reinforcement Reinforcing steel in a prestressed, concrete structural member that is not subjected to prestressing or posttensioning.


nonprestressed reinforcement

non-production costs Overhead costs, or the cost of supporting actual production activities.

nonrestrictive specification A type of specification that is written so as not to restrict the product to a particular manufacturer or material supplier.

nonreturn valve A check valve that allows flow in only one direction.

nonsimultaneous prestressing The posttensioning of tendons individually rather than simultaneously.

N

nonsiphon trap A plumbing fixture that creates a water seal that cannot be siphoned, but still allows the free flow of liquids.

nonskid floor A concrete floor surface treated with carborundum powder, iron filings, or other material to improve its traction qualities, especially when wet. The surface may also be brushed before the concrete sets to create a rough finish.

nonslip concrete *See* **nonskid floor.**

nonstaining mortar A mortar, with low free-alkali content, that avoids efflorescence or staining of adjacent masonry units by migration of soluble materials.

nontilting mixer A rotating drum concrete mixer on a horizontal axis. Concrete is discharged by inserting a chute that catches the concrete from the rotating fins.

nonunion *See* **open shop.**

Norbord A low-VOC, high-recycled-content cabinetry, made from MDF.

normal consistency **1.** The degree of wetness exhibited by a freshly mixed concrete, mortar, or neat cement grout when the workability of the mixture is considered acceptable for the purpose at hand. **2.** The physical condition of neat cement paste determined with the Vicat apparatus in accordance with a standard method of testing.

normalizing The heating of steel or other ferrous alloys to a specified temperature above the transformation range, followed by cooling in ambient air. The process reduces the brittleness and strength of the metal, but increases its ductility.

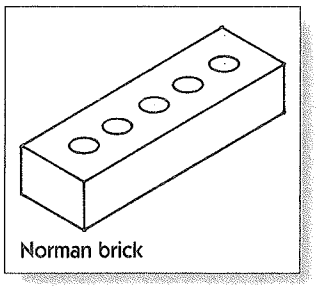
normally closed valves Valve ports are closed to flow when external power or pressure is not being applied.

normally open valves Valve ports are open to flow when external power or pressure is not being applied.

normal power factor ballast A ballast whose power factor is between 0.4–0.6.

normal weight concrete Concrete having a unit weight of approximately 150 pounds per cubic foot and made with aggregates of normal weight. *See also* **concrete, normal weight.**

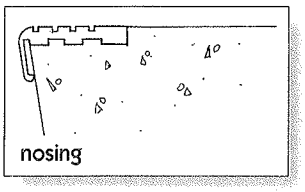
Norman brick A brick with nominal dimensions of 2-3/4" x 4" x 12". Three courses of Norman brick lay up to 8".


Norman brick

Northeastern Lumber Manufacturers One of seven regional grading agencies in North America that are authorized to write and publish grading rules for lumber. *See also* **grade stamp.**

Northern Hardwood and Pine Manufacturers Association One of seven regional grading agencies in North America that are authorized to write and publish grading rules for lumber. *See also* **grade stamp.**

nosing The horizontal projection of an edge from a vertical surface, such as the nosing on a stair tread.


nosing

nosing line The slope of a stair as defined by a line connecting the nosing of each stair tread.

no-slump concrete Fresh concrete with a slump of 1" or less.

notch board A stair stringer with the notches cut in for the treads.

notched bar test An impact test for metals.

notching A timber joint in which one or both of the members have a section or notch cut out.

notch joist A joist with a section cut out to fit a ledger or girder.

notice to bidders A notice included in the bidding documents that informs prospective bidders of the bidding procedures and the opportunity to submit a bid.

notice to creditors During bankruptcy proceedings, the formal notification to creditors of a meeting, or the granting of an order for relief.

notice to proceed A written notice from the project owner to the contractor in which the contractor is authorized to proceed with the work on a specified date.

novation One party's agreement to release another party from a contract in exchange for a new party as substitute.

novelty siding *See* **drop siding.**

nozzle An attachment to the outlet of a pipe or hose that controls or regulates the flow.

nozzle liner A replaceable rubber insert for the inside of a nozzle. The liner is used to prevent wear to the metal parts, particularly to shotcrete nozzles.

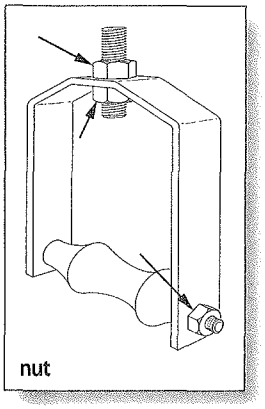
nozzle pattern The most efficient layout for spray heads in a lawn watering system.

N-truss A Pratt truss.

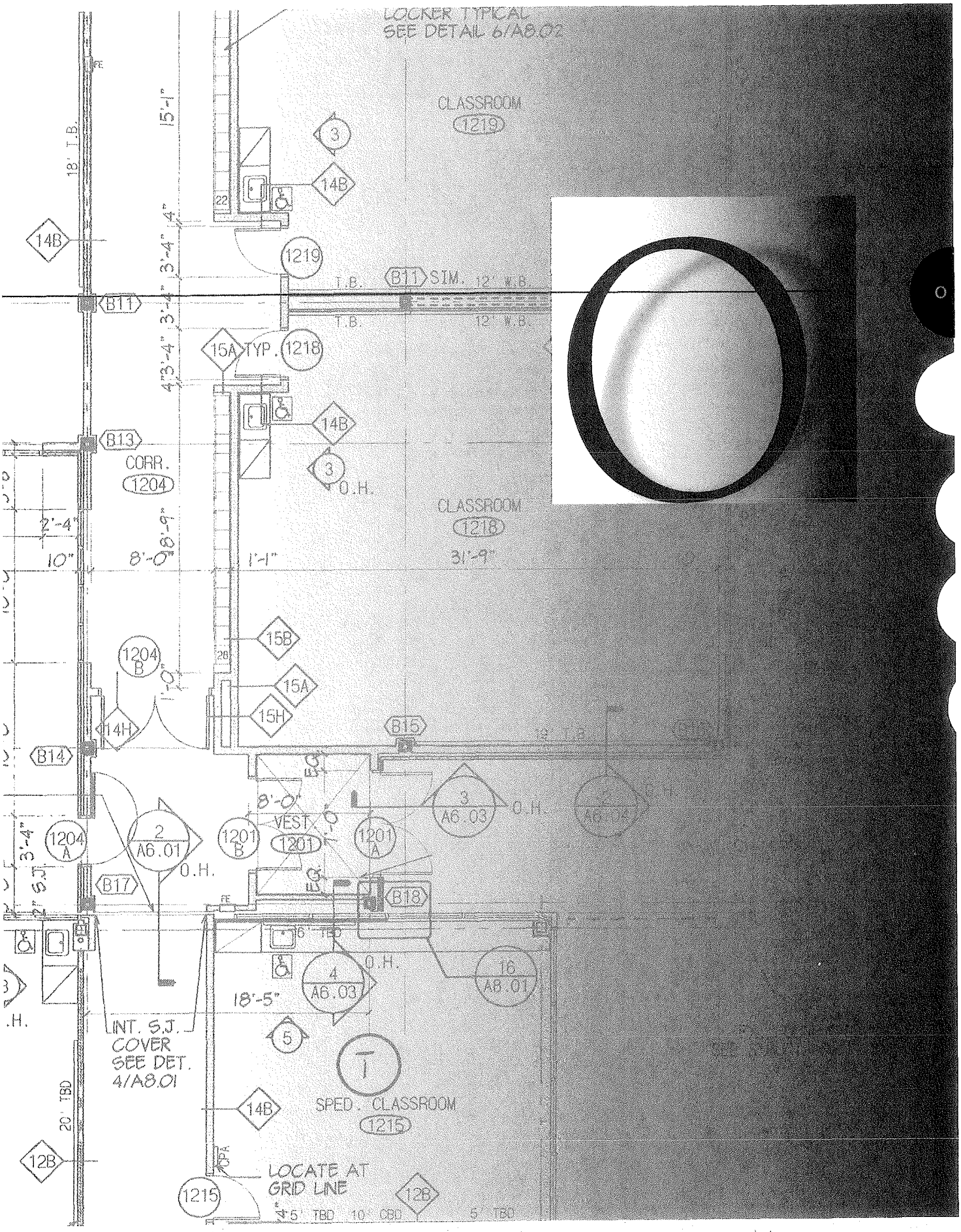
nuisance alarm An alarm triggered by a malfunction or incorrect information.

nurses call system An electrically operated system for use by patients or personnel for summoning a nurse.

nut A short metal block with a threaded hole in the center for receiving a bolt or threaded rod.



nylon fiber A synthetic fiber used extensively in floor coverings, wall coverings, drapery, and other furnishings.


LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
3
14B
22
18' T.B.
15'-1"
14B
1219
T.B.
B11
SIM. 12' W.B.
T.B.
12' W.B.
B11
4'3'-4"
3'-4"
3'-4"
15A TYP.
1218
14B
B13
CORR.
1204
3
O.H.
CLASSROOM
1218
2'-4"
10"
8'-0"
8'-9"
1'-1"
31'-9"
15B
1204
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1'-0"
20
15A
14H
15H
B14
B15
8'-0"
VEST.
1201
1'-0"
3
A6.03
O.H.
1204
A
2
A6.01
O.H.
1201
B
1201
A
3'-4"
S.J.
B17
B18
6" TBD
O.H.
4
A6.03
16
A8.01
18'-5"
INT. S.J.
COVER
SEE DET.
4/A8.01
5
1
SPED. CLASSROOM
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LOCATE AT
GRID LINE
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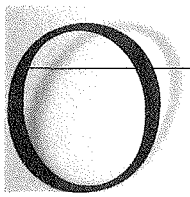
4'-5" TBD
10' CBD
5' TBD



Abbreviations

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

O oxygen

OA overall, outside air

O/A on approval

OA&M operation, administration, and maintenance

OAI outside air intake

O&M operations and maintenance

O&P overhead and profit

OAS outside air supply

OASIS Organization for the Advancement of Structured Information Standards

OAT outdoor air temperature

oBix open Building Information Xchange

OBM ordinance benchmark

OBS obsolete, open back strike

OC, oc on center

OCT octagon

OD outside diameter

ODS ozone-depleting substance, overhead distribution system

OEM original equipment manufacturer

OFCI owner-furnished and contractor-installed

OFE owner-furnished equipment

OFF office

OFOI owner-furnished and owner-installed

OG, og ogee

O/H, OVHD, OH overhead

OHS oval-headed screw

OJT on-the-job-training

OLED organic light-emitting diode

OO object-oriented, owners and operators

Opex operating expense

opp opposite

opt optional

OR outside radius, owner's risk

ord order, ordinance

ORIG original

OS operating system

OS&Y outside screw and yoke

OSB oriented strand board

OSCR Open Standards Consortium for Real Estate

OSHA Occupational Safety and Health Administration, Occupational Safety and Health Act

OSS operations support systems

OZ, oz ounce

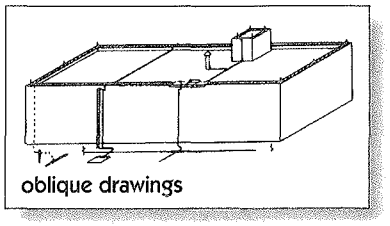
oak A hard, dense wood used for heavy framing, flooring, interior trim, plywood, and furniture. The two types available from mills are white oak and red oak.

oakum A caulking material made from hemp fibers that are sometimes saturated with tar. Oakum is commonly used with a bell-and-spigot joint in cast iron pipe. Oakum is packed into the joint with a hammer and chisel before molten lead is poured into the joint to seal it.

obligation A result of custom, law, or agreement by which an individual is duty bound to fulfill an act or other responsibility.

oblige A person or entity owed an obligation, specifically to pay money, under a contract or bond.

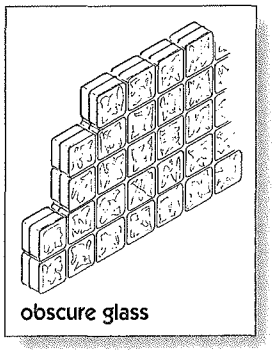
oblique drawings One face of an object drawn directly on the picture plane. Projected lines are drawn at a 30° or 45° angle.


oblique drawings

oblique photograph An aerial photograph taken with the camera axis inclined away from the vertical. A high oblique photograph is one that shows the horizon; a low oblique does not include the horizon.

oblique section An architectural or mechanical drawing of a section through an object, at an angle other than 90° to its long axis.

obscure glass Glass that transmits light but does not allow a view of objects on the other side, such as ground glass or frosted glass; translucent glass.


obscure glass

obscuring window A window glazed with obscure glass, installed for privacy.

observation of the work The architect, during construction-phase visits to a project, observes the progress and quality of the work. The purpose of the visits is to verify that work is proceeding as specified in the contract documents.

obsolescence **1.** The condition of being out of date. A loss of value occasioned by new developments that place the older property at a competitive disadvantage. **2.** A decrease in the value of an asset brought about by the development of new and more economical methods, processes, and/or machinery. **3.** The loss of usefulness or worth of a product or facility as a result of the appearance of better and/or more economical products, methods or facilities.*

occupancy The designed or intended use of a building. Also, the ratio of present space being used or rented to the designed full use, expressed as a percent.

occupancy level The percentage of space that is currently under lease.

occupancy management Identifying the presence of building users in different parts of a facility, for example by using occupancy sensors, in order to save energy by automatically turning off lights in unoccupied spaces.

occupancy permit *See* **certificate of occupancy.**

occupancy pushbutton An occupancy indicator/sensor that can be turned on and off manually.

occupancy rate The number of persons per building, unit, room, or floor.

occupancy sensor A heat-sensitive electronic sensor that reacts to moving heat sources within its monitored field. Used as a component of security and lighting systems.

occupant load The maximum number of persons in an area at a given peak period.

occupant portal A computer application that allows building occupants to access information and control conditions within their spaces.

occupant unit cost estimate An early-stage planning estimate based on the projected number of facility users. Costs are expressed per common unit, which may be desks for schools, seats for auditoriums, beds for hospitals, or rental rooms for hotels. Also referred to as *end product unit*, *end unit*, or *capacity* estimates.

Occupational Safety and Health Act The federal law governing the safety of workers in the workplace.

Occupational Safety and Health Administration The federal agency responsible for worker health and safety.

occurrence In insurance terminology, a happening or event. Usually refers to an injury or damage that is neither expected nor intended.

occurrence form An agreement that covers insurance claims from both accidents and occurrences (in contrast to the accident-only form).

odorless mineral spirit A thinner used in interior paints because of its odorless qualities.

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O

odorless paint A water-based paint, or a base using odorless mineral spirit, that produces very little odor.

off-center (out-of-center) A load that is applied off the geometric center of a structural member, or a structural member that is placed off the geometric center of an applied load.

off-count mesh Wire mesh in which the spacing or count is greater in one direction than in the other.

offer A proposal, as in a wage and benefits package, to be accepted, negotiated, or rejected.

offer and acceptance The term used to test whether a contract has been arrived at or not—basically successful contract negotiations between the owner and the contractor.

offering list A list of items for sale, published by a mill or wholesaler and distributed to potential customers. The list usually includes a description of the item, shipping information, price, and terms of sale.

off-gassing The release of airborne particulates, often from installed construction materials such as carpeting, cabinetry, or paint, that can cause allergic reactions and other health problems in building occupants.

office occupancy The use of a building or space for business, as opposed to manufacturing, warehousing, or other uses.

Office of Federal Contract Compliance (OFCC) An agency of the U.S. Department of Labor that requires contractors for federal projects to maintain affirmative action in providing equal rights for employees under the provisions of Title IV of the Civil Rights Act of 1964, which forbids discrimination by an employer on the basis of race, color, religion, sex, or national origin.

off-road hauler A heavy-duty rear dump truck or bottom dump wagon capable of routinely hauling over rough haul roads.

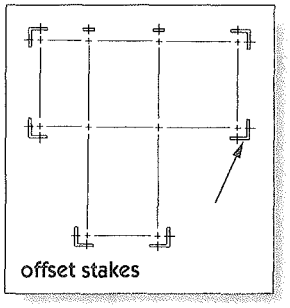
offset **1.** In surveying, a line or point placed at a given distance from a control line or point used to reestablish the original location. **2.** In plumbing, an assembly of fittings on a pipeline that takes one section of pipe out of line but parallel to a second section. **3.** Any bend in a pipe.

offset bend An intentional distortion from the normal straightness of a steel reinforcing bar in order to move the center line of a segment of the bar to a position parallel to the original position of the center line. The offset bend is commonly applied to vertical bars that are used to reinforce concrete columns.

offset scale A scale used on a map or plan for plotting points that have been determined by field measurements.

offset screwdriver A screwdriver whose head is set at 90° to its shaft.

offset stakes Stakes placed by the excavator to mark the corners of a building after the surveyor's stakes have been removed.

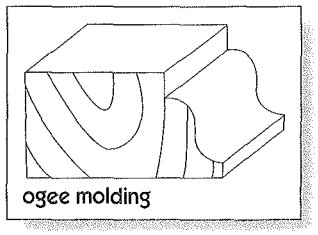


offset stakes

offsites General facilities outside the battery limits of all process units, such as field storage, service facilities, utilities, main electric substation, administrative buildings, rail tracks and storage yard, etc.*

ogee **1.** A double curve much like the letter "S." **2.** The union of concave and convex lines.

ogee molding Cornice molding (may be multiple moldings) utilizing ogee and/or reverse ogee curves to provide definition.



ogee molding

ohm A unit of electrical resistance in a conductor that produces a decrease in voltage of one volt with a constant current of one ampere.

ohmmeter An instrument for measuring the electrical resistance in a conductor or appliance in ohms.

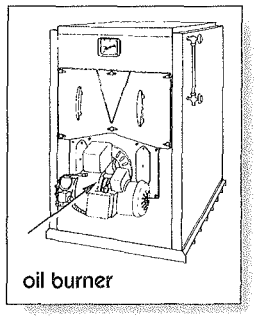
Ohm's law A scientific law stating that the current in an electrical circuit is directly proportional to the voltage and inversely proportional to the resistance. Stated as an equation: I (current) E (voltage)/R (resistance).

oil-based paint Commonly known as oil paint, any paint that has an oil base or binder along with coloring pigments. Becomes brittle and yellow with age.

oilborne preservative One of two general classifications for wood preservatives, the other being waterborne salts. Examples of oilborne preservatives include creosote and various chlorinated phenols, such as pentachlorophenol.

oil-bound distemper A distemper, or water-based paint that contains some drying oils to enhance its spreading and drying characteristics.

oil burner A fuel-oil burning unit installed in a furnace or boiler.



oil burner

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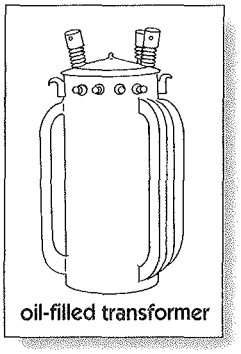
oil canning (tin canning) The waving or buckling of formed sheet metal, such as roofing or siding.

oiled and edge sealed A process used to resist moisture and preserve plywood concrete form panels. Oiling and sealing increases the number of times a panel can be used and makes the panel easier to release from the concrete.

oiler The second person assigned to a piece of equipment such as a crane. An oiler's principal job is to lubricate the equipment.

oil-filled transformer A transformer having its core and coils immersed in an insulating oil such as mineral oil.


oil-filled transformer

oil-immersed transformer *See* **oil-filled transformer.**

oil paint A paint with drying oil as a base, as opposed to a water base or other base.

oil preservative *See* **oilborne preservative.**

oil separator In a refrigeration system, a device for purging the refrigerant of oil and oil vapor.

oil soak treatment A method of treating wood with preservative.

oil stain A stain, with an oil base containing dye or pigment, used to penetrate and permanently color wood or other porous materials.

oilstone A stone with a fine-grained, oil-lubricated surface used to sharpen the cutting edge of tools.

oilstone slip An oilstone used to sharpen gauges and chisels.

oil switch (oil-immersed switch) A switch immersed in oil or in another insulating fluid.

oil varnish A high-gloss varnish that contains a blend of drying oil and gum or resin, principally used for interior finishes.

oil/water separator A device that allows oils mixed with water to become trapped in a holding section for removal, while the water is allowed to pass through for disposal.

old bundling (full-length bundling) A method of packaging siding in which each piece is of equal length. Most shippers use "new bundling," in which pieces of various lengths are nested.

old English bond A brick pattern of alternating courses of headers and stretchers, with a closer placed at the corners of each header course. *See also* **English bond.**

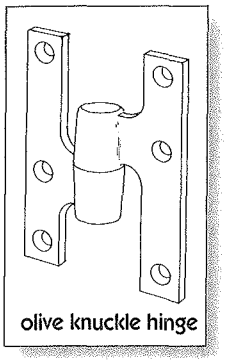
old wood Reused wood that has previously been worked.

old work A general term for any electrical work that involves an existing wiring.

olive butt *See* **olive knuckle hinge.**

olive hinge *See* **olive knuckle hinge.**

olive knuckle hinge (olive butt, olive hinge) A single-pivot paumelle hinge with knuckles that join to form an oval shape.


olive knuckle hinge

OmniClass A construction classification system that includes prior systems (MasterFormat, UniFormat, and EPIC).

on center **1.** A measurement of the distance between the centers of two repeating members in a structure. **2.** A term used for defining the spacing of studs, joists, and rafters.

on-demand bond A monetary form of contractor performance assurance, typically provided by a bank, where the bond is payable to the owner simply on his demand, and usually without the owner having to provide the bank any evidence or details of the contractor's failure to perform.

one by A slang term for lumber with a nominal thickness of 1", as in a 1" by 3" board.

one-hour rating A measure of fire resistance, indicating that an object can be exposed to flame for an hour without losing structural integrity or transmitting excessive heat.

one-line system A graphic representation of a power distribution system using lines and symbols to indicate its major components.

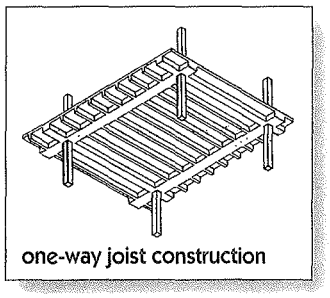
one-on-two (one-to-two) A slope in which the elevation rises one foot in two horizontal feet.

one-piece toilet A toilet whose tank and bowl were manufactured as a single fixture.

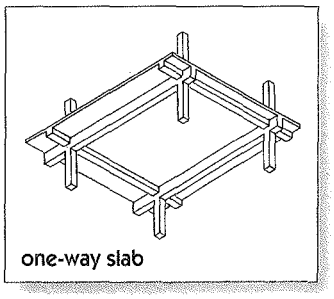
one-pipe system **1.** In drainage systems, two vertical pipes with waste and soil water flowing down the same pipe and all branches connected to the same anti-siphon pipe. **2.** A heating circuit in which all the flow and return connections to the radiators come from the same pipe. The radiator at the far end is therefore much cooler than the radiator that is nearest the heat source.

O

one-way joist construction A concrete floor or a roof framing system with monolithic parallel joists cast with the slab. The joists are supported on girders, which in turn are supported by columns.


one-way joist construction

one-way slab A slab panel, bound on its two long sides by beams and on its two short sides by girders. The dead and live loads acting on the slab area may be considered to be entirely supported in the short or transverse direction by the beams; hence, the term *one-way*.


one-way slab

one-way system The arrangement of steel reinforcement within a slab that is designed to bend in only one direction.

on grade A concrete floor slab resting directly on the ground.

on-off sprinkler A fire safety system sprinkler that activates like a traditional sprinkler but ceases operation when room temperature reaches a safe level. On-off sprinklers can reduce the amount of water discharged during a fire, thus reducing cleanup and water damage.

opacity In painting, the ability of a paint to cover or hide the original background.

opalescent glaze A smooth glaze with a milky appearance.

opaque ceramic-glazed tile A fire-bonded facing tile with an opaque, colored, ceramic glaze and a glassy or satin finish.

OPC relationship The relationship that normally exists between owner, design professional, and contractor during the construction process.

open assembly time The time required between the application of glue to veneer or to joints and the assembly of the pieces.

open bid An offer to perform a contract in which the bidder reserves the right to reduce his bid to compete with a lower bid.

open bidding A bidding procedure wherein bids or tenders are submitted by and received from all interested contractors, rather than from a select list of bidders privately invited to compete.

open boarding A system of laying boards on a roof, leaving a gap between adjacent boards.

open Building Information Xchange (oBix) A standard for Web communications between building electrical and mechanical systems and applications.

open cell A cell that interconnects with other cells in foam rubber, cellular plastics, and similar materials.

open-cell foam Cellular plastic with a great many open and interconnected cells.

open-cell process A process for fixing preservative in wood under pressure. The chemical used as a preservative is retained in the cell walls only, with the cells left empty.

open circuit The absence of a direct connection between two points in an electrical network.

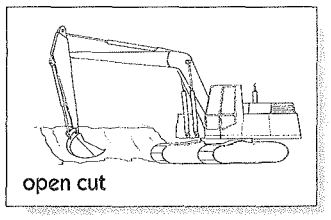
open-circuit grouting A grouting system with no provision for recirculation of grout to the pump.

open competitive selection The process of selecting a contractor through an advertisement for bidders. Bidders are not subject to restrictions or discrimination, provided they are qualified. Also referred to as *open bidding*.

open construction A description of any building element that is temporarily left unfinished or exposed to allow for easy inspection.

open cornice (open eaves) Overhanging eaves with exposed rafters that are visible from below.

open cut An excavation in the ground that is open to the sky at its surface, as opposed to a tunnel or horizontal mine shaft.


open cut

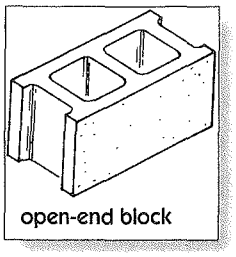
open defect Any hole or gap in lumber, veneer, or plywood that has not been filled and repaired.

Open Design Alliance (formerly OpenDWG Alliance) An alliance of CAD software users and developers whose mission is to promote open, industry-standard formats for exchanging CAD data.

OpenDWG A type of CAD file developed by the Open Design Alliance.

open eaves *See* **open cornice**.

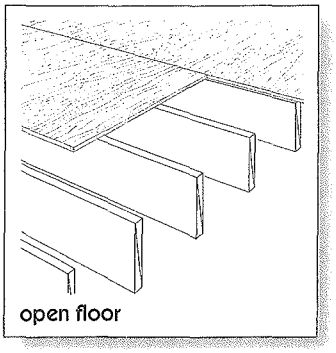
open-end block **1.** An A-block or H-block of concrete masonry. **2.** A block of standard material and size built with recessed end webs.


open-end block

open-end mortgage A mortgage arrangement wherein the mortgagor may borrow additional sums for the repair and upkeep of property after the original loan is granted. The mortgages are paid over an extended period.

open excavation Excavation in which no shores, piles, or sheeting are used to hold back the soil at the edge of the excavation.

open floor A floor in which joists are visible from the floor beneath.


open floor

open-frame girder An open-web girder or truss built with verticals connected rigidly to top and bottom chords, but with no diagonals.

open-graded aggregate **1.** An aggregate that contains almost no mineral filler. **2.** A compacted aggregate with relatively large void spaces.

open grain **1.** Lumber that is not restricted by the number of rings per inch or rate of growth. **2.** Timber with a coarse texture and open pores.

open-hole inspection Inspection by a building inspector or engineer of an open excavation to identify, based on soil type and conditions, the type of foundation that should be installed.

opening light An operable pane or sash in a window that may be open or shut, as opposed to a fixed light.

opening of bids *See* **bid opening.**

opening protective A device installed over an opening to guard it against the passage of smoke, flame, and heated gases.

opening size The size of a door opening as measured from jamb to jamb and from the threshold or floorline to the head of the frame, allowing for the size of the door and for the necessary clearance to open and close it freely. *See also* **door opening.**

open joint **1.** A joint in which two pieces of material that are joined together are not entirely flush. **2.** A joint that is not tight.

open loop control A hydraulic control system that does not have a direct link between the valve of the controlled variable (temperature, pressure) and the controller.

open mortise A mortise or notch that is open on three sides of the piece of timber into which it is cut. *See also* **slot mortise.**

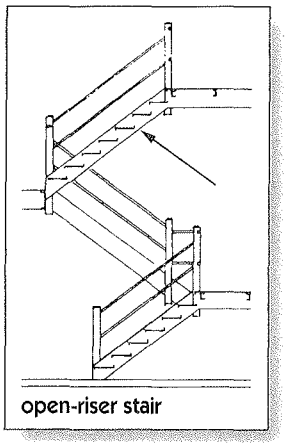
open-newel stair (hollow-newel stair, open-well stair) **1.** A stairway that is built around a wall and has open spaces between its strings. **2.** A stair without newels.

open plan A building plan that has relatively few interior walls or partitions to subdivide areas for different uses.

open plumbing Plumbing that is exposed to view beneath its fixtures, with ventilated drains and traps readily accessible for inspection and repairs.

open riser The space between two successive treads of a staircase built without solid risers.

open-riser stair A stair built without solid risers.


open-riser stair

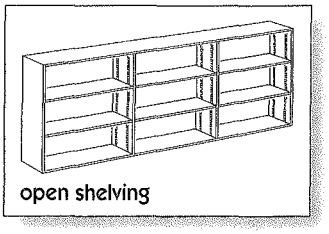
open roof (open-timbered roof) A style of roof with exposed rafters, sheathing, and supporting timbers visible from beneath, and no ceiling.

open shaft A vertical duct or passage in a building that is used to ventilate interior spaces, drawing in outside air from its open top.

open sheathing *See* **open sheeting.**

open sheeting (open sheathing, open timbering) Vertical or horizontal supporting planks and timbers that are set along an excavated surface at intervals. Open sheeting is used whenever the ground is firm and dry enough to be effectively shored up without closed sheeting.

open shelving Shelving that is exposed to view, not concealed by doors or cabinets.


open shelving

O

open shop (merit shop, nonunion shop) A term describing a firm whose employees are not covered by collective bargaining agreements.

open slating A method of installing roofing slates where a space is left between slates in each course.

open space A term used in urban planning for parks, woods, lawns, recreation spaces, and other areas on which no building stands.

open stair (open-string stair) A stairway with treads that are visible from one side or both sides.

open stairway A stairway with one side or both sides open to the room in which it is located.

open stairway

open string (open stringer, cut string) A stairway string with its upper edge cut or notched to conform with the treads and risers of the stairs.

open-string stair *See* **open stair.**

open system A piping system for water or fuels in which the conduits that circulate the liquid are attached to an elevated tank or tower, with open vents to facilitate storage, access, and inspection.

open tank A tank for treating wood with preservative at atmospheric pressure.

open-timbered floor A style of floor construction in which the joists and other supporting timbers are exposed and visible from the underside.

open-timbered roof *See* **open roof.**

open-timbering Description of structures built with their timberwork or wooden framework exposed to view, or without plaster or another covering; exposed timberwork.

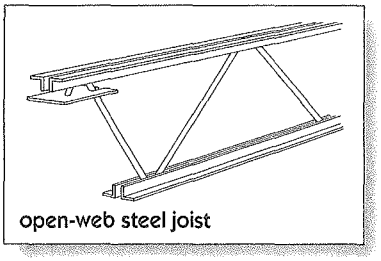
open time The time that is required for the completion of the bond after an adhesive has been spread.

open-top mixer A mixer consisting of a trough or a segment of a cylindrical mixing compartment within which paddles or blades rotate about the horizontal axis of the trough. *See also* **mixer** *and* **horizontal shaft.**

open valley A type of roof valley on which shingles and slates are not applied to the intersection of two roof surfaces, leaving the underlying metal or mineral-surfaced roofing material exposed along the length of the valley.

open web A form of construction on a truss or girder in which multiple members, arranged in zigzag or crisscross patterns, are used in place of solid plates to connect the chords or flanges.

open-web steel joist A steel truss with an open web, constructed of hot-rolled structural shapes or shapes of cold-formed, light-gauge steel.



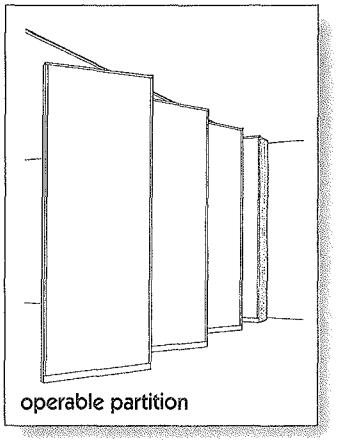
open-web steel joist

open-web studs Light gauge steel framing construction of wire rods welded to flanges for use as backing lath.

open wiring A network of electrical wiring that is not concealed by the structure of a building, but is protected by cleats, flexible tubing, knots, and tubes, which also support its insulated conductors.

openwork **1.** Ornamental work characterized by perforations. **2.** A section of work on a fortress wall that is unprotected by a parapet or another defensive structure at the site of a gorge or bastion opening.

operable partition A partition made of two or more large panels suspended on a ceiling track, and sometimes also supported on a floor track, which may be opened by sliding the panels so that they overlap. The panels form a solid partition when closed.

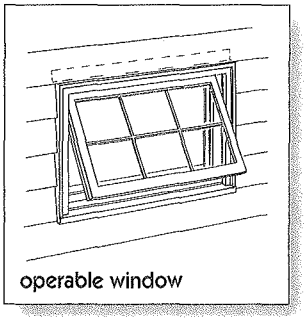


operable partition

operable transom A glass light or panel that is installed above a door and may be opened or shut for ventilation.

operable wall *See* **operable partition.**

operable window A window that may be opened and shut to accommodate ventilation needs, as opposed to a fixed light or fixed sash.



operable window

operating engineer A worker or technician who operates heavy machinery and construction equipment.

operating expense (opex) Expenses attributed to operations, generally with a useful life of one accounting period or less. These costs are not subject to amortization or depreciation.

operating expense ratio The ratio of total operating expenses to the effective gross income of a project.

operating pressure The pressure registered on a gauge when a system is in normal operation.

operations control center May refer to a building area where building systems operations are managed and tracked--or to those functions themselves. *Also* **network operations center**.

opposed-blade damper A damper installed over an air passage to regulate the volume of air entering an enclosure. The damper is operated by means of two sets of blades linked so that adjacent blades can open and turn in opposite directions.

optical access control A security device, often featuring turnstiles, that allows only properly identified people to pass through an access port.

optical coatings Very thin coatings applied to glass or other transparent materials to increase the transmission of or reduce the reflection of sunlight. Coatings are also used to reflect infrared radiation back to the heat exchanger from which it was emitted.

optical fiber cable A medium through which light pulses are transmitted, consisting of a glass core surrounded by a protective sheath. Light pulses are introduced into the optical fiber by a laser or light-emitting diode.

optical losses Losses resulting from solar radiation reflecting from the surface of a solar cell's cover plate.

optical plummet In surveying, a device used in place of a plumb bob to center transits and theodolites over a given point, preferred for its steadiness in strong winds.

optics **1.** The study of light and vision. **2.** A system of lenses, filters, prisms, or mirrors used in electronics to direct, disperse, reflect, or otherwise control light rays.

optimum moisture content The degree or percentage of moisture in soil at which the soil can be compacted to its greatest density. Optimum moisture content is used in specifications for compacting embankments.

optimum start program A building automation system that delays the start-up of a heating or cooling system until the last possible moment while still maintaining building comfort levels during occupancy.

option A financial agreement between a property owner and user that grants the latter party, upon payment of a stated sum, the right to buy or to rent the property within a time limit specified in the contract.

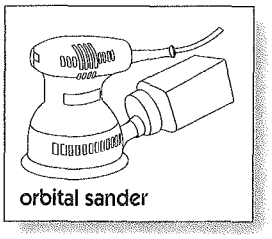
opus quadratum Stonemasonry in which the stones are cut into squares and laid out in regular ashlar courses.

orangeburg **1.** A standard paneling pattern used in decorative plywood. Orangeburg panels have random width grooving, with the width between each panel following a pattern of 4-8-4-7-9-6-4-6 inches. **2.** A common term for bituminous fiber drainage pipe.

orange peel (orange peeling) **1.** A surface flaw on paint, resulting from poor flow or application, that leaves the finish pocked with tiny holes like citrus skins. **2.** A wavy surface defect on porcelain enamel. **3.** A segmented hemispherical bucket that resembles a peel of half an orange, equipped with self-opening and closing capabilities and used to excavate earth. **4.** A distinctive texture applied to drywall.

orange peel bucket *See* **orange peel (3.)**.

orbital sander A hand-held electrical sander whose base, covered with sandpaper or abrasive material, moves rapidly in an elliptical pattern and is used chiefly for coarse work.


orbital sander

order of magnitude estimate An estimate made without detailed engineering data.*

ordinance An authoritative rule of law, public decree, or regulation enacted by a municipality or other political subdivision fully enforceable through the court system.

ordinary construction Construction in which some interior materials and members are of smaller dimensions, composed wholly or in part of wood or other combustible materials, but in which exterior bearing walls and nonbearing exterior walls are of stable, noncombustible construction with a minimum fire endurance of two hours.

ordinary-hazard contents Building contents that burn at moderate speed and give off smoke, but release no poisonous fumes or gases that would cause an explosion under fire conditions.

ordinary Portland cement (Type 1 Portland cement) A basic formula for Portland cement used in general construction, containing none of the distinctive properties or refinements of other cements.

ordnance Any chemical substance or physical item related to munitions that is designed to cause damage through explosive force, incendiary action or toxic effects.

Oregon cedar *See* **Port Orford cedar**.

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O

Oregon larch (Pacific silver fir and noble fir) Tall, needled evergreen of western North America whose wood is used for lumber and fine veneer. Lumber from the latter two species shared the Oregon larch designation for many years.

Oregon maple (big leaf maple) A wood used in furniture, especially its burls, and as core veneer in some plywood.

Oregon pine (Douglas fir) Needled evergreen producing medium-hard, close-grained wood commonly used for frames, trim, and paneling.

Oregon spruce (Sitka spruce) Needled evergreen producing soft, close-grained wood commonly used for frames and trim.

Oregon white cedar (Port Orford cedar) Needled evergreen producing soft, close-grained wood commonly used for interior and exterior trim and paneling.

Oregon white pine (ponderosa pine) Needled evergreen producing soft, close-grained wood used for frames, trim, paneling, and cabinetry.

or-equal clause A clause within the technical specification section of the project manual that allows a contractor to propose a product or method that is equal to that which has been specified by the design professional.

organic Descriptive of materials or compounds produced from vegetable or animal sources.

organic clay Clay containing a high volume of composted animal or vegetable materials.

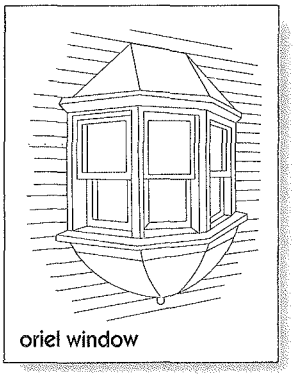
organic light-emitting diode (OLED) An LED with an emissive layer made of organic compounds.

organic silt Silt composed in large part of organic substances.

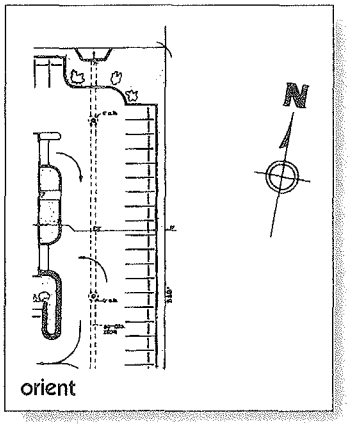
organic soil A highly compressible soil with heavy organic content, considered generally undesirable for construction because of its inability to bear sizable loads.

oriel In architecture, a projecting bay, frequently outfitted with one or more windows, that is corbeled out from the wall of a structure or supported by brackets and that serves both to expand interior space and to enhance the appearance of the building.

oriel window A window housed in an oriel. An oriel window's projection does not extend to the ground, differentiating it from a bay window.


oriel window

orient **1.** To locate a building by points of the compass. **2.** To locate a church so the altar end is toward the east.



orient

orientation The siting of a building relative to compass direction and, therefore, to the sun, which can impact heating, lighting, and cooling costs.

oriented-core barrel A surveying instrument that takes and marks a core to show its orientation, and at the same time records the bearing and slope of the test hole.

oriented strand board (OSB) Panels made of narrow strands of wood fiber oriented lengthwise and crosswise in layers, with a resin binder. Depending on the resin used, OSB can be suitable for interior or exterior applications.

orifice meter A device used to measure the amount of liquid or gas flowing through a pipe.

original equipment manufacturer (OEM) A company that uses components from one or more other companies to build a product that it sells under its own company name.

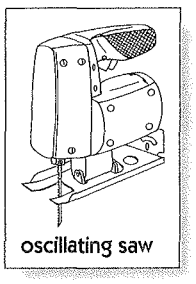
O ring A round gasket used as a sealant in pipe joints and valves.

orthographic projection A method of representing the exact shape of an object by dropping perpendiculars from two or more sides of the object to planes, generally at right angles to each other. Collectively, the views on these planes describe the object completely. The term *orthogonal* is sometimes used for this system of drawing.

orthography The drafting procedure in which elevations or sections of buildings are geometrically represented.

orthotropic A hypothetical plate consisting of beams and a slab acting together with different flexural rigidities in the longitudinal and transverse directions, as in a composite beam bridge.

oscillating saw A power saw with a straight blade that oscillates in short strokes.


oscillating saw

oscillator Any electronic component that generates alternating voltage.

oscilloscope An electronic device that uses a cathode ray tube or a fluorescent-coated tube to produce visual displays corresponding to changes in electrical signals.

Ottawa sand Silica sand produced by processing material obtained by hydraulic mining of massive orthoquartzite situated in deposits near Ottawa, Illinois. The sand is composed almost entirely of naturally rounded grains of nearly pure quartz and is used in mortars for testing of hydraulic cement. *See also* **standard sand** *and* **graded standard sand.**

outband A masonry jambstone that serves as a stretcher and is cut to accommodate a frame.

outbuilding A building that is separate from a main building but attendant on it or collateral to it in its function, such as a stable, a garage, or an outside lavatory.

outcrop A segment of an underground rock stratum or a formation that breaks through the surface of the earth and forms a visible protuberance.

outdoor-air intake *See* **outside-air intake.**

outer court An outdoor space that is bounded on three sides by property lines or building walls, but maintains a view of the sky and is open on one side to an adjacent street or public area.

outer string On a stairway, the string that stands away from the wall on the exposed outer edge of the stair.

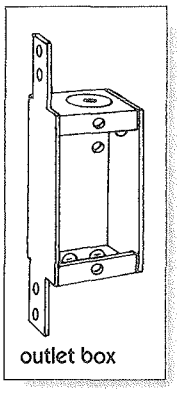
outfall The final receptacle or depositing area for sewage and drainage water.

outfall sewer A sewer that receives the sewage from the collecting system and conducts it to a point of final discharge or to a disposal plant.

outgassing The driving out or freeing of gases from fabrics and building materials.

outlet **1.** The point in an electrical wiring circuit at which the current is supplied to an appliance or device. **2.** A vent or opening, principally in a parapet wall, through which rainwater is released. **3.** In a piping system, the point at which a circulated liquid is discharged.

outlet box The metal box, located at the outlet of an electrical wiring system, that serves to house one or more receptacles.


outlet box

outlet ventilator An opening covered with a louvered frame, serving as an outlet from an enclosed attic space to the outside.

outline lighting Gaseous tubes or incandescent lamps that are arranged around the outline of a building, a door, a window, or another part of a structure in order to emphasize its configuration.

outline specifications A listing of shortened specification requirements (normally part of schematic or design development documents).

outlooker In roof construction, a projecting member that supports the portion of the roof beyond the face of a gable.

out-of-center *See* **off-center.**

out-of-plumb Deviating from a true vertical line of descent, as determined by a plumb line.

out-of-sequence services Services performed in an order or sequence other than that in which they are normally carried out.

out-of-true Descriptive of a structural member that is twisted or otherwise out of alignment.

output **1.** The net volume of work produced by a system. **2.** The maximum capacity or performance that a system is capable of under normal conditions of operation.

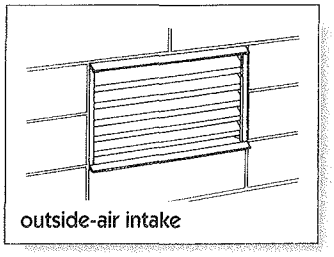
outrigger **1.** A beam that projects beyond a wall in order to support an overhanging roof or extended floor, built in a direction perpendicular to the joists of the structural member it serves. **2.** An extended beam that supports scaffolds or hoisting tackle as work is being performed on or near a building's wall. **3.** A beam that gives stability to a crane by widening its base.

outrigger scaffold A scaffold suspended from outrigger beams or brackets fixed to the outer wall of a building.

outrigger shore (horsing) A bracket installed temporarily to support an outrigger beam or another projecting member.

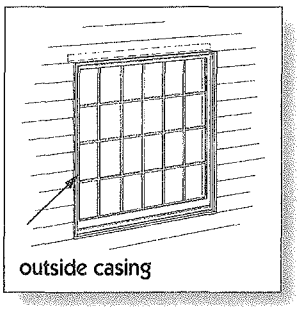
outside air Fresh, unconditioned air from outside of a building.

outside-air intake (fresh air intake, outdoor-air intake) An opening or inlet to the outside of a building, through which fresh air is introduced to the boiler room or to an air-conditioning system.


outside-air intake

outside caliper A measuring instrument set on adjustable legs and used especially to measure the outside circumference and diameter of round or cylindrical objects and structures.

outside casing (outside architrave, outside facing, outside lining, outside trim) The supporting members of the jamb or head on a cased window that face the outside and have the appearance of trim.


outside casing

outside corner The outward-projecting corner where two walls meet.

outside corner molding A molding that covers and protects the projecting outside angle of two intersecting surfaces, as in wood veneer. *See also* **corner bead.**

outside facing *See* **outside casing.**

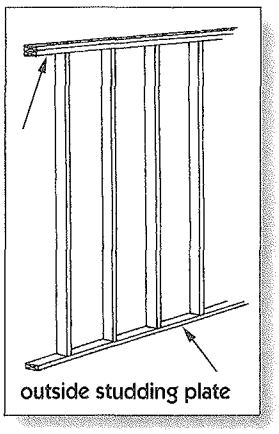
outside finish (exterior finish) Ornamental trim or surface treatment on the outside of a building.

outside foundation line A line that indicates where the outer side of a foundation wall is located.

outside glazing External windows or glass doors installed in a building from the outside.

outside screw and yoke A valve configuration where the valve stem, with exposed external threads supported by a yoke, indicates the open or closed position of the valve.

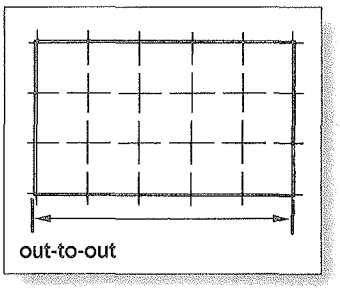
outside studding plate The soleplate or double top plate in the construction of a wood-frame wall or partition, usually built with stock of a size equal to the studding.


outside studding plate

outstanding leg A leg of a structural angle member, generally unconnected to any other member.

outsulation **1.** The placing of insulation to the exterior of a wall. **2.** The elimination of all thermal bridges between the inner and outer surfaces of a wall.

out-to-out In measurements, a term meaning that the dimensions are overall.


out-to-out

ovals Marble chips that have been tumbled until a smooth oval shape has been obtained.

oven dry The condition resulting from having been dried to essentially constant weight in an oven at a temperature that has been fixed, usually 221°F and 230°F (105°C and 115°C).

oven dry wood (bone dry wood) Wood that gives off no moisture when subjected to a temperature of 212°F (100°C).

overall (overall dimension) The total external dimension of any building material, including all projections.

overbreak Excavation performed beyond the work limits established by the neat line.

overburden **1.** A mantle of soil, rock, gravel, or other earth material covering a given rock layer or bearing stratum. **2.** An unwanted top layer of soil that must be stripped away to open access to useful construction materials buried beneath it.

overcloak The portion of a metal roofing sheet that overlaps the edge of an adjacent sheet set underneath it.

overconsolidated soil deposit A soil deposit that has been forced to withstand an effective pressure exceeding the pressure imposed by its present overburden.

overcurrent Electrical current of a magnitude beyond that rated for the equipment in use or the ampacity of a conductor. May result from a short circuit, ground fault, or electrical overload.

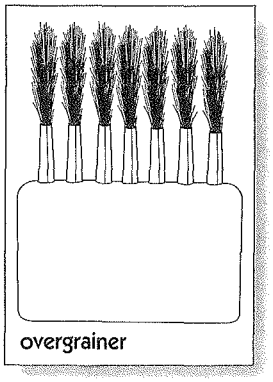
overcurrent protection Safety provisions within an electrical system, such as would be furnished by ground fault circuit interrupters, that guard against damage and injury resulting from excessive current by shutting off the flow of current when it reaches a certain level.

overdesign A term used to describe adherence to structural design requirements beyond service demands, as a means of compensating for statistical variation, anticipated deficiencies, or both.

overdig The amount of clean soil that is removed below or beyond the extent of contamination at a site to make sure all waste has been taken away.

overflow (overflow pipe) **1.** A pipe installed to prevent flooding in storage tanks, fixtures, and plumbing fittings, or to remove excess water from buildings and systems. **2.** An outlet fitted to a storage tank to set the proper level of liquid and to prevent flooding.

overgrainer A special brush with flat, thin, elongated bristles, used to create imitations of natural wood grains.


overgrainer

overhand work The process by which bricklayers install brick in an external wall while standing on a scaffold or on the floor inside a building or structure.

overhang **1.** A jetty. **2.** The extension of a roof or an upper story of a building beyond the wall/story situated directly beneath.

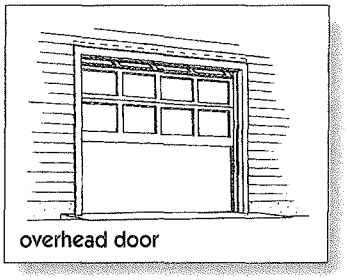
over-haul The distance excavated material is transported beyond that given as the stated hauling distance.

overhead (indirect expense, overhead expense) The costs to conduct business other than direct job costs; included in bidder's markup.

overhead balance A tense steel coil or spring installed in the head jamb of a window frame to serve as a balance for the sash.

overhead concealed closer A door closer, installed out of view in the head of the door frame, designed with a hinged arm that connects the door with the top rail of the frame.

overhead door (overhead-type garage door) A door, constructed of a single leaf or of multiple leaves, that is swung up or rolled open from the ground level and assumes a horizontal position above the entrance way it serves when opened. Commonly used as a garage door.


overhead door

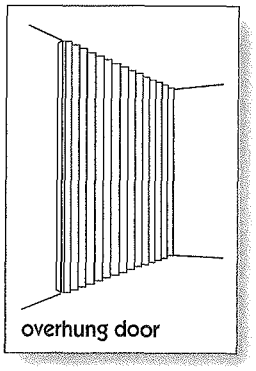
overhead expense *See* **indirect expense** and **overhead.**

overhead service Electric service that is delivered to a structure by lines that are above the ground.

overhead shovel A tractor loader that digs at one end, swings the bucket overhead, and dumps at the other end.

overhead traveling crane A lifting machine generally power-operated at least in its hoisting operation. The crane is carried on a horizontal girder, reaching between rails above window level at each side of a shop, and consists of a hoisting cab that can travel from end to end on the girder. The whole area between the rails can thus be traversed by the cab.

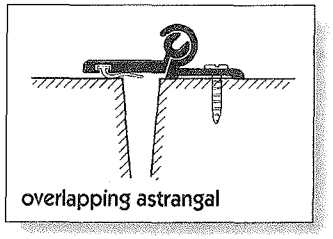
overhung door A sliding door or multiple folding door that is suspended from an overhead track.


overhung door

overlaid plywood (overlay) Plywood with a surfacing material added to one or both sides. The material usually provides a protective or decorative characteristic to the side, or a base for finishing. Materials used for overlays include resin-treated fiber, resin film, impregnated paper, plastics, and metal.

overlap In plywood manufacture, a defect in panel construction caused by one of two adjacent veneers overriding the other.

overlapping astragal (wraparound astragal) A molding that is attached lengthwise along the masting edge on one of a pair of doors to close the gap between them, providing a weather-resistant seal and stopping the transmission of light or smoke from one side of the doors to the other.

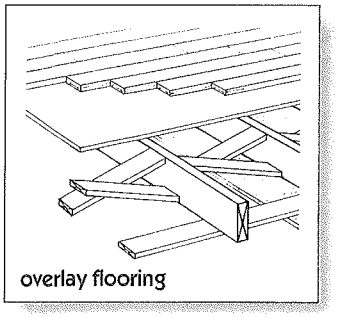

overlapping astrangal

overlay **1.** A layer of concrete or mortar, seldom thinner than 1" (25 millimeters), placed on and usually bonded to the worn or cracked surface of a concrete slab either to restore or to improve the function of the original surface. **2.** The surfacing of a plywood face with a solid material other than wood. *See also* **overlaid plywood.**

O

overlay districts Zoning districts in which additional regulatory standards are superimposed on existing zoning. Overlay districts provide a method of placing special restrictions in addition to those required by basic zoning ordinances.

overlay flooring Finish flooring of maple, mahogany, oak, or other hardwood cut into narrow tongue-and-groove strips.


overlay flooring

overlay glass Glass that is made up of two or more layers of different colors fused together, and that is often cut to permit a lower layer of glass to show on top for decorative effect.

overlay technique A method of producing composition roofing in which a layer of asphalt is spread over an existing asphalt layer.

overload **1.** A load exceeding that for which the bearing structure was designed. **2.** Excess power, current, or voltage in an electrical device or circuit that is not designed to accommodate it.

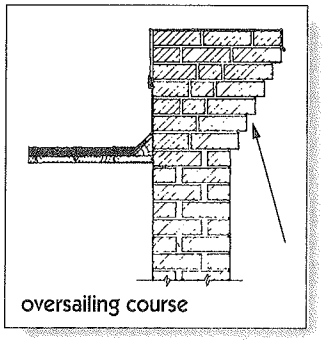
overload capacity The limit of excess power, current, or voltage that an electrical device or circuit can accommodate before it is damaged.

overload relay A relay in a motor circuit that disconnects the motor from its power source if the current that feeds the motor surpasses a certain predetermined level.

overrun **1.** The amount the cost of an item increases beyond the estimated cost. **2.** The amount a quantity increases over the estimated quantity.

overrun brake (overriding brake) A brake fitted to a towed vehicle, such as a concrete mixer to a trailer. It operates as soon as the towing truck slows down and the towed vehicle tends to push into it. Movement of the towed vehicle applies the overrun brake, making safe high-speed towing possible.

oversailing course **1.** A course of masonry that extends beyond the face of the wall in which it is set. **2.** A string course.


oversailing course

oversanded Descriptive of mortar or concrete containing more sand than necessary to produce adequate workability and a satisfactory condition for finishing.

oversite concrete A layer of concrete that is laid below a slab or flooring to prevent the ground beneath from being disturbed, to block out air and moisture, and to provide a hard, level surface for subsequent flooring layers.

oversize brick A brick measuring greater than 2-1/2" x 3-1/2" x 7-1/2".

overstretching Stressing of tendons to a value higher than designed for the initial stress to: (a) overcome friction losses, (b) overstress the steel temporarily to reduce creep that occurs after anchorage, and (c) counteract loss of prestressing force that is caused by subsequent prestressing of other tendons.

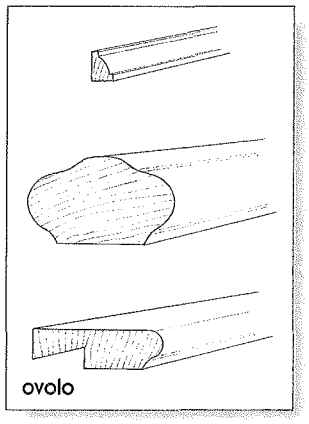
overtime **1.** A term applied to the number of hours worked in excess of the normal contract for one day or one week. **2.** A term applied to the payment for this time, frequently 1-1/2 or double the normal rate of pay.

overturning The failure of a retaining wall as the result of hydraulic or earth pressure on one side. Overturning occurs when walls are built on a narrow base or with materials too light to withstand surrounding pressure.

overvibration Excessive use of vibrators during placement of freshly mixed concrete, causing segregation and excessive bleeding.

overvoltage A voltage above the normal rated voltage or the maximum operating voltage of a device or circuit.

ovolo A convex molding approximately the shape of a quarter circle.


ovolo

owner The owner of a project, that is also party to the owner-contractor and owner-designer agreements.

owner-architect agreement Contract between owner and architect for professional design services.

owner-contractor agreement The contract formed between owner and contractor describing performance of the construction work for a project (or a portion thereof).

owner's equity The owner's or owners' claims against the assets of a business. Owner's equity implies that the

business is a single proprietorship and, therefore, represents the proprietor's claims against assets of the single proprietorship.

owner's inspector A party hired by an owner to inspect the work. *See also* **clerk of the works.**

owner's liability insurance Insurance procured to protect the owner against claims originating from the work performed by the contractor.

owner's representative The designated official representative of the owner (may be an architect, engineer, or contractor) to oversee a project.

ox eye A slang term for any circular window.

oxidation **1.** The reaction of a chemical compound mixed or exposed to oxygen. **2.** Part of the asphalt refining process, wherein oxygen is incorporated in hot, bituminous liquids by blowing it through the melted substance. **3.** The hardening of asphalt coating on a roof under exposure to sun and air.

oxidation stain A stain that occurs when a mineral in wood combines with oxygen.

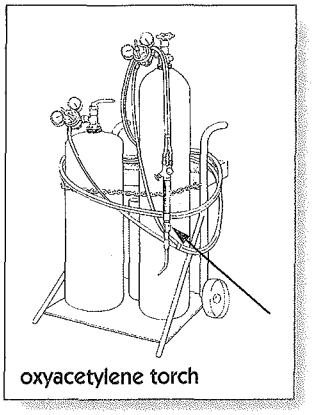
oxidized asphalt Asphalt that has been specially treated by having air blown through it at high temperatures, making it suitable for use in roofing, hydraulics, pipe coating, membrane envelopes, and undersealing.

oxidizer An agent that, when acting on another substance, causes the attachment of an oxygen atom thereto.

oxter piece A vertical length of timber used in ashlaring.

oxyacetylene The mixture of oxygen and acetylene, forming a highly combustible gas used for cutting and welding metal.

oxyacetylene torch A welding or cutting torch that produces a superheated flame through combustion of oxygen and acetylene.



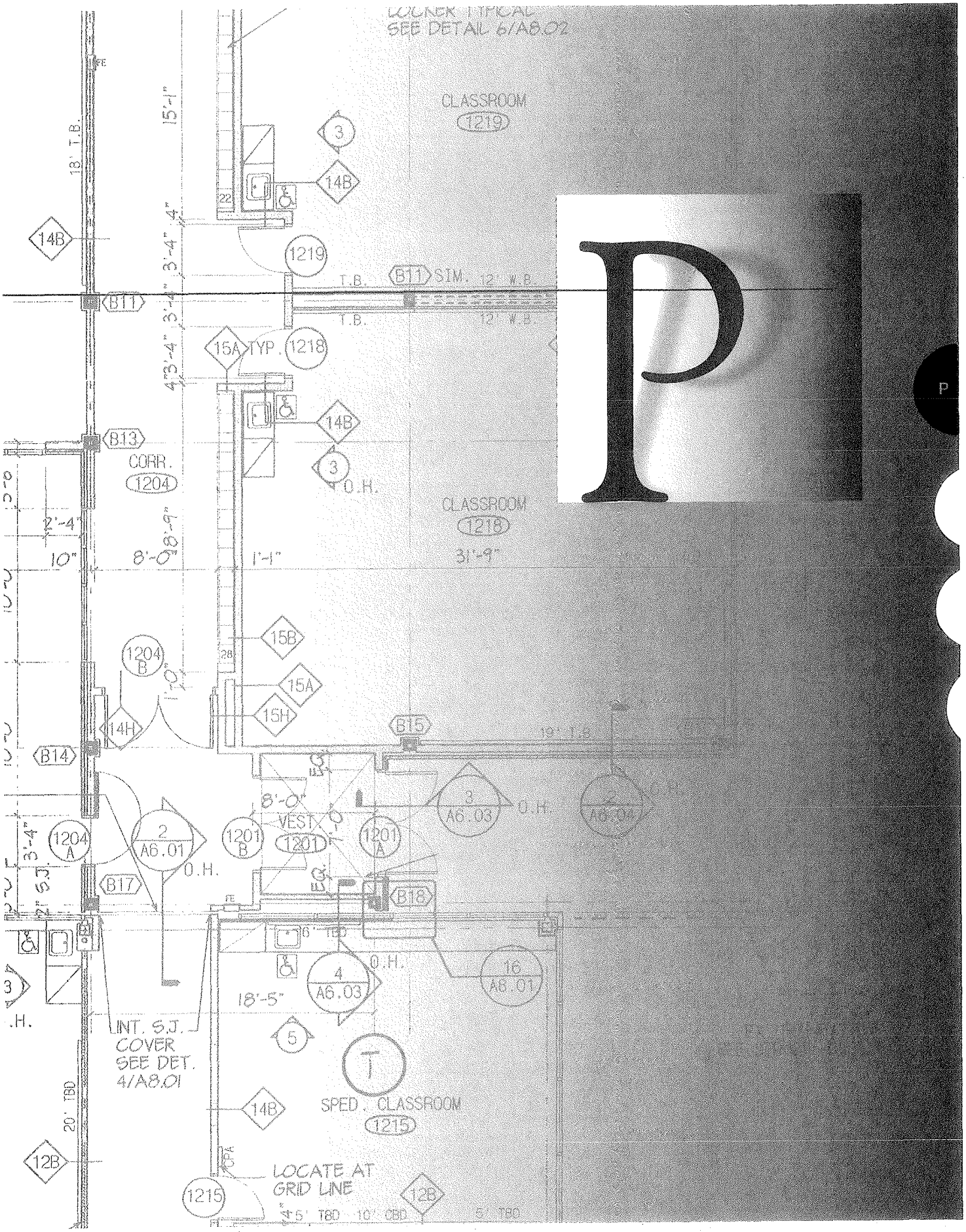
oxyacetylene torch

oxychloride cement (sorel cement) A hard, durable cement made up of calcined magnesia and magnesium chloride, occasionally blended with fillers.

oxygen cutting A process of metal cutting in which the separation of the metal is effected by its chemical reaction with oxygen at high temperatures.

oxygen starvation Areas of corrosion on metals exposed to an electrolyte, caused by a smothering effect or by the formation of a crevice between two areas of the metal or between the metal and any other adjacent material.

ozone Triatomic oxygen (O_3), an unstable form of oxygen that is produced by ultraviolet activity and electrical discharges and is used as an oxidizing agent, a deodorizer in air-conditioning and cold storage systems, and as an agent for stemming the growth of bacteria, fungus, and mildew. Excessive concentrations of ozone are poisonous to humans.


LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
3
14B
22
1219
B11
SIM.
12' W.B.
T.B.
15A
TYP.
1218
14B
3
O.H.
B13
CORR.
1204
CLASSROOM
1218
2'-4"
10"
8'-0"
1'-1"
31'-9"
15B
15A
15H
1204
B
14H
B14
B15
19' T.B.
8'-0"
VEST.
1201
3
A6.03
O.H.
1204
A
2
A6.01
1201
B
1201
A
O.H.
B17
B18
16' TBD
4
A6.03
O.H.
16
A8.01
18'-5"
5
INT. S.J.
COVER
SEE DET.
4/A8.01
T
SPED. CLASSROOM
1215
14B
20' TBD
12B
LOCATE AT
GRID LINE
1215
12B
5' TBD
10' CBD
5' TBD
18' T.B.
15'-1"
3'-4"
3'-4"
3'-4"
3'-4"
4"
4"
3'-4"
2" S.J.
3'-4"
1'-0"
8'-9"
P

Abbreviations

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

p part, per, pint, pipe, pitch, pole, post, port, power

P phosphorus, pressure, pole, page, projection

P&G post and girder

P&I purchase and install

P&SDS piping and surface decontamination solvents

P&T posts and timbers, pressure and temperature

P1E planed one edge

P1S planed one side

P1S2E planed one side and two edges

P4S planed four sides

PA particular average, power amplifier, preliminary assessment, professional association, purchasing agent, public address system

PAH polycyclic aromatic hydrocarbons

pan panel

Pape paperhanger

PAPI precision approach path indicator

PAPR powered air purifying respirator

PAR. paragraph, part, partition, parabolic reflector

par. parapet

par planed all round

PARP full face piece air purifying respirator

part, partn partition, partial

partbd particleboard

PASS passenger, passage

pat. patent

Patt pattern

PAX private automatic (telephone) exchange

Pb lead, push button

PC Portland cement, power connector, personal computer

pc piece

PCB polychlorinated biphenyl

PCCP prestressed conc cylinder pipe

PCE pyrometric cone equivalent

pcf pounds per cubic foot

pckg packaged

PCM phase contract microscopy

pc/pct percent

pcs pieces

PD per diem, potential difference

Pd palladium

pd paid

PE professional engineer, probable error, plain end, polyethylene, Porcelain Enamel

pe plain edged

pecky cyp pecky cypress

ped pedestal, pedestrian

pegbrd pegboard

pelec photoelectric

pend pendant

PEP Public Employment Program

per perimeter, by the, period

PERF perforate, perforated

PERM permanent

PERP perpendicular

Pers personal

PERT project evaluation and review technique

PESB pre-engineered steel building(s)

PET precision end trimmed

PF power factor, profile

PFA pulverized fuel ash

PFD preferred

PH phase, Phillips head

Ph phenyl

pH hydrogen-ion concentration

ph phase, phot

phos phosphate

photo photograph

PI pressure injected

PIB polyisobutylene

PID photoionization detector

pil pilaster

pile pile driver

PITI principal, interest, taxes and insurance

PIV post indicator valve

piv pivoted

Pjtn projection

Pjtr projector

pk park, peak, plank

pkd packed

pkfr plank frame

pkg package

pkgng packaging

pkng packing

pkt pocket

pkwy parkway

pl plain, plate

plah plasterer helper

plas plaster

P/L plastic laminate

PL pile, plate, plug, power line, pipe line, private line

pl place, plate

platf platform

PLC programmable logic controller

Plf pounds per linear foot

PLG piling

plh production labor-hour

Pll pallet

PLM polarized light microscopy

plmb, plb, PLMB plumbing

plstc plastic

pluh plumbers helper

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plum plumber

PLYWD, ply plywood

PM post meridiem

pmh production man-hour

pmp pump(s)

PNEU pneumatic

PNL panel

Pntd painted

Pntg painting

PO purchase order

POL polish, petroleum, oil and lubricants, polished

polarogr polarographic

polthn polyethylene

polyest polyester

polyiso polyisocyanurate

polyprop, PP, ppl polypropylene

PORC porcelain

Pord painter, ordinary

Port portable

PORT CEM portland cement

pos, POS positive

posn position

pot. potential

POTW publicly owned treatment works

pp ponderosa pine, pages, piping

PP-AC air-conditioning power panel

Ppd prepaid

PPE personal protective equipment

PPGL polished plate glass

PPH parts per hour

ppm parts per million

PPSD package, power supply

ppt, pptn precipitate, precipitation, parts per thousand

PR payroll, pair

Prcs process(es)

prcst precast

pre-assm preassembled

preb prebend

prec preceding

precp precipitation

pre-eng pre-engineered

prefab prefabricated

prefin prefinished

prelim preliminary

prem premium

prep preparation, prepared

press pressure

pretreat pretreated, pretreatment

prfcn purification

prgm program

pri primary

prin principal

pris prismatic

prl parallel

prod. production, product

prog progressive

proj project, projection, projecting

prom programmable read only memory

prop. property, propelled, propeller, proportional

prot protection, protective

prov provisional

prox proximity

PRP potentially responsible party, purpose

prs pairs

Prscg processing

prt particle

PRV pressure-regulating valve, pressure relief valve

PS polystyrene

ps pieces, power shift

p.s.e. planed and square-edged

psf pounds per square foot

psi, psig pounds per square inch

psj planed and square-jointed

PSP plastic sewer pipe

Pspr painter, spray

Psst painter, structural steel

PT pipe thread, potential transformer, part, point, packed tower

pt paint, pint, payment, port, point

ptfe polytetrafluoroethylene

ptg planed, tongued, and grooved

PTN partition

PTTU packed tower treatment unit

PU pickup, plutonium, ultimate load

PUD pickup and delivery

PUR polyurethane

pur purlins

PVA polyvinyl acetate

PVC polyvinyl chloride

pvmt pavement

pvntr preventer

PW paper wrapped

PWA Public Works Administration

PWR pressurized water reaction

pwr power

pwred powered

pwt pennyweight

1PH single phase

3PH three phase

P Definitions

pace A landing in a staircase.

pache Color coding used on drawings to aid in quantity takeoffs for estimating.

Pacific coast cypress *See* **Alaska yellow cedar.**

Pacific coast spruce *See* **Sitka spruce.**

Pacific coast yellow cedar *See* **Alaska yellow cedar.**

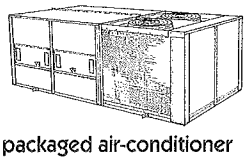
Pacific red cedar *See* **western red cedar.**

Pacific silver fir *Ables ammilis.* This species is found in British Columbia, Washington, and Oregon. The name comes from the silvery appearance of the underside of the tree's needles. Its wood is classed in the hem-fir group.

Pacific yew *Taxus brevifolia.* This species, generally small in size, is not a commercially important tree. Its wood is heavy and strong and is used for such purposes as archery bows. Yews are usually found growing in the shade of larger trees.

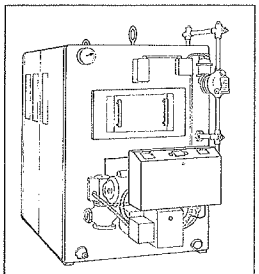
pack The bundling in which shakes and shingles are shipped. In shakes, the most prevalent pack is a 9/9. This describes a bundle packed on an 18" wide frame with nine courses, or layers, at each end. The most common pack for shingles is 20/20. Because of their smoother edges, shingles can be packed tighter than shakes, a bundle of shakes usually contains a net of about 16" of wood across the 18" width of the frame.

packaged air-conditioner A factory-assembled air-conditioning unit ready for installation. The unit may be mounted in a window, an opening through a wall, or on the building roof. These units may serve an individual room, a zone, or multiple zones.



packaged air-conditioner

packaged boiler A factory-assembled water or steam heating unit ready for installation. All components, including the boiler, burner, controls, and auxiliary equipment, are shipped as a unit.



packaged boiler

packaged concrete, mortar, grout Mixtures of dry ingredients in packages, requiring only the addition of water to produce concrete, mortar, or grout.

package dealer A contractor responsible for the design and construction of a project to specific end requirements, usually for a fixed sum.

packaged lumber Lumber strapped in standard units, usually milled to length and wrapped in paper or plastic.

package generator A generator used to provide temporary power.

package trim Prefabricated door and window moldings.

packer A device inserted into a hole in which grout is to be injected, which acts to prevent return of the grout around the injection pipe. A packer is usually an expandable device actuated mechanically, hydraulically, or pneumatically.

packer-head process A method of casting concrete pipe in a vertical position in which concrete of low water content is compacted with a revolving compaction tool.

packing **1.** Stuffing of shaped elastic material to prevent fluid leakage at a shaft, valve stem, or joint. **2.** Small stones, usually embedded in mortar, used to fill cracks between larger stones.

packing gland A protective sleeve used over cable or piping in applications where pressure or other factors pose a threat.

pack set The condition where stored cement will not flow from a container such as a rail car or silo. It is caused by interlaced particles or electrostatic charges on particles. *See also* **sticky cement.**

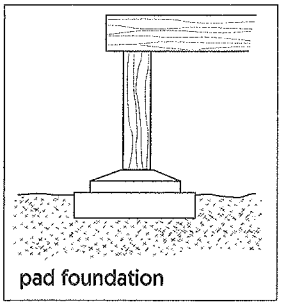
pad **1.** A plate or block used to spread a concentrated load over an area, such as a concrete block placed between a girder and a loadbearing wall. **2.** A shoe of a crawler-type track.

paddle A tool or implement with a wide blade at one end.

paddle wheel scraper A heavy duty excavation machine with a wheel that scrapes soil into a large bowl section.

paddock An enclosed area for animals, usually horses.

pad foundation A thick slab-type foundation used to support a structure or a piece of equipment.



pad foundation

padlock A unit lock with a U-shaped bar that is passed through a staple of a hasp or link in a chain, and the bar pressed into the body to lock.

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pad out To add shims to framing so that a finished wall or ceiling will be correctly aligned.

pad saw A keyhole saw.

padstone A concrete or stone block used to spread a concentrated load over an area of wall.

pad support A wire grid to keep a sound-absorbing insert from contact with the perforated pan in a metal acoustical ceiling.

pailing Sheathing constructed of vertical boards that is used in concrete formwork.

paint **1.** A mixture of a solid pigment in a liquid vehicle which dries to a protective and decorative coating. **2.** The resultant dry coating.

paint base The liquid vehicle into which a pigment is mixed to produce a paint.

painter A tradesperson experienced and trained in painting.

paint grade A description of a wood product that is more suitable for painting than for a clear finish.

paint kettle An open container with a wire handle used while painting.

paint remover A liquid solvent applied to dry paint to soften it for removal by scraping or brushing.

paint roller A tube with a fiber surface that is mounted on a roller and handle, and used to apply paint.

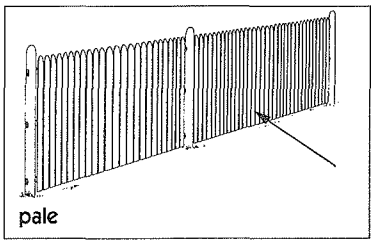
paint system A specific combination of paints applied in sequence. A paint system consists of a combination of some of the following coats: sealer or primer, stain, filler, undercoat, and one or more top coats.

paint thinner A liquid compatible with the vehicle of a paint, used to make a paint flow easier. Paint thinner lowers the viscosity of paints, adhesives, etc.

pairing veneers Matching full sheets of veneers (faces and backs) together to reduce handling when laying up panels at the glue spreader.

pai-tung The first form of nickel silver. Developed by the Chinese in the 17th century.

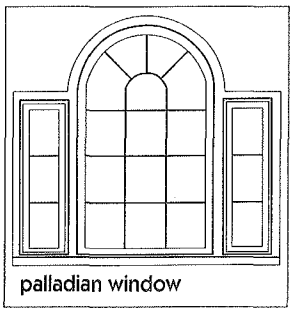
pale (paling) **1.** One of the stakes in a palisade. **2.** A picket in a fence.


pale

palisade A fence of poles driven into the ground and pointed at the top.

palladiana terrazzo Randomly fractured marble slabs ⅜" to 1" thick with the largest dimension being 15", with smaller chips filling the spaces between.

palladian window A tripartite or three-light window that features a central arched window with balanced rectangular lights on each side.


palladian window

pallet **1.** A platform used for stacking material and arranged to be handled by a forklift truck. **2.** A wood insert in a brick wall used for support of a surface system.

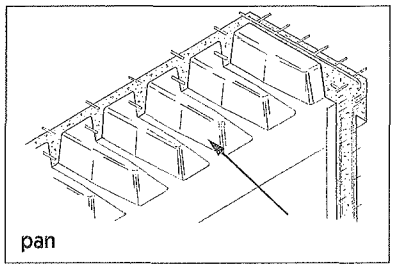
pallet brick A brick made with a groove, to hold a pallet.

palletized A term used frequently in the shingle and shake industry. Both items are often shipped on pallets from the mill for ease in handling while in transit. These shipments are referred to as palletized loads.

pallet stock Lumber used to make pallets.

palm sander A hand-held electrical sander with a vibrating or orbital base to which sandpaper is attached for finer sanding.

pan **1.** A prefabricated form unit used in concrete joist floor construction. **2.** A container that receives particles passing the finest sieve during mechanical analysis of granular materials. **3.** A structural panel.


pan

panache The triangular-like surface of a vault between a supported dome and two supporting arches.

pan and roll roofing tile A roofing tile system consisting of two types of tile: A flat or slightly curved tile with a flange on each side, and curved tile that fits the flanges and closes the joints.

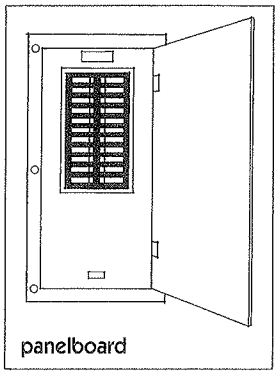
pan construction A type of concrete floor or roof in which pan forms are used to create intersecting ribs and resulting in a waffle-like undersurface.

pane **1.** A flat sheet of glass installed in a window or door. The installed sheet is also referred to as a light. **2.** A British term for the peen of a hammer. **3.** One face or side of a building.

P

panel **1.** A section of form sheathing, constructed from boards, plywood, metal sheets, etc., that can be erected and stripped as a unit. **2.** A concrete member, usually precast, rectangular in shape, and relatively thin with respect to other dimensions. **3.** A sheet of plywood, particleboard, or other similar product, usually of a standard size, such as 4' x 8'. **4.** *See* **frog.**

panelboard A board on which electric components and/or controls are mounted.



panelboard

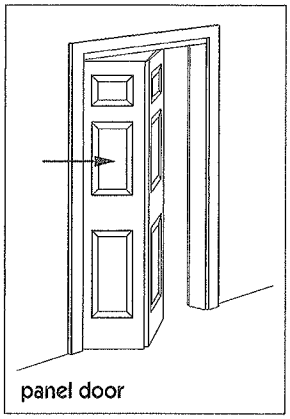
panel box A box in which electric switches and fuses are mounted.

panel clip A specially shaped metal device used in joining panels in roof construction. The clip substitutes for lumber blocking and helps to spread the load from one panel to the next one.

panel construction A general term used to describe construction where building components are assembled elsewhere before being brought to a site for placement.

panel divider Molding or trim used to fill or cover the joint between two surface sheets.

panel door A door constructed with panels, usually shaped to pattern, installed between the stiles and rails that form the outside frame of the door.



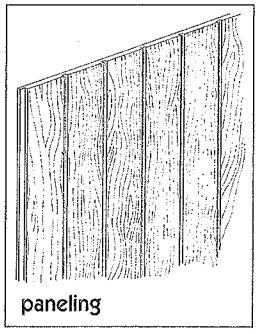
panel door

panel, drop *See* **drop panel.**

paneled door (Colonial door) A door that consists of raised or indented panels.

panel heating A method of heating a space using floor, wall, or roof panels in which are embedded electric elements or pipes for hot water, steam, or hot air.

paneling The material used to cover an interior wall. Paneling may be made from a 4' x 4' *select* milled to a pattern and may be either hardwood or softwood plywood, often prefinished or overlaid with a decorative finish, or hardboard, and usually prefinished.



paneling

panel insert A metal unit used instead of glass in a panel door.

panel mold A mold in which plaster panels are cast.

panel molding A decorative molding, originally used to trim raised panel wall construction.

panel patch *See* **patch.**

panel pin A very thin nail used to fasten wood paneling to supports.

panel point Point of intersection of the members of a truss.

panel product Any of a variety of wood products such as plywood, particleboard, hardboard, and waferboard, sold in sheets or panels. Although sizes vary, the board size for most panel products is 4' x 8'.

panel saw A power saw held in a framework and used in cutting panels to size.

panel strip **1.** A strip extending across the length or width of a flat slab for design purposes. **2.** A narrow piece of wood or metal used to hide a joint between two sheathing boards forming a panel.

panel wall An exterior, non-load-bearing wall with individual panels hung from or supported by the framing of the building.

panel window A picture window with several sash-or fixed-glazings.

pan form stair A metal stair assembly with metal sheet pans at the treads to hold precast or cast-in-place masonry or stone treads.

pan formwork The support-work for the forms while a concrete pan construction floor or roof is being built.

pan fraction **1.** The reported results of mechanical analysis of granular materials. **2.** The weight of the material retained on any one sieve divided by the initial weight of the sample.

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pan head A head of a screw or rivet shaped like a truncated cone.

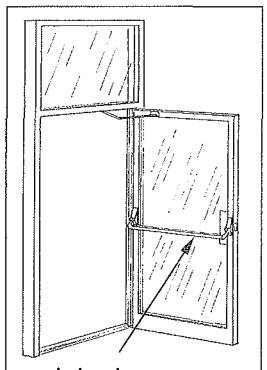
panic bolt The bolt in panic hardware that is released by pressure on a horizontal bar.

panic exit hardware, mortise type Panic exit hardware in which the lock mechanism is concealed within the door or set into a rectangular cavity (called a *mortise*) that has been cut in the edge of the door.

panic exit hardware, rim type Panic exit hardware in which the lock mechanism is located on the inside face of the door.

panic exit hardware, vertical rod type Panic exit hardware with latches at the top and/or bottom of the door. The latches are connected to a vertical rod that, in turn, is connected to a crossbar. In an emergency, the latches are released simply by pressing the crossbar.

panic hardware A door-locking assembly that can be released quickly by pressure on a horizontal bar. Panic hardware is required by building codes on certain exits.



panic hardware

panier A corbel form for smoothing the angle between a beam and pilaster.

pan mixer *See* **mixer, pan.**

panopticon A building plan with corridors that radiate from a central point. All corridors can be observed from that location.

pan steps Prefabricated treads for a pan form stair.

pantile A roofing tile shaped like an elongated "S." Joints are protected by the overlapping edges. In older buildings, galvanized roofing was sometimes used in the form of pantiles to imitate wood and slate shingles and terra-cotta tiles.

pantograph A device for tracing drawings at different scales.

pants Steel plates attached to the hammer of a pile driver to aid in driving sheet piling.

pan-type humidifier A pan with water placed in a flow of air to increase humidity. A heating element may be placed in the pan for greater evaporation.

pan-type stairs *See* **pan form stair.**

pap The vertical outlet from a roof gutter.

paper and wire Backing for tile installation that consists of tar paper and wire mesh or metal lath.

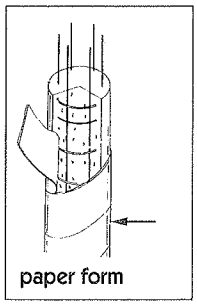
paper backed lath Any lath with building paper attached. A paper backed lath serves as formwork and reinforcing for a concrete floor over open web joists.

paper birch *Betula papyrifeya.* A North American birch with a tough bark.

paperboard (pasteboard, cardboard) A stiff cardboard composed of layers of paper, or paper pulp, compressed into a sheet.

paper, building A material used to cover framing and sheathing before the exterior wall covering is applied.

paper form A heavy paper mold used for casting concrete columns and other structural shapes.

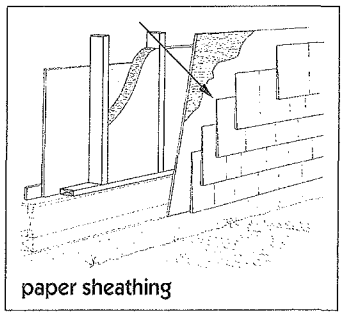


paper form

paperhanger A tradesperson experienced and trained in preparing surfaces for and hanging wall coverings.

paper overlay Paper prepared for application to the face of a panel after first being printed in four colors with the grain and color of a more valuable wood, or in a decorative design.

paper sheathing Felt or heavy paper sheets used as an air and/or vapor barrier in walls.



paper sheathing

paper wrap A method of packaging wood products for shipment on a truck or railroad flatcar, with the paper designed to protect the product from dirt and the elements.

papreg A paper product produced by impregnating sheets of high-strength paper with synthetic resin and then laminating the sheets to form a dense, moisture-resistant product.

P

parabolic aluminized reflector (PAR) lamp A lamp that utilizes a light reflector shaped so as to project light from a small source in an approximately parallel beam, as in a spotlight.

parabolic luminaire A fluorescent fixture with a louver of parabolic-shaped baffles that provide excellent light control and reduce glare.

paraffin-based oil Petroleum oil used as summer oil, dormant spray, and as a vehicle for conveying pesticides. Also used as an additive to increase the effectiveness of pesticides.

paraform Paraformaldehyde, an additive used with wood flour as a hardener in adhesives. *See also* **resorcinal resin adhesive**.

paragraph In contract documents, the first subdivision of an article. The next levels are subparagraphs and clauses.

paraline drawings Projected pictorial drawings of an object or building that give a three-dimensional quality. Oblique, dimetric, isometric, and trimetric are examples of paraline drawings.

parallel **1.** The condition in which two lines or planes are an equal distance apart at all points. **2.** Electric blasting caps arranged so that the firing current passes through all of them at the same time.

parallel activities Two or more activities than can be done at the same time. Allows a project to be completed faster than if activities were arranged sequentially. *

parallel application An installation of gypsum board with the long dimension of the board in the same direction as the framing members.

parallel chord truss An engineered structural component, composed of a combination of members, with its top and bottom members positioned flat and parallel to each other.

parallel circuit An electrical circuit that has at least two paths for electricity to flow, with loads parallel to each other as a result.

parallel configuration An electrical configuration that provides more than one path for the flow of current.

parallel connection A connection at which a flow is diverted to two or more parallel conduits.

parallel flow An arrangement of a heat exchanger where the hot and cold materials enter at the same end and flow to the exit.

parallel gutter *See* **box gutter**.

parallel-laminated veneer A product in which the veneers have been laminated with their grains parallel to one another. Parallel laminated veneer is used in furniture and cabinetry to provide flexibility over curved surfaces, and in the production of laminated veneer structural products.

parallel series Two or more series of blasting caps arranged in parallel.

parallel siding (square-edged siding) **1.** Siding that is not beveled. **2.** Siding having edges of the same thickness.

parallel welding The joining of metal parts by fusion, with the electric current that produces the weld divided and routed through the electrode and metal along similar paths.

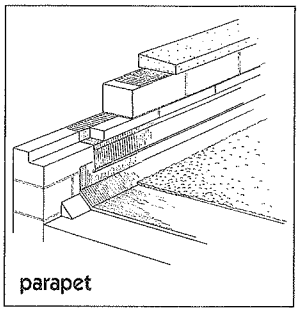
parallel-wire unit A posttensioning tendon composed of a number of wires or strands which are approximately parallel.

parameter A variable in a mathematical expression.

parameter estimate A cost estimate based on an evaluation of the building's systems.

parametric estimate Estimating algorithms or cost estimating relationships that are highly probabilistic in nature (i.e., the parameters or quantification inputs to the algorithm tend to be abstractions of the scope). Typical parametric algorithms include, but are not limited to, factoring techniques, gross unit costs, and cost models (i.e., algorithms intended to replicate the cost performance of a process of system). *

parapet **1.** That part of a wall that extends above the roof level. **2.** A low wall along the top of a dam.


parapet

parapet gutter A gutter built or placed behind a parapet.

parapet skirting Roofing felt turned up against a parapet.

parapet wall *See* **parapet**.

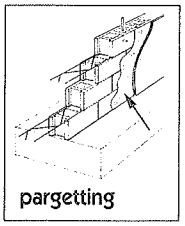
parcel A contiguous land area, subject to single ownership and legally recorded as a single unit.

paretta Cast masonry with a surface of protruding pebbles.

parge To coat with plaster, particularly foundation walls and rough masonry.

parge coat A coat of masonry cement applied to masonry for resistance to penetration of moisture.

pargetting **1.** Lining of a flue to aid in smooth flow and increase fire resistance. **2.** Application of a dampproofing masonry cement. **3.** Ornamental, often elaborate, facing for plaster walls.


pargetting

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Parian cement A hard finish plaster, similar to Keene's cement plaster, except borax is used as an additive in place of alum.

paring Trimming wood by shaving small portions from the surface with a chisel.

paring chisel A long-handled chisel used to shape wood by hand without the use of a mallet.

paring gouge A long thin woodworking gouge, the cutting edge of which is beveled on the concave side.

parkerized Descriptive of steel products, such as fasteners, that have been given a zinc phosphate coating for corrosion protection.

parking garage A garage for short term storage of automobiles only.

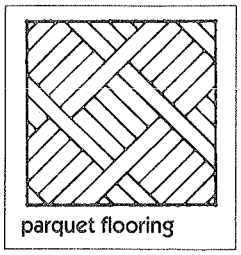
parking lot A ground-level space for short term storage of automobiles.

parking space A marked-off area for short term storage of a single automobile.

PAR lamp *See* **parabolic aluminized reflector lamp.**

parliament hinge An H-shaped hinge.

parquet flooring A floor covering composed of small pieces of wood, usually forming a geometric design.


parquet flooring

parquet strip A wood flooring composed of tongued and grooved hardwood boards.

parsing A thin coat of plaster or masonry cement.

partial cover plate A cover plate attached to the flange of a girder but not extending the full length of the girder.

partially air-dried (PAD) Wood seasoned to some extent by exposure to the atmosphere without artificial heat, but still considered green or unseasoned.

partial occupancy An owner's occupation and use of a project before final completion. *See also* **final completion.**

partial payment *See* **progress payment.**

partial prestressing Prestressing to a stress level such that, under design loads, tensile stresses exist in the precompressed tensile zone of the prestressed member.

partial release Release in a prestressed concrete member of a portion of the total prestress initially held wholly in the prestressed reinforcement.

particleboard A generic term used to describe panel products made from discrete particles of wood or other ligno-cellulosic material rather than from fibers. The wood particles are mixed with resins and formed into a solid board under heat and pressure.

particle shape The shape of a particle. *See also* **cubical piece, elongated piece,** *and* **flat piece.**

particle size **1.** Minimum particle diameter that will be removed by an air filter. **2.** Diameter of a pigment particle in paint. **3.** Diameter of a grain of sand in a mechanical analysis test.

particle size distribution A tabulation of the result of mechanical analysis expressed as the percentage by weight passing through each of a series of sieves.

particulate pollution Pollution made up of small liquid or solid particles suspended in the atmosphere or water supply.

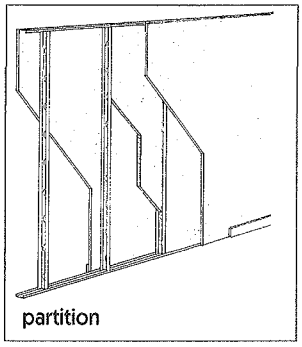
parting bead A narrow strip between the upper and lower sashes in a double-hung window frame.

parting slip A thin piece of wood in the cased frame of a sash window separating the sash weights.

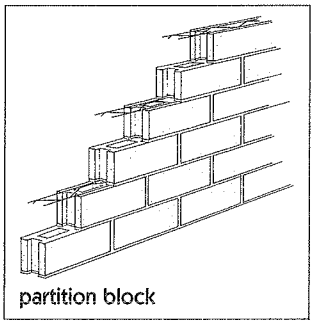
parting stop *See* **parting bead.**

parting tool A turning tool with a narrow blade and V-shaped gouge used for cutting recesses or grooves in wood.

partition A dividing wall within a building, usually non-load-bearing.


partition

partition block Light concrete masonry unit with a nominal thickness of 4" to 6".


partition block

partition plate The top horizontal member of a partition, which may support joists or rafters.

partition stud A steel or wood upright in a partition.

partition tile A hollow, clay unit for use in interior partitions. The surface of a partition tile is often grooved for plastering.

P

partnering A set of collaborative processes (as opposed to a relationship only); a commitment to achieve mutually identified objectives between two (or more) organizations, based on cooperation, open communication, and heightened effectiveness through continuous improvement.

partnership The joining of two or more individuals for a business purpose whereby profits and liabilities are shared.

party wall A common wall between two living units.

Pascal's law A principle that states that pressure applied to a confined fluid at any point is transmitted equally in all directions.

pass **1.** One-direction application of a substance, such as paint or a layer of shotcrete, placed in one movement over the field of operation. **2.** A single progression of a welding operation along a joint, resulting in a weld bead.

passage (passageway) A horizontal space for moving from one area of a building to another.

pass door A door through the wall separating a stage from the auditorium.

passenger elevator An elevator mainly used for people.

passings The dimension of the overlap between sheets of flashing.

passivate To render a material, such as a steel surface, inert, typically by using a chemical or electrochemical process.

passive design An approach to design that minimizes energy consumed by burning fuel or using power. *See also* **sustainable design**.

passive solar energy system A solar energy system that collects and distributes thermal energy through a structure via natural means, without using pumps or fans.

pass-through An opening in a partition for passing objects between adjacent areas.

pass-through clause Contract language that allows a general contractor to pass risk and responsibilities to subcontractors by reference.

paste **1.** Caulk or lime putty. **2.** A concentrated pigment that must be diluted before it is applied.

paste board *See* **paper board**.

paste content (of concrete) Proportional volume of cement paste in concrete, mortar, or the like, expressed as volume percent of the entire mixture. *See also* **neat cement paste**.

paste filler A filler in paste form used in preparing wood surfaces for painting.

paste paint A paste-like mixture of pigment and solvent, usually requiring additional solvent for use.

paste volume (of concrete) *See* **paste content**.

pat A specimen of neat cement paste about 3" (76 mm) in diameter and ½" (13 mm) in thickness at the center, and tapering into a thin edge on a flat glass plate for indicating setting time.

patch **1.** A piece of wood or synthetic material used to fill defects in the plies of plywood. Also called a *plug*. **2.** A compound used in stonemasonry to replace chips and broken corners or edges in fabricated pieces of cut stone or to fill natural voids. The patch is applied in plastic form.

patch board (patch panel) A board with jacks and plugs for terminals of electric circuits. The circuits may be temporarily interconnected by patch cords.

patch gun **1.** A hand tool that "shoots" a premixed material for patching and repairing exterior finishes like stucco. **2.** A hand tool used to apply joint compound to drywall.

patching machine A machine that cuts out the defect in a piece of veneer and replaces the defect with a solid piece of veneer used as a patch. The machine is often referred to by the brand name of the machine.

patch panel *See* **patch board**.

patent defect A defect present in materials, equipment, or completed work detectable by reasonably careful observation. A patent defect is distinguished from a latent defect, which could not be discovered by reasonable observation. *See also* **latent defect**.

patent glazing Any of a number of devices, usually preformed neoprene gaskets, for securing glass in frames without putty.

patent hammer A hammer with chisel-like faces, used for dressing stone.

patent-hammered Stonework finish applied to the face of building stone.

patent knotting A solution of shellac and benzine or similar solvent used to seal knots in wood.

patent plaster A packaged hard plaster.

patent stone (artificial soil) Stone chips embedded in a binder of mortar, cement, or plaster. The surface may be ground and/or polished.

patina Color and texture added to a surface as a result of oxidation or use, such as the green coating on copper or its alloys.

patio An outdoor area, usually paved and sometimes shaded, adjoining a building.

patten The base of a column.

pattern **1.** A plan or model to be a guide in making objects. **2.** A form used to shape the interior of a mold.

pattern cracking Fine openings on concrete surfaces in the form of a pattern, resulting from a decrease in volume of the material near the surface and/or an increase in volume of the material below the surface.

patterned glass A type of glass used to control light, obscure visual detail for privacy, or to provide decorative effects.

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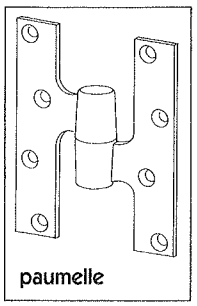
patternmaker's saw A small hand saw with fine teeth used to make intricate cuts.

pattern staining Dark areas on finished plaster, particularly on the interior of external walls, which are caused by different thermal conductances of backings.

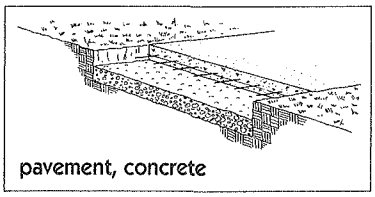
paumelle A door hinge with a single joint, usually of modern design.


paumelle

paved invert In piping, the lower portion of a corrugated metal pipe whose corrugations have been filled with smooth bituminous material to resist scour and erosion and improve flow.

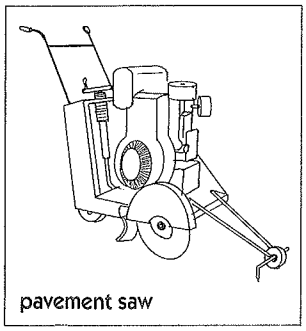
pavement base The layer of a pavement immediately below the surfacing material and above the subbase.

pavement, concrete A layer of concrete over roads, sidewalks, canals, playgrounds, and those areas used for storage or parking. *See also* **rigid pavement**.


pavement, concrete

pavement light Transparent or translucent inserts in a pavement to light a space below.

pavement saw A self-propelled machine with a circular saw blade for cutting control joints.


pavement saw

pavement sealer A bituminous coating used to seal and renew the surface of asphalt paving.

pavement structure The collection of courses of specified materials placed on a graded surface.

paver **1.** A block or tile used as a wearing surface. **2.** A machine that places concrete pavements.

pavilion roof **1.** A roof composed of equally hipped areas. **2.** A pyramid-shaped roof.

paving The hard surface covering of areas such as walks, roadways, ramps, waterways, parking areas, and airport runways.

paving aggregate The various solid materials, such as sand, gravel, or slag, used in construction of a pavement.

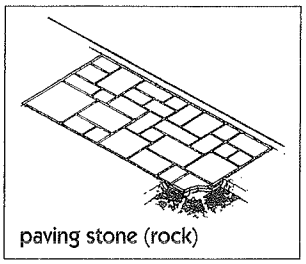
paving asphalt A sticky residue from the refining of crude oil. Paving asphalt is used in built-up roofing systems, as the binder in asphaltic concrete, or as a waterproofing agent.

paving breaker (chipper) A hand-held, pneumatic tool for cutting pavements.

paving brick A vitrified clay brick with good resistance to abrasion.

paving/curbing layout drawings Graphic layout of parking lots and driveways. These drawings show the various types of bituminious concrete, brick paving and curbing, and the limits of each, and are helpful for calculating areas and measurements.

paving stone (rock) A block of natural stone shaped or selected for use in a pavement surface.


paving stone (rock)

paving train An assemblage of equipment designed to place and finish a concrete pavement.

paving unit A fabricated or shaped unit used in a pavement surface.

payback method A technique of economic evaluation that determines the time required for the cumulative benefits from an investment to recover the investment cost and other accrued costs. *

payback period (PB) Measures the length of time until accumulated savings are sufficient to pay back the initial cost. Discounted payback (DPB) takes into account the time value of money by using time-adjusted cash flows. If the discount rate is assumed to be zero, the method is called simple payback (SPB).

payment bond A form of security purchased by the contractor from a surety, which is provided to guarantee that the contractor will pay all costs of labor, materials, and other services related to the project for which he is responsible under the contract for construction. *See also* **labor and material payment bond.**

payment request *See* **application for payment.**

payment schedule An arrangement for payments to the contractor, typically based on amounts of work completed.

P

payments withheld A provision of AIA document A201-General Conditions of the Contract for Construction, Paragraph 9.6, which provides that the owner may withhold payments to the contractor if, in the opinion of the design professional, the work falls behind the schedule of construction, or in the event that the work deviates from the provisions of the contract documents.

payout time The time required to recover the original fixed investment from profit and depreciation. Most recent practice is to base payout time on an actual sales projection. *

payroll deductions Amounts withheld from gross pay by the employer, including federal and state taxes, union dues, and medical insurance.

p bar A heavy steel bar, shaped like a chisel at one end, used for prying.

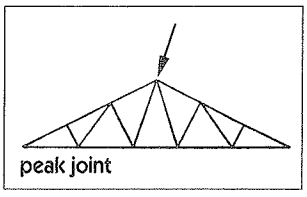
peacock's eye A circular marking in wood, such as bird's eye in maple, found particularly in sugar maple but also in other species.

pea gravel Screened gravel, most of the particles of which will pass a ⅜" (9.5 mm) sieve and be retained on a No. 4 (4.75 mm) sieve.

pea gravel grout A grout with pea gravel added.

peaked roof A roof of two or more slopes that rises to a peak.

peak joint The joint of a roof truss that is at the ridge.


peak joint

peak levels In measuring ambient air contamination, above average levels of ambient contamination due to the sudden release of a contaminant into the air. Usually occurs for a short period of time immediately following the release.

peak load The maximum demand or design load of a device, system, or structure over a designated time period.

peak-load controller An electrical controller used to limit the maximum power demands to a device or system.

peat Fibrous organic matter in various stages of decomposition, found in swamps and bogs, and used to enrich soil for plantings.

peat moss **1.** A type of moss growing in wet areas. **2.** The partially decomposed moss used as mulch.

peavey A long-shafted tool with a hook that is used by loggers to roll logs, break jams, pry rocks, tighten chains, and push over trees.

pebble dash (rock dash) An exterior finish in which crushed rock or pebbles are embedded in mortar, plaster or stucco.

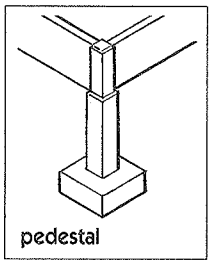
pecan *Carya illinoensis*. One of the largest native hickories, its wood is used in furniture and flooring, while it is grown commercially for its nuts in the Mississippi River valley.

peck **1.** Channeled or pitted areas or pockets sometimes found in cedar or cypress, the decay resulting from fungus in isolated spots. **2.** A dry measure equal to two gallons.

pecky Characterized by peck, channeled, or pitted areas or pockets found in cedar and cypress.

pecky timber Decay-spotted timber. In cedar and cypress the decay stops when the wood is dried.

pedestal **1.** An upright compression member whose height does not exceed three times its average least lateral dimension, such as a short pier or plinth used as the base for a column. **2.** Utility boxes that house connections and/or switches for telephone, electrical, or cable television service.

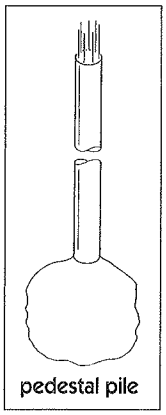

pedestal

pedestal floor A flooring system that is elevated from the subfloor to accommodate cabling, piping, ductwork, or other building systems.

pedestal lavatory Lavatory supported by a pedestal rather than wall hung. Supply and waste lines are enclosed by the pedestal.

pedestal pavers A paving system suitable for pedestrian traffic that features concrete or stone pavers on pedestals over an insulated base.

pedestal pile A cast-in-place concrete pile constructed so that concrete is forced out into a widened bulb or pedestal shape at the foot of the pipe which forms the pile.


pedestal pile

pedestal urinal A urinal that is supported by a pedestal rather than wall-hung. Supply and waste lines are enclosed by the pedestal.

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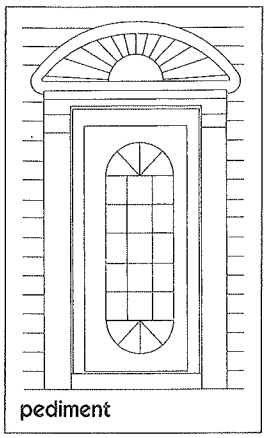
pedestrian control device Any device, especially turnstiles, but including gates, railings, or posts, used to control the movement of pedestrians.

pediment A decorative unit, often triangular in shape, above a doorway.



pediment

peel To produce veneer from a log through rotary cutting.

peel-away A caustic stripper used to remove paint on sensitive, historic materials without causing damage.

peeler A log from which veneer is peeled on a lathe, for the production of plywood. A peeler-grade log most frequently is from an old-growth tree, with a high proportion of clear wood.

peeler core That portion of a peeler block that remains after the veneer has been taken. Peeler cores are often used as raw material for the production of studs.

peeling **1.** A process in which thin flakes of mortar are broken away from a concrete surface, such as by deterioration or by adherence of surface mortar to forms as they are removed. **2.** Separation of paint or other coating from the surface to which it was applied, often caused by poor adhesion due to inadequate pre-painting preparation, or effects of moisture.

peen The end of a hammer, other than a claw hammer, opposite the hammering face. A peen may be pointed or ball- or cone-shaped. A peen is used for chipping, indenting, and metalworking.

peen-coated nail A mechanically galvanized nail coated by tumbling in a container with zinc dust and glass balls.

peen-hammered finish A textured finish on the surface of a material.

peening To hammer, bend, or shape with a peen.

peg **1.** A pointed pin of wood used to fasten wood members together. **2.** A short, pointed wooden stick used as a marker by surveyors.

peg-and-plank A rustic wood floor of planks and exposed pegs.

pegboard A hard fiberboard sheet, usually ¼" thick with regular rows of holes for attaching pegs or hooks.

pelmet A valance or cornice, sometimes decorative, at the head of a window to conceal a drapery track or other fittings.

pelmet board A board at the head of a window, acting as a pelmet.

pelmet lighting Lighting furnished by sources that are concealed by a pelmet.

penal bond A combined performance, and labor and material payment bond.

penal sum An amount specified in a bond or contract designated as a penalty to be paid by a specific signatory if contractual obligations are not met.

penalty and bonus clause *See* **bonus and penalty clause.**

penalty clause A clause in a contract specifying a charge against the contractor for failure to complete the work by a pre-arranged date. *See also* **liquidated damages.**

pencil cedar Eastern red cedar.

penciling Painting mortar joints, usually white.

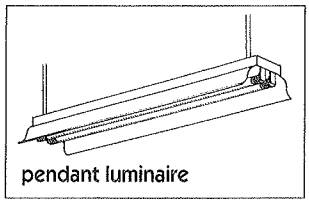
pencil rod Plain metal rod of about ¼" (6 mm) diameter.

pencil rot A type of decay found in cedar.

pencil stock Pieces of eastern red cedar or incense cedar from which pencils are manufactured. Pencil stock consists of squares 8" in length, or in multiples of 8", and equal to the thickness of the piece in width.

pendant **1.** An electric device suspended from overhead. **2.** A suspended ornament in Gothic architecture, used in vaults and timber roofs.

pendant luminaire A suspended lighting unit.



pendant luminaire

pendant switch An electric switch suspended by an electric cord and used to control lamps or other devices that are out of reach.

pendent sprinkler A fire safety system sprinkler with a head that features a deflector plate that directs discharged water downward.

pendulum saw *See* **swing saw.**

penetrant An additive that increases a liquid's ability to penetrate a surface or enter the pores of a substrate. Penetrants are typically used as wetting agents.

penetrating finish A low-viscosity oil or varnish that penetrates into wood with only a film of material at the surface.

penetration **1.** A test of the hardness of an asphalt utilizing a weighted needle at standard conditions. **2.** The cut-off depth of piles or sheet piling. **3.** The depth of a caisson below ground level. **4.** The intersection of two surfaces of vaulting.

P

penetration macadam Pavement made from layers of coarse, open-graded aggregate (crushed stone, slag, or gravel) followed by the spray application and penetration of emulsified asphalt.

penetration probe A device for obtaining a measure of the resistance of concrete to penetration, customarily determined by the distance that a steel pin is driven into the concrete from a special gun by a precisely measured explosive charge.

penetration resistance The resistance, usually expressed in pounds per square inch (psi) or megapascals (MPa), of mortar or cement paste to penetration by a plunger or needle under standard conditions.

penetration test A test to estimate the bearing capacity of soil by recording the number of blows required to drive a standard tool into soil.

peninsula-base kitchen cabinet A kitchen cabinet or series of cabinets at right angles to a wall and having access from two sides.

penitent Variation of **pendant 2**.

penitent post A short post placed against the wall and supporting an arch or tie beam.

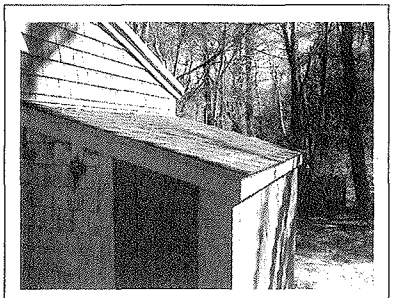
penny A measure of the length of a nail. The larger the number is, the longer the nail.

penta Short for *pentachlorophenol*, a wood preservative.

pentachlorophenol A chemical used in wood preserving, usually applied under pressure so that it will penetrate the wood.

penthouse A structure on the roof of a building, usually less than one-half the projected area of the roof, and housing mechanical and electrical equipment or residents.

pent roof A roof with a single plane surface sloping on one side only.



pent roof

peppermint test A test for leaks in a drainpipe using oil of peppermint as a trace odor source.

percentage agreement A contractual agreement for which compensation will be based on a certain percentage of the total cost of construction.

percentage fee A fee paid to the contractor or the architect that is a percentage of the total construction cost. *See also* **fee** *and* **compensation**.

percentage humidity The ratio, expressed as a percentage, of the weight of water vapor in a pound of dry air to the weight of water vapor if the same weight of air were saturated.

percentage of reinforcement The ratio, expressed as a percentage, of the cross-sectional area of reinforcing steel to the effective cross-sectional area of a member.

percentage void The ratio, expressed as a percentage, of the volume of voids to the gross volume of material.

percent complete An estimate of the percentage complete for an activity as of a particular data date. Percent complete may be based on time expended, cost or resources employed, or measurement of work in place. *

percent fines **1.** Amount, expressed as a percentage, of material in aggregate finer than a given sieve, usually the No. 200 sieve. **2.** The amount of fine aggregate in a concrete mixture expressed as a percent by absolute volume of the total amount of aggregate.

percent saturation The ratio, expressed as a percentage, of the volume of water in a soil sample to the volume of voids.

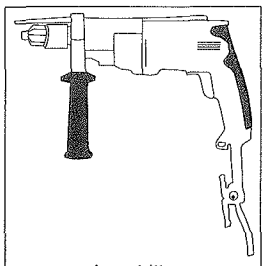
percent voids *See* **percentage void**.

perched water table A water table, of limited area, held above the normal water table by an intervening strata of impervious confining strata.

percolation The movement of a fluid through a soil.

percolation test A test to estimate the rate at which a soil will absorb waste fluids, performed by measuring the rate (percolation rate) at which the water level drops in a hole full of water.

percussion drill A pneumatic or electric tool that drills holes by applying a rapid series of blows.



percussion drill

pereletok The bottom of the active layer of permafrost that sometimes remains frozen throughout the year.

perennial A plant or shrub with a life cycle greater than two years.

perfections Shingles 18" long and 0.45" thick at the butt.

perforated drain A subsurface draining system that uses pipes with holes in the bottom to allow water or other liquid to percolate into the soil.

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perforated facing A perforated sheet or board used as a finished surface and allowing a fraction of sound to penetrate the surface to an absorbent layer.

perforated hardboard *See* **pegboard.**

perforated metal pan A unit that forms the exposed surface of a type of acoustical ceiling. The perforated pan contains a sound-absorbent material, usually in pad form.

perforated tape A special paper tape used to reinforce the material covering joints between gypsum boards.

performance **1.** A term meaning fulfillment of a promise made by one party to a contract or agreement in return for compensation. **2.** The manner in which or the efficiency with which something acts or reacts in the manner in which it is intended.

performance-based fee A fee structure that rewards a consultant's effort to meet or exceed the clients goals, such as minimizing a project's life-cycle cost. The designer's fee is based on a measurement, such as energy use or operating cost of the completed facility.

performance bond **1.** A guarantee that a contractor will perform a job according to the terms of the contract, or the bond will be forfeited. **2.** A bond procured by the contractor which shows that a surety guarantees (to the owner) that the work will be performed in accordance with the contract documents. Unless prohibited by statute, the performance bond can be combined with the labor and material payment bond. *See also* **surety bond.**

performance measurement baseline The time-phased budget plan against which contract performance is measured. It is formed by the budgets assigned to scheduled work elements and the applicable indirect budgets. *

performance measurement system **1.** An organization's defined processes for monitoring and updating project and/or organization progress at a detailed level over time. **2.** A quantitative tool (for example, rate, ratio, index, percentage) that provides an indication of an organization's performance in relation to a specified process or outcome. *

performance specification A description of the desired results or performance of a product, material, assembly, or piece of equipment with criteria for verifying compliance.

pergola An arbor or similar open-air structure with trelliswork supported on columns or posts. Vines or other plants are usually trained over pergolas.

periclase A crystalline mineral, magnesia (MgO), the equivalent of which may be present in Portland cement clinker, Portland cement, and other materials, such as open hearth slags, and certain basic refractories.

periderm The cork-producing tissue of a tree.

perimeter drain A drainage system around a house usually comprised of perforated plastic pipe.

perimeter grouting Injection of grout, usually at relatively low pressure, around the periphery of an area which is subsequently to be grouted at greater pressure. Perimeter grouting is intended to confine subsequent grout injection within the perimeter.

perimeter heating system A system of warm-air heating in which outlets for air ducts are located near the outside walls of rooms and are close to the floor. The returns are near the ceiling.

perimeter installation A method of floor installation where adhesive is only used along the outside edges and seams of the flooring material, allowing for faster installations and easier repairs

perimeter isolation A method of installing a building material, such as concrete or wallboard, so that it is separated from structural elements. This isolation helps reduce the cracking that can result when structural members shift. Perimeter isolation is also used as a sound control measure.

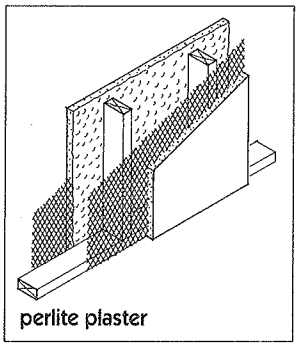
perimeter security Control and observation of areas of ingress and egress to a building and parking structure, including main lobby doors, rear plaza doors, truck docks, fire exits, and other points of access.

periphery wall A wall on the exterior of a building.

perlite A volcanic glass having a perlitic structure, usually having a higher water content than obsidian when expanded by heating. Perlite is used as a lightweight aggregate in concretes, mortars, and plasters.

perlite composite board A rigid insulation board formed of expanded perlite, fibers, and a sizing material. Often recommended as a product for sustainable design because it is commonly manufactured with post-consumer paper.

perlite plaster A plaster using perlite as an aggregate instead of sand.


perlite plaster

perlitic structure A structure produced in a homogeneous material, generally natural glass, by contraction during cooling, and consisting of a system of irregular convoluted and spheroidal cracks.

perm A unit of water vapor transmission through a material, expressed in grains of vapor per hour per inch of mercury pressure difference.

P

permafrost Permanently frozen soil or subsoil found in arctic or subarctic regions.

permanent bracing Bracing that forms part of a structure's resistance to horizontal loads. Permanent bracing may also function as erection bracing.

permanent form Any form that remains in place after the concrete has developed its design strength. A permanent form may or may not become an integral part of the structure.

permanent load The load, including a dead load or any fixed load, that is constant through the life of a structure.

permanent set Inelastic elongation or shortening.

permanent shore An upright used to support dead loads during alterations to a structure and left in place.

permeable paving Paving materials that allow rainwater to pass through into the ground to replenish the water table.

permeability **1.** The property of a material that permits passage of water vapor. **2.** The property of soil which permits the flow of water.

permeability to water, coefficient of The rate of discharge of water under laminar flow conditions through a unit cross-sectional area of a porous medium under a unit hydraulic gradient and standard temperature conditions, usually 20°C.

permeameter An instrument to measure the coefficient of permeability of a soil sample.

permeance The resistance, measured in perms, to the flow of water vapor through a given thickness of material.

permit A document issued by a governing authority such as a building inspector approving specific construction. Among the types of permits are the building permit, demolition, zoning, grading, septic, plumbing and electrical permits.

permit, building *See* **building permit.**

permit, occupancy *See* **certificate of occupancy.**

permit, zoning *See* **zoning permit.**

perpend **1.** A stone which extends completely through a wall and is exposed on each side of the wall. **2.** A joint between masonry units.

personal injury (insurance terminology) Protection against claims for bodily or character injury, or damage to one's reputation. This insurance protects against damage caused by specified actions of the insured. Includes false arrest, malicious prosecution, willful detention or imprisonment, libel, slander, defamation of character, wrongful eviction, invasion of privacy, or wrongful entry. *See also* **bodily injury.**

personal property **1.** Generally, all property that is not real property, such as tangible goods including furniture, cars, books, and equipment, and intangible goods, such as money, notes, bonds, and stocks. **2.** One of four categories in which assets can be classified.

personal protective equipment (PPE) Special clothing, devices and equipment worn by workers for protection against documented or potential site hazards. Examples include respirators and eye, ear and skin protection. *See also* **level A-D clothing.**

perspective **1.** The technique of preparing a perspective drawing. **2.** The appearance of objects in depth.

perspective center A point of origin or termination of perspective rays used in preparing a perspective drawing.

perspective drawing A three-dimensional graphic presentment of a project (or part of a project).

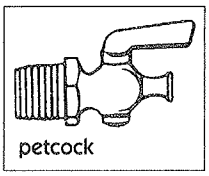
PERT (project evaluation and review technique) Along with CPM, PERT is a probabilistic technique for planning and evaluating progress of complex programs. Attempts to determine the time required to complete each element in terms of pessimistic, optimistic, and best-guess estimates. *

pervious cesspool A tank in the ground which receives domestic sewage or other organic wastes. The walls and floor of the tank are designed to permit the liquids to seep through to the soil.

pervious soil A soil that allows relatively free passage of water.

pessimistic time estimate The maximum time required for an activity under adverse conditions. It is generally held that an activity would have no more than one chance in a hundred of exceeding this amount of time. *

petcock A small valve installed on equipment or piping for drainage of liquids or air.


petcock

petrifying liquid A penetrating solution used for waterproofing masonry surfaces.

petrography The branch of petrology dealing with description and systematic classification of rocks, aside from their geologic relations, mainly by laboratory methods, largely chemical and microscopical. Also, loosely referred to as *petrology* or *lithology*.

petroleum asphalt Asphalt refined directly from petroleum, as opposed to asphalt from natural deposits.

petroleum hydrocarbon Petroleum products are complex mixtures of hydrocarbon compounds, ranging from light, volatile, compounds to heavy, long-chained, branched compounds. The composition of petroleum hydrocarbons varies depending upon the source of the crude oil and the refining practices used. A number

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of solvents are refined from cured petroleum and used to lower the viscosity of oils and resins.

petroleum oil A refined spray oil made from a flammable hydrocarbon-based mixture found beneath the earth's surface. Petroleum oils are categorized as unsaturates, aromatics, naphthenes, and paraffins.

petroleum spirit A thinner, for paints and varnishes, having a low-aromatic hydrocarbon content, obtained in petroleum distillation.

petrology The science of rocks, dealing with their origin, structure, composition, etc., from all aspects and in all relations. *See also* **petrography**.

pew A bench-like seat used in a church.

p-grade Molding stock intended to be covered with opaque finishes or overlays. P-grade stock can be finger-jointed and/or edge-glued.

pH A measure of hydrogen ion concentration expressed as an exponential number used to determine the relative acidity or alkalinity of a liquid.

phantom line A broken line, usually fine, with alternating long and short dashes, in order to show details.

phase A major period in the life of an asset or project. A phase may encompass several stages.

phase converter An electrical device that converts single-phase power to the smooth, continuous and universally adaptable three-phase power.

phased application The installation of built-up roofing plies in two or more applications, usually at least one day apart.

phased construction Implies that construction of a facility or system or subsystem commences before final design is complete. Phased construction is used in order to achieve beneficial use at an advanced date. *

phasing Working on a construction project in parts and at specified intervals. Usually phasing is required when construction activity is not permitted at certain locations or on particular dates during the project.

phenol A product of the petroleum industry used in the production of phenolic resin, epoxy resins, plasters, and exterior plywood glue. Phenol is made from benzene. It exists naturally in coal tar and wood tar. However, phenol from these sources is rarely used in the production of glue.

phenolic compounds Substances containing phenols.

phenolic insulation A rigid, closed cell foam insulation product made with phenolic plastics. No longer used in the roofing industry because when wet it will chemically attack steel decks. However, it has not posed problems when used over concrete or wood decks, or gypsum boards sealed with a vapor retarder.

phenolic resin A class of synthetic, oil-soluble resins (plastics) produced as condensation products of phenol, substituted phenols and formaldehyde, or some similar aldehyde that may be used in paints for concrete.

phenolic resin glue An adhesive used for bonding exterior plywood. Phenolic resin is produced in a reaction between phenol and formaldehyde. An extender is usually added to the phenolic resin prior to use in the plywood-manufacturing process.

phi factor Capacity reduction factor in structural design. The factor is expressed as a number less than 1.0 (usually 0.65-0.90) by which the strength of a structural member or element, in terms of load, moment, shear, or stress, is required to be multiplied in order to determine design strength or capacity. The magnitude of the factor is stipulated in applicable codes and construction specifications for respective types of members and cross sections.

Philadelphia leveling rod A leveling rod in two sliding parts with color-coded graduations. The rod can be used as a self-reading leveling rod.

Philippine mahogany The wood of several types of trees found in the Philippines. The wood resembles mahogany in grain. Density varies from very light to quite heavy. The heavier, darker woods are durable and strong and used like mahogany. The lighter-weight colored woods are used for interior plywood.

Phillips head screw A screw with a recessed head and an X-shaped driving indentation.

phosphatizing A chemical treatment process used on steel to prevent corrosion.

phosphor mercury-vapor lamp A high-pressure mercury-vapor lamp with a phosphor-coated glass cover over the lamp proper. The phosphor in the cover adds colors not generated by the lamp.

phot A measure of illumination equal to one lumen per square centimeter.

photoelectric cell An electronic device for measuring illumination level or detecting interruption of a light beam. The electric output or resistance of the device varies according to the illumination.

photoelectric control An electric control that responds to a change in incident light.

photogrammetry The practice of calculating measurements and drawing up surveys through the use of photographs, especially aerial photographs.

photoionization detector An ionization detector that uses ultraviolet light to generate ions.

photometer A device that measures luminous intensity, light distribution, color, and other qualities of a luminaire.

P

photo-oxidation Oxidation resulting from exposure to sunlight.

photovoltaics (PV) Devices that convert sunlight directly into electricity. PVs generate power without noise, pollution, or fuel consumption, and are useful where utility power is not available, reliable, or convenient.

physical percentage complaint Percentage of work content of an activity or project achieved as of a particular date. Physical completion of any activity represents the most accurate, unbiased measure or appraisal in accordance with the accept method of measurement, tempered with judgment and experience. Physical completion is not linked to work hours budgeted or expended. *

physical progress The status of a task, activity, or discipline based on pre-established guidelines related to the amount or extent of work completed. *

physical restraint A situation in which a physical activity or work item must be completed before the next activity or work items in the sequence can begin (e.g., concrete must harden before removing formwork). *

Phytoremediation A low-cost option for site cleanup when the site has low levels of contamination that are widely dispersed. Phytoremediation (a subset of bioremediation) uses plants to break down or uptake contaminants.

piano hinge A continuous strip hinge used in falling doors, etc.

Picea The general botanical classification of the spruces.

pick A hand tool, consisting of a steel head pointed at one or both ends and mounted on a wooden handle, for loosening and breaking up compacted soil or rock.

pick and dip *Also, the Eastern or New England method.* A method of laying brick in which the bricklayer picks up a brick in one hand and, with a trowel in the other hand, scoops the mortar needed to lay the brick.

pickax *See* **pick.**

pick dressing The rough dressing of hard, quarried stone with a heavy pick or wedge-shaped hammer.

picked finish A surface finish for stonemasonry in which the surface is covered with small pits made by striking it perpendicularly with a pick or chisel.

picket A sharpened or pointed stake, post, or pale, usually used as fencing.

picket fence A fence consisting of vertical piles, often sharpened at the upper end, supported by horizontal rails.

pickled A metal surface that has been treated with strong oxidizing agents to remove scale and provide a tough oxide film.

pickling The process of treating metal surfaces to remove impurities, rust, and scale using pickling liquor consisting of strong mineral acids. Sulfuric and hydrochloric are the most common acids. Slang for the preservative treatment of wood, metals, and piping systems.

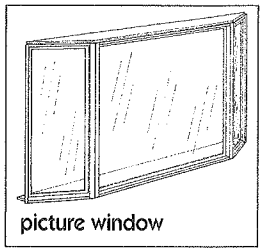
pickup **1.** The amount by which an estimate for an item is higher than the actual cost; savings; underrun. **2.** Unwanted adherence of solids to the open surface of a sealant. **3.** Common term for a small open-body truck with a ½ ton to 1 ton capacity.

pickup load The heat consumption required to bring piping and radiators to their operating temperature when a heating system is first turned on.

picture molding Molding designed to support picture hooks near the ceiling.

picture plane The plane on which rays are projected when making a perspective drawing.

picture window A large window, usually a fixed sheet of plate or insulating glass.


picture window

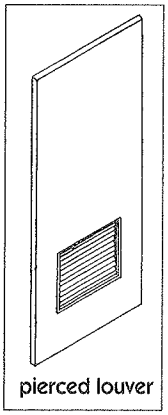
pieced timber **1.** A timber made from two or more pieces of timber fitted together. **2.** A damaged timber patched with a fitted piece of wood.

piece mark A mark given to one or more pieces in an assembly designating a location in the assembly, as shown on shop drawings.

pien check In a stair constructed of stone, a rabbet cut in the front edge of a tread that fits over the riser below it.

pier **1.** A short column to support a concentrated load. **2.** Isolated foundation member of plain or reinforced concrete. **3.** Means of support for bridge spans or the ends of a lintel or arch. **4.** A marine dock or breakwater structure.

pierced louver A louver set in the face sheets or panels of a door.


pierced louver

pierced wall An ornamented, nonbearing masonry wall laid with void spaces between the blocks.

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pier glass A mirror hung between two windows.

pigeonhole A small compartment for holding papers or small objects, usually one of an adjoining series.

piggyback **1.** A method of transportation whereby truck trailers are carried on trains, or cars on trucks. **2.** In staple application to gypsum wallboard, a second staple is driven directly on top of the first. The staple will spread to create a firm bond between the wallboard and the tile.

pigment A coloring matter, usually in the form of an insoluble fine powder, dispersed in a liquid vehicle to make paint.

pigment / binder ratio Amount of pigment in paint relative to the amount of binding agent.

pigmented structural glass Also known as "Carrara glass," "Sani onyx," and "Vitolite," a versatile glass made popular in the 20th century used in items such as refrigerator interiors and storefronts.

pigment figure A natural pattern in woods, such as rosewood and zebra wood, consisting of variations in color rather than grain.

pig spout A sheet metal flashing system that directs water out through the face of a gutter instead of through a downspout.

pigtail **1.** An anti-siphon piping device used to protect a pressure gauge. **2.** A flexible conductor attached to an electric component or appliance to connect it to a circuit.

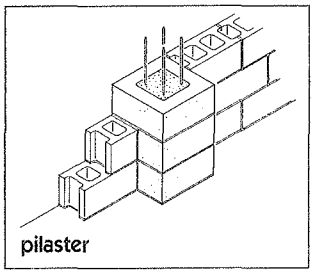
pigtail splice A connection of two electric conductors, made by placing the ends of the conductors side by side and twisting the ends about each other.

pig tin A metal alloy which is at least 99.80% tin.

pike pole A long pole, with a spear-type point and a hook on one end, used to move logs around in a mill pond.

pike staff Similar to a pike pole, but lighter.

pilaster A column built within a wall, usually projecting beyond the wall.

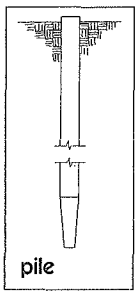

pilaster

pilaster block Concrete masonry units designed to form plain or reinforced concrete masonry pilasters of the projecting type.

pilaster face The form for the front surface of a pilaster parallel to the wall.

pilaster side The form for the side surface of a pilaster perpendicular to the wall.

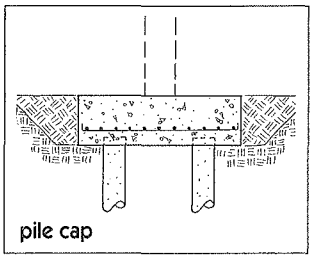
pile A slender timber, concrete, or steel structural element, driven, jetted, or otherwise embedded on end in the ground for the purpose of supporting a load.


pile

pile-bearing capacity The load on a pile or group of piles that will theoretically produce failure if exceeded.

pile bent Two or more piles driven in a row transverse to the long dimension of the structure and fastened together by capping and (sometimes) bracing.

pile cap **1.** A structural member placed on, and usually fastened to, the top of a pile or a group of piles and used to transmit loads into the pile or group of piles and, in the case of a group, to connect them into a bent. Also known as a *rider cap* or *girder*. **2.** A masonry, timber, or concrete footing resting on a group of piles. **3.** A metal cap or helmet temporarily fitted over the head of a precast pile to protect it during driving. Some form of shock-absorbing material is often incorporated.


pile cap

pile core The mandrel used to drive the shell of a cast-in-place concrete pile.

pile driver A machine for driving piles, usually by repeated blows, from a free-falling or driven hammer. A pile driver consists of a framework for holding and guiding the pile, a hammer, and a mobile plant to provide power.

pile eccentricity The amount that a pile deviates from its plan location, or from plumb.

pile extractor A machine for loosening piles in the ground by exerting upward striking blows. The actual removal is by a crane.

pile foundation The system of piles, and pile caps, that transfers structural loads to bearing soils or bedrock.

pile friction The friction forces on an embedded pile limited by the adhesion between soil and pile and/or the shear strength of the adjacent soil.

pile hammer A weight which strikes a pile to drive it into the ground. The weight may fall freely or be assisted by steam or air pressure.

pile head The top of a pile.

pile height The height of piles in a rug measured from the top surface of the backing to the top of the pile.

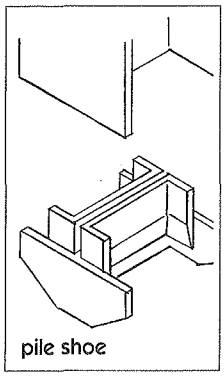
P

pile load test A static load test of a pile or group of piles used to establish an allowable load. The applied load is usually 150% to 200% of the allowable load.

pile point Hardened steel tip affixed to the end of a pile to reduce damage.

pile shell A pipe used as the shell or a section of shell for a cast-in-place concrete pile. *See also* **piling pipe.**

pile shoe A pointed or rounded device on the foot of a pile to protect the pile while driving.

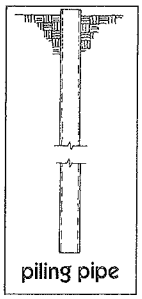

pile shoe

pile test *See* **pile load test.**

pile tolerance The permitted deviation of a pile in the horizontal and vertical planes.

piling A column, usually steel, wood, or concrete, driven into the ground to support a structure.

piling pipe A pipe used as the shell or a section of shell for a cast-in-place concrete pile.


piling pipe

pillar **1.** A post or column that supports part of a structure. **2.** A column of ore left in a mine to support the ground overhead.

pilot boring A preliminary boring or series of borings to determine the nature of the soil in which a foundation will be dug or a tunnel driven.

pilot hole A guiding hole for a nail or screws, or for drilling a larger hole.

pilot lamp *See* **pilot light.**

pilot light **1.** A small, constantly burning flame used as an ignition source in a gas burner. **2.** A low-wattage light used to indicate that an electric circuit, control, or device is active.

pilot nail A temporary nail used to align boards until permanent nails are driven.

pilot punch A machine punch in which the punching tool is fitted with a small control plug to be inserted in a guide hole in the material to be punched.

pin A peg or bolt of some rigid material used to connect or fasten members.

pincers A joined tool with a pair of jaws and handles used to grip an object.

pinch bar A steel bar with a chisel point at one end used as a lever for lifting or moving heavy objects.

pin-connected truss A truss in which the main members are connected by pins.

pin connection In structural analysis, any member connection designed to transfer axial and shear forces, but not moments.

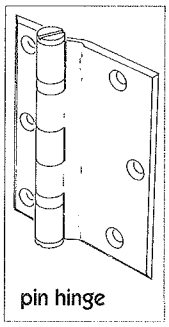
pine Any of various softwoods of the genus *Pinus*.

pine oil A high-boiling-point essential oil obtained from the steam distillation of pine needles, twigs, etc. Used industrially as a solvent. Used in paint to provide good flow properties and as an anti-skinning agent.

pine shingles Shingles made from pine wood.

pine tar A blackish-brown liquid distilled from pine wood. Pine tar is used as an antiseptic externally and an expectorant internally and also to make the grips of tools sticky.

pin hinge A butt hinge with a pin for the pivot.


pin hinge

pinhole (pin hole) **1.** In wood, a small, round hole made by a beetle or worm in the standing timber. **2.** In plaster, a surface defect caused by trapped air. **3.** In painted surfaces, a defect usually caused by impurities or dirt. **4.** In glazed ceramic surfaces, a small round hole.

pin joint A structural joint found in trusses and some girder seats.

pin knot A knot with a diameter no larger than ½".

pinnacle **1.** The highest point. **2.** A turret or elevated portion of a building. **3.** A small ornamental body or shaft terminated by a cone or pyramid.

pinner A small stone which supports a larger stone in masonry.

pinning Fastening or securing by means of a pin.

pinning in Filling in joints of masonry with chips of the stone.

pinning up The operation of driving wedges to bring an upper work to fully bear on shoring or underpinning.

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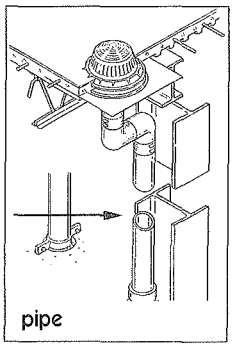
pintle A vertical pin fastened at the bottom and serving as a center of rotation.

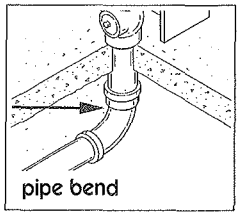
pin tumbler A lock mechanism having a series of small pins that must be properly aligned by a key to open.

pinyon pine (pinon pine, nut pine) *Pinus monophylla, P. cembroides, P. quadrifolia, P. edulis.* A group of small pines, 20' to 40' in height, occurring in scattered groves in the semi-arid areas of the west. They produce an edible seed, mostly used as topping for salad. Trees exposed to constant winds take on a sprawling form.

pipe **1.** A hollow cylinder or tube for conveyance of a fluid. **2.** From ASTM B 251–557: Seamless tube conforming to the particular dimensions commonly know as "standard pipe size."


pipe

pipe bend (pipe elbow) A pipe fitting used to change direction.


pipe bend

pipe bracket A shaped metal assembly used to support a pipe from a wall or floor.

pipe chase A vertical space in a building reserved for vertical runs of pipe.

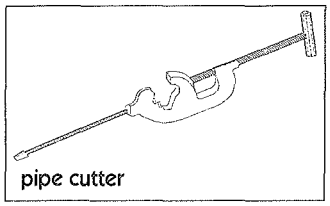
pipe column A column made of steel pipe and often filled with concrete.

pipe coupling A fitting used to connect two lengths of pipe in a direct line.

pipe covering Any wrapping on a pipe which acts as thermal insulation and/or a vapor barrier.

pipe cross A fitting used to connect four lengths of pipe in the same plane with all lengths at right angles to each other.

pipe cutter A hand tool for cutting pipe or tubing, consisting of a frame with a cutting wheel and drive wheels. Cutting is accomplished by forcing the cutting wheel into the pipe material and rotating the tool around the pipe a number of times.


pipe cutter

pipe die An adjustable tool for cutting threads on or in a pipe.

pipe elbow *See* **pipe bend.**

pipe expansion joint An assembly, other than a fabricated U-bend, designed to compensate for pipe contraction or expansion.

pipe fitting Bends, tees, and other connectors used in assembling pipe.

pipe gasket A fabricated packing to seal joints in pipe.

pipe hanger A device or an assembly to support pipes from a slab, beam or other structural element that is above the pipe.

pipe laser **1.** A self-leveling instrument used in surveying that employs a laser as a reference for measurements or verifying alignment. **2.** A plumber's tool used to simplify pipe alignment and installation. Once a hole is drilled in a stud or beam for pipe placement, the laser is directed through the hole to indicate where the hole in the next stud or beam should go.

pipelayer **1.** A tradesperson skilled and trained in laying and joining pipes of glazed clay, concrete, iron, or steel in a trench. **2.** An attachment for a tractor or other machine consisting of a winch and side boom for placing lengths of pipe in a trench.

pipeline heater A heater, usually a wrapping, with an electric element used to prevent the liquid in the pipe from freezing or to maintain the viscosity of the liquid.

pipeline refrigeration Refrigeration provided to a group of buildings by piping refrigerant from a central plant.

pipe pile A cylinder, usually 10"–24" in diameter, generally driven with open ends to form a friction pile. This pile may consist of several sections from 5' to 40' long joined by special fittings, such as cast-steel sleeves. A pipe pile is sometimes used with its lower end closed by a conical steel shoe.

pipe plug A pipe fitting with outside threads and a projecting head used to close the opening in another fitting.

pipe reamer A plumber's hand tool with a spinning cone that is used inside a pipe to remove burrs.

pipe reducer A pipe fitting used to connect two lengths of pipe of different diameters.

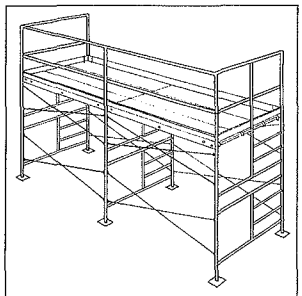
pipe ring A circular-shaped metal part used to support a pipe from a suspended rod.

pipe run Any path taken by pipe in a distribution or collection system.

pipe saddle An assembly to support a pipe from the underside.

P

pipe scaffolding A flexible scaffold anchored against a building. This prevalent type of scaffold is also referred to as "metal tube" or "coupler scaffold."



pipe scaffolding

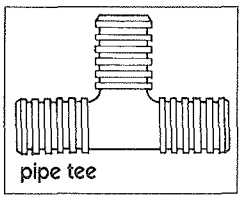
pipe sleeve A cylindrical insert cast in a concrete wall or floor for later passage of a pipe. Also a larger pipe usually used in embankments that allows a smaller pipe to be installed later or to protect it from heavy loads.

pipe stock An assembly to hold a pipe die.

pipe stop A stopcock in a pipe.

pipe strap A thin metal strip used as a pipe hanger.

pipe tee A T-shaped fitting to connect three lengths of pipe in the same plane with one length at right angles to the other two.



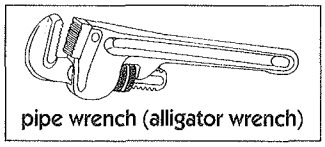
pipe tee

pipe thread A V-cut screw thread cut on the inside or outside of a pipe or fitting. The diameter of the thread tapers.

pipe tongs A hand tool used to screw or unscrew lengths of pipe and/or fittings.

pipe vise A vise for holding pipe or tubing for cutting or threading. The pipe is held in curved, V-shaped, serrated jaws or, for larger pipes, by chains.

pipe wrench (alligator wrench) A heavy hand tool with adjustable serrated jaws for gripping, screwing, or unscrewing metal pipe.



pipe wrench (alligator wrench)

piping **1.** An assembly of lengths of pipe and fittings, i.e., a run of pipe. **2.** Movement of soil particles by percolating water that produces erosion channels.

piping loss The heat lost from piping between the heat source and the radiators.

piston A solid cylinder that fits inside a larger cylinder and moves as a result of the power it receives. It can be used to transmit power to or from a connecting rod. Found in reciprocating engines, pumps, and compressors.

pit **1.** An excavation, quarry, or mine made or worked by the open cut method. A pit seldom goes below the ground water level. **2.** The area between the stage and the first row of seats in a theater. **3.** A small hole or cavity on a surface.

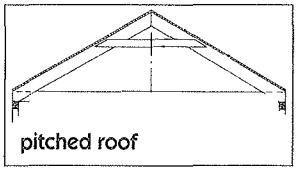
pit boards Horizontal boards used as sheeting to retain the soil around a pit.

pitch **1.** An accumulation of resin in the wood cells in a more or less irregular patch. Pitch is classified for grading purposes as light, medium, heavy, or massed. **2.** The angle or inclination of a plane such as a roof, which varies according to climate, design, and materials used, and is expressed as a ratio of rise per run. **3.** The set, or projection, of teeth on alternate sides of a saw to provide clearance for its body. **4.** The ratio of rise to run of stairs. **5.** The reciprocal of the number of threads per inch.

pitch board A thin piece of board used as a guide in stair construction. The board is cut in the shape of a right triangle to the slope of the nosings of the treads. Usually, the two sides equal the tread length and rise of the stair.

pitch dimension The distance between the bases of the top and the bottom risers in a flight of stairs, measured parallel to the slope.

pitched roof A roof having one or more surfaces with a slope greater than 10° from the horizontal.



pitched roof

pitched stone A rough-faced stone having each edge of the exposed face pitched at a slight bevel from the plane of the face.

pitched truss A truss that ties sloping top chords to the bottom chord with angled struts.

pitching chisel A mason's chisel with a wide, thick edge used for rough dressing stone.

pitch pine *Pinus rigida*. This pine is found in a wide area, from Maine to northern Georgia. Lumber from it is graded under rules established by the Northeastern Lumber Manufacturers Association.

pitch pocket **1.** A flanged metal device used to provide a water-tight seal around columns or other roof penetrations. **2.** An opening between growth rings which usually contains or has contained resin, or bark, or both. A pitch pocket is classified for grading purposes as very small, small, medium, large, closed, open, or through.

pitch seam Shake or check filled with pitch.

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pitch select D select or better, except that the grade admits any amount of medium to heavy pitch. Massed pitch is admissible but limited to half the area of an otherwise high line piece. Dimensions are 4" and wider, 6' and longer in multiples of one foot.

pitch streak A well-defined accumulation of pitch in a more or less regular streak. A pitch streak is classified for grading purposes as small, medium, or large.

pitch symbol A triangular symbol used on elevation drawings to indicate the incline of a roof or other plane surface.

pith The small, soft core in the center of a log.

pith fleck A narrow streak resembling pith on the surface of a piece of lumber, usually brownish and up to several inches in length, resulting from the burrowing of larvae in the growing tissue of the tree.

pith knot A minor defect in lumber, a pith knot is a knot whose only blemish is a small pith hole in the center.

pitot tube A device, used with a manometer or other pressure- reading device, to measure the velocity head of a flowing fluid.

pit prop A timber used as a support in an excavation or mine.

pit-run gravel Ungraded gravel used as taken from a pit.

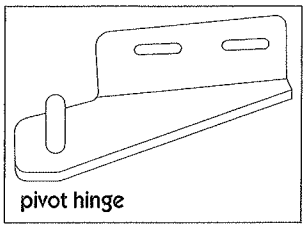
pitting Development of relatively small cavities in a surface due to phenomena such as corrosion, cavitation, or, in concrete, localized disintegration. *See also* **popout**.

pivot A short shaft or pin about which a part rotates or swings.

pivoted door A door that swings on pivots, rather than a door hung on hinges.

pivoted window A window with a sash that rotates about fixed horizontal or vertical pivots.

pivot hinge A hinge with a short fixed shaft or pin upon which a part rotates or swings. Commonly used for cabinet doors.



pivot hinge

placeability *See* **workability**.

placement **1.** The process of placing and consolidating concrete. **2.** A quantity of concrete placed and finished during a continuous operation. Also, inappropriately referred to as *pouring*.

placing The deposition, distribution, and consolidation of freshly mixed concrete in the place where it is to harden. Also, inappropriately referred to as *pouring*.

placing drawings Detailed drawings used to position steel reinforcement in concrete construction.

plain ashlar A rectangular block of stone, the face of which has been smoothed with a tool.

plain bar A reinforcing bar without surface deformations, or one having deformations that do not conform to the applicable requirements.

plain concrete **1.** Concrete without reinforcement. **2.** Reinforced concrete that does not conform to the definition of reinforced concrete. **3.** Used loosely to designate concrete containing no admixture and prepared without special treatment.

plain end (PE) Used to describe the ends of pipe which are shipped from the mill with unfinished ends. These ends may eventually be threaded, beveled, or grooved in the field.

plain masonry Masonry with no reinforcement or with reinforcement only for shrinkage and temperature changes.

plain rail A meeting rail in a double-hung window that is the same thickness as the other members of the frame.

plain-sawn Wood sawn from logs so that the annual rings intersect the wide faces at an angle less than 45°.

plaintiff The party that initiates a claim or action against another party. *See also* **defendant**.

plain tile A flat, rectangular tile of concrete or burnt clay.

plan **1.** A two-dimensional overview of the design, location, and dimensions of a project (or a portion of a project). *See also* **drawings**. **2.** Formalized, written method of accomplishing a project task. **3.** An intended future course of action. **4.** The basis for project controls. **5.** A generic term used for a statement of intentions whether they relate to time, cost or quality in their many forms. **6.** A predetermined course of action over a specified period of time which represents a projected response to an anticipated environment in order to accomplish a specific set of adaptive objectives. *

planar frame A structural frame with all members in the same plane.

plancier The wood or plaster soffit or underside of an overhanging eave.

plan deposit *See* **deposit for bidding documents**.

plane **1.** A flat surface. **2.** A tool used to smooth or shape wood. **3.** To run sawn wood through a planer to smooth its surface.

planed all round A piece that has been surfaced on all four sides.

planed lumber Lumber which has been run through a planer to finish one or several sides.

plane iron The smoothing metal blade in plane.

P

plane of weakness The plane along which a body under stress will tend to fracture. The plane of weakness may exist by design, by accident, or because of the nature of the structure and its loading.

planer A machine used to surface rough lumber.

planer heads Sets of cutting knives mounted on cylindrical heads which revolve at high speed to dress lumber fed through them. Top and bottom heads surface or pattern the two faces, while side heads dress or pattern the two edges or sides.

planer knife One of the sharp blades used in a planer head.

plane surveying Surveying which neglects the curvature of the earth.

plane table A device, consisting of a drawing board on a tripod and a telescope attached to a ruler, for plotting lines of a survey directly from observations.

planimeter A mechanical device that measures plane areas on a map or drawing.

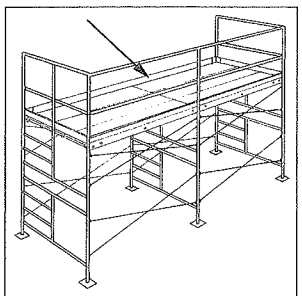
planing The process of smoothing a surface by shaving off small chips.

planing machine **1.** Several types of a fixed machine for planing wood or steel. **2.** A portable machine for planing a wood floor in place.

plank A piece of lumber two or more inches thick and six or more inches wide, designed to be laid flat as part of a load-bearing surface, such as a bridge deck.

plank-and-beam construction *See* **post-and-lintel construction.**

planking Material used for flooring, decking, or scaffolding.



planking

planking and strutting The temporary timbers supporting the soil at the side of an excavation.

plank-on-edge floor A subfloor formed by joists in contact with each other to form a continuous surface.

plank-type grating Prefabricated grating in widths similar to wooden planks, usually less than 30" wide. Plank grating is available in a variety of materials.

planned cost The approved estimated cost for a work package or summary item. This cost when totaled with the estimated costs for all other work packages results in the total cost estimate committed under the contract for the program or project. *

planned unit development (PUD) A zoning classification that allows flexibility in the design of a subdivision or development.

planned value Measure of the value of work planned to have been performed so far. *

planner In project control, a team member with the responsibility for planning, scheduling and tracking of projects. They are often primarily concerned with schedule, progress and manpower resources. *

planning The process of developing a scheme of a building or group of buildings by studying the layout of spaces within each building, and of building and other installations in an open space.

planning bill An artificial grouping of items, in bill of material format, used to facilitate master scheduling and/or material planning. *

planning grid A graph-like paper with the lines at right angles or other selected angles to each other, used by architects or engineers in modular planning.

plan room A service provided by construction industry organizations or service companies, sometimes available to interested constructors, material men, vendors, and manufacturers. Plan rooms provide access to contract documents for projects currently in the process of receiving competitive or negotiated bids.

planted molding A molding which is nailed, tongued-in, or otherwise fastened to a base, as opposed to one cut into the base material.

planted stop A molding or strip nailed to a frame and used as a door or casement stop.

planting In masonry, laying the first courses of a foundation on a prepared bed.

plant mix **1.** A mixture of aggregate and asphalt cement or liquid asphalt, prepared in a central or traveling mechanical mixer. **2.** Any mixture produced at a mixing plant.

plant overhead Those costs in a plant that are not directly attributable to any one production or processing unit and are allocated on some arbitrary basis believed to be equitable. Includes plant management salaries, payroll department, local purchasing and accounting, etc. *

plan view A drawing that depicts an object, assembly, or floor plan from above.

plaster **1.** A cementitious material or combination of cementitious material and aggregate that, when mixed with a suitable amount of water, forms a plastic mass or paste. When applied to

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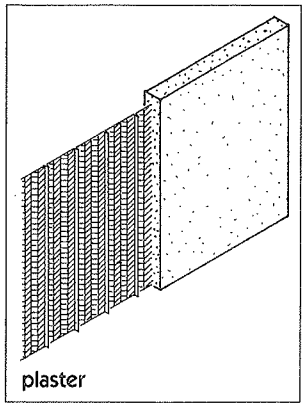
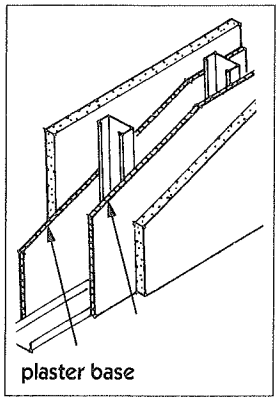
a surface, the paste adheres to it and subsequently hardens, preserving in a rigid state the form or texture imposed during the period of elasticity. **2.** The placed and hardened mixture created as in definition 1 above. *See also* **stucco**.


plaster

plaster aggregate Graded mineral particles and mineral, vegetable, or animal fibers to be used with gypsum or cement-base plasters to produce a plaster mix.

plaster base Any working ground to receive plaster, including wood, metal, or gypsum lath, insulating board, or masonry.


plaster base

plaster-base finish tile Ceramic tile with exposed surface, scored or roughened for an application of a plaster system.

plaster bead An edging, usually metal, to strengthen applied plaster at corners.

plasterboard (sheetrock, drywall) Any prefabricated board of plaster with paper facings. Plasterboard may be painted or used as a base for a finish coat of applied plaster.

plasterboard nail A nail for fastening plasterboard to a supporting system. The nails are galvanized with a flat head and a deformed shank.

plaster bond The mechanical or chemical adhesion of plaster to a surface.

plaster ceiling panel A raised or sunken section of a plaster ceiling, forming a panel.

plaster cornice A molding of plaster at the intersection of a wall and a ceiling.

plaster cove A concave molding of plaster at the intersection of a wall and a ceiling.

plasterer's putty A hydrated lime with just enough water added to make a thick paste for use as a hole or crack filler.

plaster ground A wood strip or metal bead used as a guide for application of a desired thickness of plaster or for attaching trim.

plaster guard A shield attached behind the hinge and strike reinforcement on a hollow metal door frame to prevent mortar or plaster from entering mounting holes.

plaster lath A supporting structure for plaster, such as a wood lath, metal lath, or lath board.

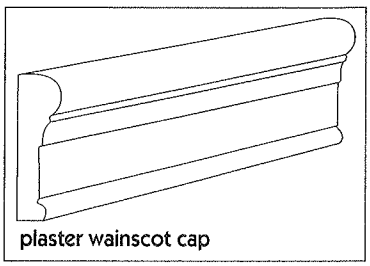
plaster mold A mold or form made from gypsum plaster, usually to permit concrete to be formed or cast in intricate shapes. *See also* **mold** *and* **form**.

plaster of paris Gypsum, from which three-quarters of the chemically bound water has been driven off by heating. When wetted, it recombines with water and hardens quickly. *See also* **hemihydrate**.

plaster ring A metal collar attached to a base and used as a guide for thickness of applied plaster and a fastener for trim.

plaster set The initial stiffening of a plaster mix that may be reworked without the addition of water.

plaster wainscot cap A horizontal wood strip which covers the joint between the wainscoting and the plaster surface.


plaster wainscot cap

plastic Possessing plasticity, or possessing adequate plasticity. *See also* **plasticity**.

plastic bond fire clay **1.** A fire clay of sufficient natural plasticity to bond nonplastic material. **2.** A fire clay used as a plasticizing agent in mortar.

plastic cement A synthetic cement used in the application of flashing.

plastic centroid Centroid of the resistance to load computed for the assumptions that the concrete is stressed uniformly to 85% its design strength and the steel is stressed uniformly to its specified yield point.

plastic consistency **1.** Condition of freshly mixed cement paste, mortar, or concrete that allows that deformation to be sustained continuously in any direction without rupture. **2.** In common usage, concrete with slump of 3" to 4" (80 to 100 mm).

plastic cracking Cracking that occurs in the surface of fresh concrete soon after it is placed and while it is still plastic.

P

plastic curtains Curtains or strip doors that reduce infiltration and exfiltration within a building. These barriers typically consist of several strips of heavy plastic (often transparent or translucent) that form a fairly tight seal, yet allow easy passage.

plastic deformation Deformation that does not disappear when the force causing the deformation is removed.

plastic design *See* **ultimate-strength design.**

plastic flow *See* **creep.**

plastic glue Resin bonding materials used in joining wood pieces. These materials include: **1.** Thermosetting resins such as phenol-formaldehyde, urea-formaldehyde, and melamine resin. **2.** Thermoplastics such as acryl-polymers and vinyl-polymers. **3.** Casein plastics. **4.** Natural resin glues.

plastic-hinge Region where ultimate moment capacity in a member may be developed and maintained with corresponding significant inelastic rotation as main tensile steel elongates beyond yield strain.

plasticity **1.** The capability of being molded, or being made to assume a desired form. **2.** A property of a material that allows it to retain its form when bent. **3.** A complex property of a material involving a combination of qualities of mobility and magnitude of yield value. **4.** That property of freshly mixed cement paste, concrete, or mortar, which determines its resistance to deformation and ease of molding.

plasticity index **1.** The range in water content through which a solid remains plastic. **2.** Numerical adherence between the liquid limit and the plastic limit. *See also* **Atterberg limits.**

plasticizer **1.** A material that increases plasticity of a cement paste, mortar, or concrete mixture. **2.** Various substances added to organic compounds to create a more flexible finished product. These additives are frequently used in roofing materials and concrete.

plasticizing **1.** Producing plasticity or becoming plastic. **2.** Softening wood by hot water, steam or chemicals to increase its moldability.

plastic laminate A thin board used as a finished surfacing, made from layers of resin-impregnated paper fused together under heat and pressure.

plastic limit The water content at which a soil will just begin to crumble when rolled into a thread approximately ⅛" (3 mm) in diameter. *See also* **Atterberg limits.**

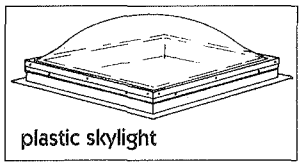
plastic loss *See* **creep.**

plastic lumber An alternative building material that is usually manufactured with recycled plastics. In contrast to wood, it will not splinter, rot, or warp. Used in decking and pilings, among other applications.

plastic mortar A mortar of plastic consistency.

plastic shrinkage cracks *See* **plastic cracking.**

plastic skylight A molded unit of transparent or translucent plastic that is set in a frame for use as a skylight.


plastic skylight

plastic soil Any soil that can be molded or deformed by moderate pressure without crumbling.

plastic wood A quick-drying putty of nitrocellulose, wood flour, resins, and solvents used as a filler for holes and cracks.

plate **1.** In formwork for concrete, a flat, horizontal member at the top and/or bottom of studs or posts. If on the ground, a plate is called a *mudsill.* **2.** In structural design, a member, the depth of which is substantially smaller than its length and width. **3.** In framing, the *top plate* (horizontal) connects with the top of wall studs. The floor joists, rafters, or trusses rest on it. The *sole plate* is at the bottom of wall studs. The still plate (horizontal) rests on and is anchored to the foundation. **4.** A flat rolled iron or steel product. *See also* **flat plate, load-transfer assembly.**

plate anchor An anchor bolt used to fasten a plate or sill to a foundation.

plate beam *See* **plate girder.**

plate bolt *See* **plate anchor.**

plate girder A girder fabricated from plates, angles, or other structural shapes, welded or riveted together.

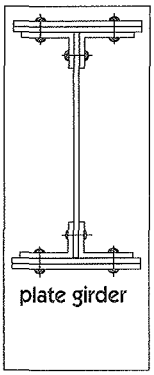


plate girder

plate glass High-quality glass of the same composition as window glass but thicker, up to 1¼", with ground and polished faces, usually used for large areas in a single sheet.

platen A flat plate in a hot press, usually one of many in a multi-opening press used in the manufacture of panel products.

plate rail Decorative molding on the upper part of a wall and grooved to hold chinaware plates or decorations.

plate stock Component that makes up the bottom and top of a typical wood framed wall. Usually the same dimension as the wall framing stock but may be a lesser grade.

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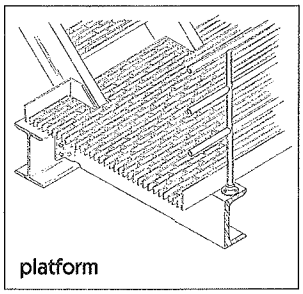
plate-type tread A stair tread fabricated from metal plate and/or floor plate. The riser may be integral.

plate vibrator A self-propelled, mechanical vibrator used to compact fill.

platform **1.** A floor or surface raised above the adjacent level. **2.** A landing in a stairway. **3.** A working space for persons, elevated above the surrounding floor or ground level such as a balcony or platform for the operation of machinery or equipment.


platform

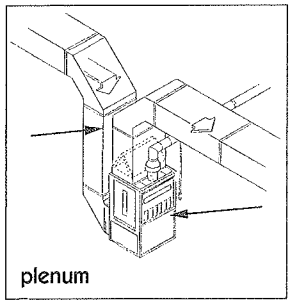
platform frame *See* **platform framing.**

platform framing A framing system in which the vertical members are only a single story high, with each finished floor acting as a platform upon which the succeeding floor is constructed. Platform framing is the common method of house construction in North America.

platform roof **1.** A truncated roof. **2.** A roof, the top of which is a horizontal plane.

plenishing nail A large nail used to fasten planks to joists.

plenum **1.** A closed chamber used to distribute or collect warmed or cooled air in a forced air heating/cooling system. **2.** The space between the suspended ceiling and the floor above. **3.** The space between a raised floor and the floor below. **4.** A closed chamber used to collect or distribute fluids in a distribution or collection system.


plenum

plenum barrier A barrier, erected in a plenum ceiling, used to reduce sound transmission between rooms or over a large area.

plenum chamber *See* **plenum.**

plenum fans (plug fans) Single-inlet, single-width centrifugal fans without the scroll, permitting 360° air delivery from the fan wheel.

plen-wood system A system for distributing air for heating and cooling using the entire underfloor area of a building as a plenum chamber. The system eliminates the need for ductwork in some structures. Proponents of the system cite savings in both construction costs and in the costs of heating and cooling.

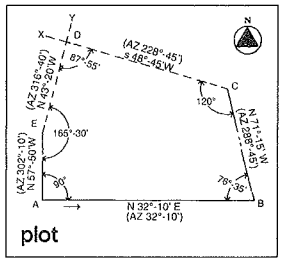
Plexiglass® The brand name, often used generically, for a clear and rigid plastic sheet product.

pliers A pincer-like hand tool with opposing jaws for gripping, cutting and bending.

plinth **1.** A block or slab supporting a column or pedestal. **2.** The base course of an external masonry wall when of different shape from the masonry in the wall proper. **3.** The base of a monument or statue often with inscription.

plinth course **1.** The masonry course that forms the plinth of a stone wall. **2.** The final course of a brick plinth in a brick wall.

plot **1.** A measured and defined area of land. **2.** A ground plan of a building and adjacent land.



plot

plot plan A diagram showing the proposed or existing use of a specified parcel of land.

plough *See* **plow 2.**

plow **1.** In molding, a rectangular slot of three surfaces cut with the grain of the wood. **2.** In carpentry, a tool that cuts grooves. **3.** A drywall tool with a bent trowel used to finish corners.

plow and tongue joint *See* **tongue-and-groove joint.**

plucked finish A rough-textured stone surface, made by overcutting with a planer so that stone is removed by spalling rather than shaving.

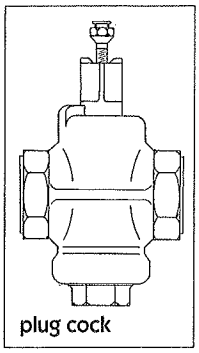
plug **1.** A wood peg driven into a wall for support of a fastener. **2.** A stopper for a drain opening. **3.** A male-threaded fitting used to seal the end of a pipe or fitting. **4.** A fixture for connection of electric wires to an outlet socket. **5.** A fibrous or resinous material used to fill a hole and close a surface. **6.** Material that stops or seals the discharge line of a channel or pipe.

plug and feathers A heavy device consisting of a wedge and two tapered plates of metal used to split boulders.

plug center bit A plug-shaped bit used to enlarge a hole or counterbore around the hole.

P

plug cock A valve where full flow is through a hole in a tapered plug. Rotating the plug 90° completely stops the flow.


plug cock

plug cutter A small hollow bit used to cut a plug from a larger piece of wood.

plug fuse A fuse contained in an insulated container with a metal screwbase. There is a small window on the face of the container for checking the condition of the fuse element.

plugged lumber Lumber in which a defect has been filled by material to provide a smooth paint surface.

plugging Inserting a plug into a hole.

plugging chisel A steel rod, with a star-shaped point, used for drilling holes in masonry by striking with a hammer.

plug-in A temporary figure in an estimate price-out sheet to be used until a more dependable one is obtained.

plug tap *See* **plug cock.**

plug tenon A short tenon which projects from the material into which it is fitted, the free end fitting into a mortise. A plug tenon is used to provide lateral stability for a wood column.

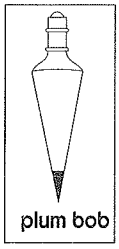
plug valve *See* **plug cock.**

plug weld A weld made through a circular hole in one of the members to be connected.

plum (plum stone) A large randomly shaped stone dropped into freshly placed mass concrete to economize on the volume of concrete used. *See also* **cyclopean concrete.**

plumb Vertical, or to make vertical.

plumb bob A cone-shaped metal weight, hung from a string, used to establish a vertical line or as a sighting reference to a surveyor's transit.


plum bob

plumb bond Any bond in masonry in which the vertical joints are in line.

plumb bond pole A pole used to insure that vertical masonry joints are in line.

plumb cut A vertical cut, as in the cuts in a rafter at the top ridge where it meets the ridge plate.

plumber's dope *See* **dope.**

plumber's friend *See* **plunger.**

plumber's furnace A portable, gas-fired furnace for melting solder, heating lead, or soldering iron.

plumber's rasp A coarse rasp used to file lead.

plumber's round iron A specially shaped soldering iron used to solder seams in tanks.

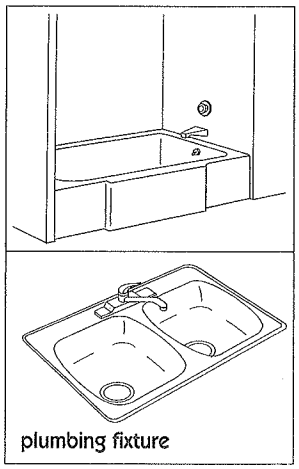
plumber's soil A mixture of lampblack and glue used to prevent solder from adhering where not wanted.

plumber's solder An alloy with a low melting point used for joining metal pieces such as copper pipes.

plumbing **1.** The work or practice of installing in buildings the pipes, fixtures and other apparatus required to bring in the water supplies and to remove water-borne wastes. **2.** The process of setting a structure or object truly vertical.

plumbing boot Metal support installed to reinforce wall studs in cases where a cut has been made for a plumbing drain line.

plumbing fixture A receptacle in a plumbing system, other than a trap, in which water or wastes are collected or retained for use and ultimately discharged to drainage.


plumbing fixture

plumbing ground Drain and waste lines underneath a basement floor.

plumbing jack A sleeve surrounding a drain or vent pipe on a roof.

plumbing, rough Advance work done by a plumbing contractor. Includes installation of waste and supply piping, shower pans and tubs, and gas piping.

plumbing stack A vent pipe installed through the roof materials.

plumbing system Arrangements of pipes, fixtures, fittings, valves, and traps, in a building which supply water and remove liquid-borne wastes.

plumbing trim Last stage of the plumbing contractor's work prior to final inspection. It includes pipe connections to fixtures and appliances.

plumbing waste line Plastic piping for removal of sewage.

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plumb joint A sheet metal joint made by lapping the edges and soldering them together flat.

plumb level A level that is set in a horizontal position by placing it at a right angle to a plumb line.

plumb line The cord or line that supports a plumb bob.

plumb rule A board or metal rule, fitted with one or more leveling bubbles, used to establish horizontal and vertical lines.

plume **1.** The effluent mixture of heated air and water vapor discharged from a cooling tower. **2.** An identifiable and definable stream of pollutants in an otherwise clean volume of air or water.

plummet *See* **plumb bob.**

plunger (plumber's friend) A tool, consisting of a large rubber suction cup on a wood handle, for clearing plumbing traps of minor obstructions.

ply **1.** A single layer or sheet of veneer. **2.** One complete layer of veneer in a sheet of plywood.

Plyform® The trademark owned by the American Plywood Association for concrete form panels produced by its association members.

plymetal Plywood covered on one or both sides with sheet metal.

plywood A flat panel made up of a number of thin sheets (veneers), of wood. The grain direction of each ply, or layer, is at right angles to the one adjacent to it. The veneer sheets are united under pressure by a bonding agent. Interior-grade plywood is suitable for indoor use or for outside use when subject only to occasional, temporary moisture, while exterior-grade plywood uses a weather-resistant adhesive.

plywood grade The widely-recognized grading system administered by the American Plywood Association that rates plywood on the quality of its veneer (from A to D) and on its exposure durability.

plywood, marine *See* **marine plywood.**

plywood squares Plywood fabricated for use as floor tile.

pneumatically applied mortar *See* **shotcrete.**

pneumatic caisson Method of caisson construction requiring that air pressure be controlled during the construction process.

pneumatic control system A system in which control is effected by pressurized air.

pneumatic drill A reciprocating drill actuated by compressed air.

pneumatic feed Delivery equipment in which material is conveyed by a pressurized air stream.

pneumatic hammer An air-powered tool with a linear driven shaft fitted with a chisel or hammer.

pneumatic placement *See* **pneumatic feed.**

pneumatic structure A fabric envelope supported by an internal air pressure slightly above atmospheric pressure. The pressure is provided by a series of fans.

pneumatic water supply A water supply system for a building in which water is distributed from a tank containing water and compressed air.

pocket **1.** A recess in a wall to receive an end of a beam. **2.** A recess in a wall to receive part or all of an architectural item, such as a curtain or folding door. **3.** The slot on the pulley stile of a double-hung window through which the sash weight is placed in the sash weight channel.

pocket channel A U-shaped opening in a window frame or sash where the glazing is inserted.

pocket chisel A chisel with a wide blade that is sharpened on both sides.

pocket door A door that opens by sliding into and "hiding" in a wall recess.

pocket piece A small piece of wood that closes the *pocket* in the pulley stile of a double-hung window.

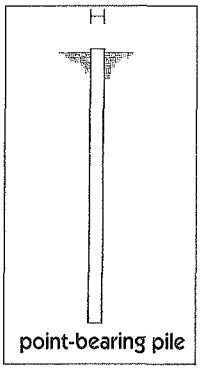
pocket rot A type of decay found in cedar.

pockmarking Undesirable depressions formed in a painted surface or varnish film.

podium **1.** A stand for a speaker. **2.** An elevated platform for a conductor. **3.** The masonry platform on which a classical temple was built.

point **1.** A fee equal to 1% of the principal amount of a loan. Charged by the lender when the loan is made. **2.** A tooth for a saw. **3.** A mason's tool. **4.** A thin, triangular or diamond-shaped piece of metal used in glazing to hold glass in a wooden frame. **5.** A piece of equipment that is monitored or controlled by a building automation system.

point-bearing pile A pile that transfers its load to the supporting stratum by point bearing as opposed to a friction pile. *See* **bearing pile.**



point count Method for determination of the volumetric composition of a solid by observation of the frequency with which areas of each component coincide with a regular system of points in one or more planes intersecting a sample of the solid.

P

point count (modified) The point count method supplemented by a determination of the frequency with which areas of each component of a solid are intersected by regularly spaced lines in one or more planes intersecting a sample of the solid.

pointed ashlar Rectangular stonework with face markings made by a pointed tool.

pointed work The rough finish on the face of a stone that is made by a pointed tool.

pointing **1.** The finishing of joints in a masonry wall. **2.** The material with which joints in masonry are finished.

pointing trowel A diamond-shaped trowel used in pointing or repointing masonry joints.

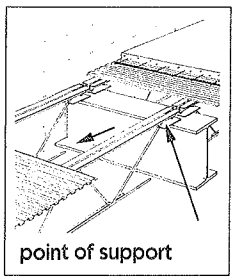
point load A term used in structural analysis to define a concentrated load on a structural member.

point of contraflexure *See* **point of inflection.**

point of inflection (point of contraflexure) **1.** The point on the length of a structural member subjected to flexure where the curvature changes from concave to convex or conversely, and at which the bending moment is zero. **2.** Location of an abrupt bend in a plotted locus of points in a graph.

point of service (point of delivery) The location where a utility company's wires or pipes join a customer's electrical or piping system.

point of support A point on a member where part of its load is transferred to a support.

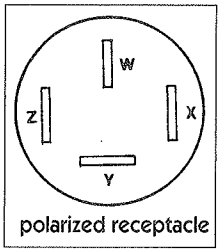

point of support

point source A light source, the dimensions of which are insignificant at viewing distance. A fluorescent lamp is a point source at a large distance. **2.** A pollution source that is discharged at an identifiable point such as a single pipe or smoke stack.

Poisson's ratio The ratio of transverse (lateral) strain to the corresponding axial (longitudinal) strain resulting from uniformly distributed axial stress below the proportional limit of the material.

polarity The direction of electric current flow in a DC circuit.

polarized receptacle An electric receptacle with contacts arranged so a mating plug must be inserted in only one orientation.



polarized receptacle

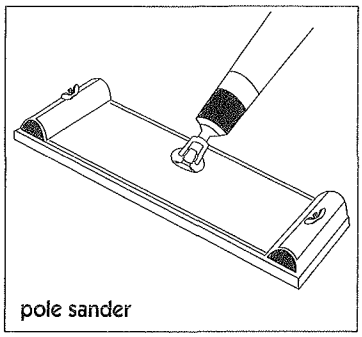
polarizing microscope A microscope equipped with elements permitting observations and determinations to be made using polarized light. *See also* **Nicol prism.**

pole **1.** A long, usually round piece of wood, often a small diameter log with the bark removed, used to carry utility wires or for other purposes. A pole is often treated with preservative. **2.** Either of two oppositely charged terminals, as in an electric cell or battery. **3.** Either extremity of an axis of a sphere.

pole-frame construction A construction system using vertical poles or timbers.

pole plate A horizontal board or timber that rests on the tie beams of a roof and supports the lower ends of the common rafters at the wall, and also raises the rafters above the top plate of the wall.

pole sander A sanding block on the end of a long pole that makes the sanding of drywall ceiling joints easier.


pole sander

pole shore *See* **post shore.**

pole trailer A specially constructed log trailer designed to carry extremely long poles, usually employing a disconnected rear section with independent steering, much like a long-ladder fire truck.

polish **1.** To give a sheen or gloss to a finish coat of plaster. **2.** The operation in which fine abrasives are used to hone a finished surface to a desired smoothness.

polished finish A finish so smooth that it forms a reflective surface, usually produced by mechanical buffing and chemical treatment of a surface with no voids.

polish grind (final grind) The final operation in which fine abrasives are used to hone a surface to its desired smoothness and appearance.

polishing varnish A hard varnish that can be polished by rubbing with abrasive and mineral oil without dissolving the resin.

poll The broad end or striking face of a hammer.

polycarbonate A transparent thermoplastic with a high impact strength and a high modulus of elasticity. Its excellent insulating qualities make it ideal for many electrical applications.

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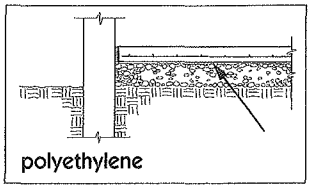
polychlorinated biphenyls (PCBs) A group of hydrocarbon-containing chlorine compounds that, before being banned as pollutants, were used in hundreds of industrial and commercial applications, including electrical and hydraulic equipment, sealants, rubber, paints, and plastics. PCBs are not readily biodegradable, and the United States stopped producing them in 1977.

polychloroprene (neoprene) An oil-resistant, synthetic rubber. In roofing, used for membranes and flashing. The common name for polychloroprene is neoprene.

polychromatic finish **1.** A finish obtained by blending a number of colors. **2.** A finish obtained by using a paint containing metallic flakes on transparent pigments. The resulting effect is the appearance of a variety of colors when viewed from different angles.

polyester resin A synthetic resin that polymerizes during curing and has excellent adhesive properties, high strength, and good chemical resistance.

polyethylene A thermoplastic high-molecular-weight organic compound. In sheet form, polyethylene is used as a protective cover for concrete surfaces during the curing period, a temporary enclosure for construction operations, and as a vapor barrier. It is also commonly used for culvert pipes and in other piping systems.



polyethylene vapor barrier A plastic film used to prevent the passage of vapor or moisture into areas where it could collect and do damage.

polygonal masonry Masonry constructed of stones with multi-sided faces.

polyisobutylene (PIB) A synthetic rubber derived from the polymerization of isobutylene. In roofing, used for membranes and flashing.

polyisocyanurate (polyiso) A polymer with a high R-value commonly used as insulation. It is available as a liquid, sprayed foam or rigid foam boards, usually faced with a foil paper. Increasingly, polyiso board products are also being used for sheathing. Often specified for applications where increased fire resistance is desired.

polymer **1.** The product of polymerization. Some polymers are elastomers, while others are plastics. **2.** A rubber or resin consisting of large molecules formed by polymerization.

polymer-cement concrete A mixture of water, hydraulic cement, aggregate, and a monomer or polymer. The cement is polymerized in place when a monomer is used.

polymer concrete **1.** Concrete in which an organic polymer serves as the binder. Also known as *resin concrete*. *See also* **concrete**. **2.** Sometimes erroneously employed to designate hydraulic cement mortars or concretes in which part or all of the mixing water is replaced by an aqueous dispersion of a thermoplastic copolymer.

polymeric liner A synthetic liner used to contain liquids inside a surface berm or an excavated area.

polymerization The reaction in which two or more molecules of the same substance combine to form a compound containing the same elements, and in the same proportions, but of high molecular weight. The original substance can be generated from the compound, in some cases only with extreme difficulty.

polymethyl-methacrylate (PMMA) A transparent thermoplastic that offers good weather resistance and a high strength-to-weight ratio.

polypropylene A tough plastic with good resistance to heat and chemicals. Polypropylene is a polymer of propylene, and is found in everything from packaging to molded automobile parts.

polystyrene foam A low cost, foamed plastic weighing about 1 lb. per cu. ft., with good insulating properties and resistance to grease.

polystyrene resin Synthetic resins, varying in color from water-white to yellow, formed by the polymerization of styrene on heating, with or without catalysts. These resins may be used in paints for concrete, for making sculptured molds, or as insulation.

polysulfide coating A protective coating system prepared by polymerizing a chlorinated alkyl polyether with an inorganic polysulfide. This coating exhibits outstanding resistance to ozone, sunlight, oxidation, and weathering.

polytetrafluoroethylene (PTFE) A fluorocarbon-based polymer with high chemical and weather resistance, low friction, and electrical and thermal insulation. The most common brand name is Teflon®. PTFE's many construction applications include usage in hydraulic machinery and in plumber's joint tape.

polyurethane Reaction product of an isocyanate with any of a wide variety of other compounds containing an active hydrogen group. Polyurethane is used to formulate tough, abrasion-resistant coatings, and is also used for foam insulation products.

polyurethane finish A synthetic varnish that is exceptionally hard, and wear-resistant.

polyurethane insulation (PUR insulation) Any of a number of insulation products made of polyurethane. Forms include rigid boards, spray foams, and pourable mixes.

P

polyvinyl acetate (PVA) Colorless, permanently thermoplastic resin, usually supplied as an emulsion or water-dispersible powder, which may be used in paints for concrete. Polyvinyl acetate is characterized by flexibility, stability towards light, transparency to ultraviolet rays, high electric strength, toughness, and hardness. The higher the degree of polymerization, the higher the softening temperature.

polyvinyl chloride (PVC) A thermoplastic resin derived from the polymerization of vinyl chloride. Plasticizers have been added to give it flexibility. Widely used in piping products, it is also used for siding, floor covering, window housing, and fencing. In roofing, it is used for membranes and flashing. Also used in the manufacture of nonmetallic waterstops for concrete. PVC materials are to be avoided in green construction because it has been linked to cancer, birth defects, and groundwater contamination.

pommel **1.** A knob at the top of a conical or dome-like roof. **2.** A rounded metal block on an end of a handle, raised and dropped by hand to compact soil.

ponded roof A flat roof designed to hold a limited amount of water as a cooling measure for a building system.

ponderosa pine (western white pine, western yellow pine) *Pinus ponderosa.* A pine species found in a wide range that reaches from British Columbia to Mexico, and from the Pacific coast to the Dakotas. The wood is widely used in general construction, most often as boards, but is more valued for its uses in millwork and in cuttings for remanufacture.

ponding **1.** The process of flooding the surface of a concrete slab by using temporary dams around the perimeter in order to satisfactorily cure the concrete. **2.** The accumulation of water at low points in a roof. The low points may be produced or increased by structural deflection.

pond pine *Pinus serotina.* A minor species of the southern yellow pine group found along the Atlantic coast from southeast Virginia to the Florida panhandle. Lumber from this species carries a *mixed pine species* stamp.

poor pine Another name for spruce pine.

pop (blow, blister) A delaminated area in a plywood panel.

popcorn concrete No-fines concrete containing insufficient cement paste to fill voids among the coarse aggregate so that the particles are bound only at points of contact. *See also* **no-fines concrete**.

poplar A member of the willow family. Its wood is used in furniture core stock, crates, and plywood. In North America: *Populus tretnula*, aspen, *P. balsamifera*, cottonwood, *P. tacamahaca*, and *balsam poplar*.

popout The breaking away of small portions of a concrete surface due to internal pressure, leaving a shallow, typically conical, depression.

popping Shallow depressions ranging in size from pinheads to ¼" in diameter, immediately below the surface of a lime-putty finish coat. Popping is caused by expansion of coarse particles of unhydrated lime or of foreign substances.

pop rivet A fastener installed with a rivet gun to connect metal pieces.

pop valve A safety valve made to open immediately when the fluid pressure is greater than the design force of a spring.

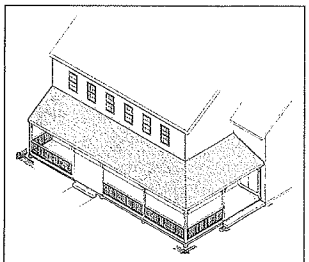
porcelain A hard glazed or unglazed ceramic used for electrical, chemical, mechanical, or thermal components.

porcelain enamel A silicate glass bonded to metal by fusion at a temperature above 800°F (427°C). Porcelain enamel is not a true porcelain.

porcelain tile A dense, usually impervious, fine-grained, smooth-surfaced, ceramic mosaic tile or paver.

porcelain tube A ceramic tube, with a slight shoulder at one end, used to carry an exposed, insulated wire where it passes through a wood joist, stud, etc.

porch A structure attached to a building, usually roofed and open-sided, and often at the entrance. Sometimes screened or glass-enclosed.



porch

porch lattice An open lattice that closes the open side(s) of a porch below floor level.

porcupine boiler A vertical, cylindrical boiler with many projecting, closed stubs to provide an additional thermal surface.

pore water The free water present in soil.

pore water pressure The pressure of the water in a saturated soil.

porosity The ratio, usually expressed as a percentage, of the volume of voids in a material to the total volume of the material, including the voids.

porous fill *See* **pervious soil**.

porous paving Paving surfaces designed to allow storm water infiltration and reduce runoff.

porous woods Hardwoods that have pores or vessels that can be seen with the naked eye.

port In electronics, a point of entry into a network or switch.

portal An entrance, gate, or doorway, sometimes a major feature of a structure.

porte-cochere An open structure with a roof that provides shelter over a driveway.

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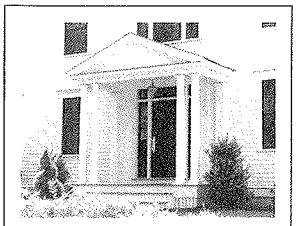
portico **1.** A covered walk consisting of a roof supported on columns. **2.** A colonnaded (continuous row of columns) porch.



portico

Portland blast-furnace slag cement *See* **cement, Portland blast-furnace slag.**

Portland cement *See* **cement, Portland.**

Portland cement concrete *See* **concrete.**

portlandite A mineral, calcium hydroxide, that occurs naturally in Ireland. Portlandite is a common product of hydration of Portland cement.

Portland-pozzolan cement *See* **cement, Portland-pozzolan.**

Portland stone A limestone, from the island of Portland off the coast of England, used as a building stone.

port of entry (POE) A port that provides all customhouse services for imported products.

Port Orford cedar *Chamaicyparis lawsoniana.* A cedar common to the coastal belt of western Oregon and extreme northern California, having limited markets, but its light-colored wood is greatly desired in Japan for exposed use in houses.

position **1.** A trader's open contracts in the futures market. **2.** A reference to a shipping period, as in "Feb/March position."

positioned weld A weld on a joint that has been oriented to facilitate the welding.

position indicator A device that shows the position of an elevator in its hoistway. Also called a *hall position indicator* if at a landing, or a *cab position indicator* if in the cab.

position trading An approach to futures trading in which the trader either buys or sells contracts and holds them for an extended period, as distinguished from a day trader, who will normally initiate and offset his position in a single trading day.

positive cutoff A below-ground wall that extends to an impervious lower stratum to block subsurface seepage.

positive displacement Moving a fluid by capturing and then discharging a fixed amount of fluid. A piston pump is one example of a positive displacement pump.

positive moment A condition of flexure in which, for a horizontal simply supported member, the deflected shape is normally considered to be concave downward and the top fibers subjected to compression stresses. For other members and other conditions, consider positive and negative as relative terms. *See also* **negative moment.** (Note: For structural design and analysis, moments may be designated as positive or negative with satisfactory results as long as the sign convention adopted is used consistently.)

positive float Amount of time available to complete non-critical activities or work items without affecting the total project duration. *

positive pressure Pressure that is greater than atmospheric pressure.

positive reinforcement Reinforcement for positive moment.

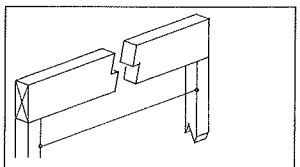
possum-trot plan Plan of a house with two areas separated by a breezeway, and all sections having a common roof.

post **1.** A member used in a vertical position to support a beam or other structural member in a building, or as part of a fence. In lumber, 4 x 4s are often referred to as posts. Most grading rules define a post as having dimensions of 5" x 5" or more in width, with the width not more than 2" greater than the thickness. **2.** Vertical formwork member used as a brace. Also called a *shore*, *prop*, and *jack*. **3.** A secondary column located at the end of a building to support its girts.

post and beam construction *See* **post and lintel construction.**

post and beam framing A structural framing system in which beams rest on posts rather than bearing walls.

post and lintel construction Construction that uses posts or columns and a horizontal beam to span an opening, as opposed to construction using arches or vaults.



post and lintel construction

post and pane A type of construction in which timber framings are filled in with brick or plaster panels, leaving the timbers exposed.

postbuckling strength The load that can be carried by a structural member after it has been subjected to buckling.

post-completion services *See* **post-construction services.**

post-construction services **1.** Services rendered after the release of the final invoice for payment or over 60 days from the date of substantial completion of the project. **2.** Any services necessary to allow the owner to use and/or occupy the facility.

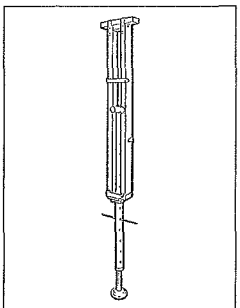
post-consumer recycled content Material that has been used by consumers, such as used newspaper, and has been diverted or separated from waste management systems for recycling.

postern **1.** Any small, often inconspicuous, door. **2.** A smaller door, for pedestrian passage, located next to a large door that is used by vehicles.

P

post pole *See* **post shore.**

post shore, adjustable timber single-post Individual timber used with a fabricated clamp to obtain adjustment and not normally manufactured as a complete unit.



post shore, adjustable timber single-post

post shore, fabricated single-post Type 1: Single all-metal post, with a fine-adjustment screw or device in combination with pin-and-hole adjustment or clamp. Type 2: Single or double wooden post members adjustable by a metal clamp or screw and usually manufactured as a complete unit.

post shore, timber single-post shore Timber used as a structural member for shoring support.

posttensioned concrete Concrete that has the reinforcing tendons tensioned after the concrete has set.

posttensioning A method of prestressing reinforced concrete in which tendons are tensioned after the concrete has hardened.

potable water Water that satisfies the standards of the responsible health authorities as drinking water.

potato masher A simple hand tool used to mix joint compound. The tool has a wire mixer similar to that of the kitchen implement of the same name.

potentially responsible party (PRP) A party who may have financial liability for the cleanup of a hazardous waste site.

potentiometer An instrument for controlling electrical potential. Measures an unknown voltage by comparing it to a standard voltage.

pot floor A floor surface of structural clay tiles.

pot life Time interval, after preparation, during which a liquid or plastic mixture is usable.

pound-calorie The amount of heat required to raise one pound of water 1°C.

pour coat (top mop) The top coating of asphalt on a built-up roof, sometimes including embedded gravel or slag.

pouring box A device designed to contain spills that may occur when transferring liquids from one container to another.

pouring of concrete *See* **placement and placing.**

pouring rope *See* **asbestos joint runner.**

pour point The lowest temperature at which a lubricant flows under specified conditions.

pour strip In concrete formwork, a narrow guide placed inside the form to direct the concrete.

powder factor The amount of explosive required to dislodge and fragment one cubic yard of rock.

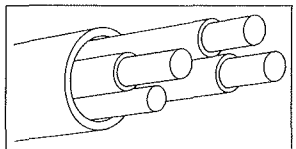
powder molding A method of manufacturing objects by using powdered raw materials in a mold.

powder post A condition in which wood has decayed to powder or been eaten by borers that leave holes full of powder.

power The rate of performing work or the rate of transforming, transferring, or consuming energy. Power is usually measured in watts, Btu/hour, or horsepower.

power buggy A wheelbarrow-sized machine powered by a gasoline engine or an electric motor.

power cable A usually heavy cable, consisting of one or more conductors with insulation and jackets, for conducting electric power.



power cable

power consumption The rate at which power is consumed by a device or unit (such as a building), usually expressed in kilowatt-hours, Btu/hour, or horsepower-hours.

power drill An electric-powered, hand-held drill, activated by pressing a trigger-like switch.

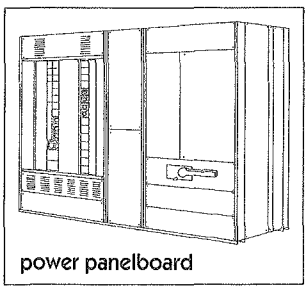
power drops Electrical power outlets to serve specific pieces of equipment.

power factor A calculation, expressed as a percentage, that relates the volt amperes of an AC circuit, or the apparent power, to the wattage, or the true power. In essence, it provides a measurement of how effectively electrical power is being used. A higher power factor means a more effective use of electrical power.

power float *See* **rotary float.**

power of attorney An authorization to act as an agent for another party. *See also* **attorney-in-fact.**

power panelboard A panelboard used for circuits supplying motors and other heavy power-consuming devices, as opposed to a panelboard used for lighting circuits.



power panelboard

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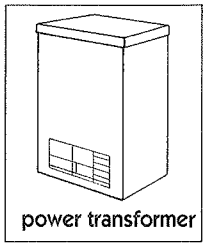
power sander An electric-powered hand tool used for smoothing and/or polishing.

power shovel A self-propelled, power-operated machine used to excavate and/or load soils or debris.

Powers spacing factor *See* **spacing factor.**

power take-off On construction equipment, an attachment enabling the power from the prime mover to be used to drive an auxilliary machine or tool.

power transformer A device in an alternating-current electrical system that transfers electric energy between circuits, usually changing the voltage in the process.


power transformer

power trowel *See* **mechanical trowel.**

power vent A vent with a fan that boosts the flow of air.

power wrench *See* **impact wrench.**

pozzolan A siliceous, or siliceous and aluminous, material which, in itself, possesses little or no cementitious value but will, in finely divided form and in the presence of moisture, chemically react with calcium hydroxide at ordinary temperatures to form compounds possessing cementitious properties.

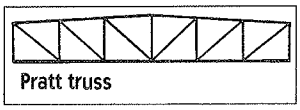
pozzolan cement A natural cement, used in ancient times, made by grinding pozzolan with lime.

pozzolanic Of or pertaining to pozzolan.

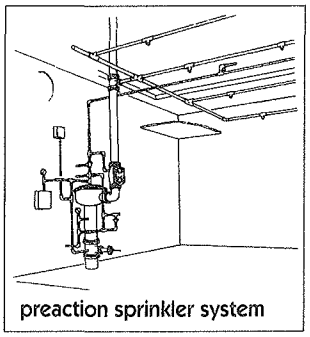
pozzolanic reaction *See* **pozzolan.**

practical coverage The actual coverage of a paint or other coating based on the intended dry film thickness and with an allocation (usually 15%) for material loss.

Pratt truss A type of truss with parallel chords, all vertical members in compression, and all diagonal members in tension. The diagonals slant toward the center.


Pratt truss

preaction sprinkler system A dry pipe sprinkler system in which water is supplied to the piping when a smoke or heat detector is activated.


preaction sprinkler system

preassembled lock A factory-assembled lock requiring little or no alterations on installation.

preboring **1.** Drilling a pilot hole. **2.** Boring a hole, for a bearing pile, through a hard stratum that would damage the pile if driven.

precast **1.** A concrete member that is cast and cured in other than its final position. **2.** The process of placing and finishing precast concrete.

precast concrete Concrete structural components, such as piles, wall panels, beams, etc., fabricated at a location other than in-place.

precipitator *See* **electrostatic precipitator.**

precise level An instrument similar to an ordinary surveyor's level but capable of finer readings and including a prism arrangement that permits simultaneous observation of the rod and the leveling bubble.

precise leveling rod A leveling rod with fine graduations on an insert of metal under constant tension, with a low thermal expansion coefficient.

precoating *See* **tinning.**

precompressed zone The area of a flexural member that is compressed by the prestressing tendons.

precon Contraction for preconstruction meeting.

preconsolidation pressure The greatest effective pressure a soil has experienced.

precooling coil In an HVAC system, a cooling coil located at the air-entering side of the primary cooling coil.

precure The process of curing a glued joint prior to pressing or clamping.

precured period *See* **presteaming period.**

precuring In plywood manufacturing, the premature curing of an adhesive due to press temperatures being too high, a too rapid resin-curing speed, or a malfunctioning press. Precuring can result in plywood delamination or a poor quality surface in particleboard.

precut A lumber item, usually a stud, that is cut to a precise length at the time of manufacture, so that it may be used in construction without further trimming at the job site.

precycling Proactive approach of selecting products and materials according to their potential for lessening the amount of material that goes into the waste stream and for future recycling. Precycling includes buying in bulk, avoiding one-time use products, and choosing products that are biodegradable and have the least amount of throw-away packaging, for example.

P

predesign services Services provided by the design professional which precede customary services. Predesign services include assistance of the owner in establishing the program, schedule, budget, and project limitations. *See also* **programming phase.**

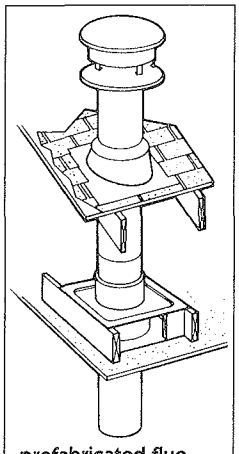
pre-draining Removal of excess water from a soil mass prior to excavation.

predrilled Materials, such as roof decking, that have been drilled at the mill to accommodate bolts or other hardware.

prefabricate To fabricate units or components at a mill or plant for assembly at another location.

prefabricated construction A construction method that uses standard prefabricated units that are assembled at a site along with site fabrication of some minor parts.

prefabricated flue A vent for fuel-fired equipment that is assembled from factory-made parts.



prefabricated flue

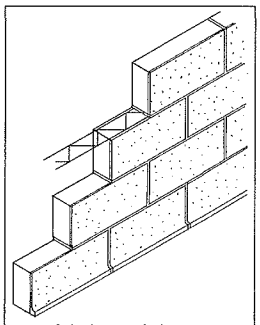
prefabricated joint filler A compressible material used to fill control, expansion, and contraction joints and may also be used alone, or as a backing for a joint sealant.

prefabricated masonry panel A wall panel of masonry units constructed at an assembly site and moved to a job site for erection.

prefabricated modular units Units of construction that are preassembled at the factory and shipped as a complete unit to the job site. They usually can be installed with a minimum of adjustments.

prefabricated pipe conduit system Prefabricated units consisting of piping for one or more utilities, ready to be installed either above or below ground.

prefabricated tie A manufactured assembly consisting of two heavy parallel wires tied together by welded wires. The tie is laid in masonry joints to tie two wythes together.



prefabricated tie

prefabricated wall *See* **demountable partition.**

preferred angle **1.** Any angle of inclination of a stair between a 30° pitch and a 35° pitch. **2.** Any angle or pitch of a ramp 15° or less.

prefilled A particleboard panel whose surface has been made smooth by the application of a solvent-based filler before being shipped. Such panels have decorative overlays or laminates applied to them.

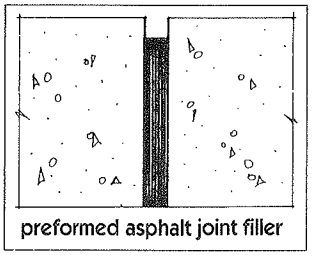
prefilter A filter placed before the main filter(s). A prefilter is coarser and is used to remove larger particles.

prefinished Products with a finish coating of paint, stain, vinyl, or other material applied before they are taken to the job site.

prefinished door A standard-sized door with both faces factory-finished and cuts and recesses provided for hardware.

prefiring Raising the temperature of refractory concrete under controlled conditions prior to placing it in service.

preformed asphalt joint filler Premolded strips of asphalt, vegetable or mineral filler, and fibers for use as a joint filler.



preformed asphalt joint filler

preformed foam Foam produced before it is mixed with other ingredients to make cellular foam.

preformed joint sealant *See* **preformed sealant.**

preformed sealant A factory-shaped sealant that requires little field fabrication prior to installation.

preframed A construction term for wall, floor, or roof components assembled at a factory.

preheat coil A coil, in an air-conditioning system, used to preheat air which is below 32°F (0°C).

preheater **1.** A heat exchanger used to heat air that is to be used in the combustion chamber of a large boiler or furnace. **2.** *See* **preheat coil.** **3.** A heat exchanger used to heat a fluid flowing into a process or location. An example would be to preheat outdoor air entering a heated space using the exhaust air.

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preheat fluorescent lamp A fluorescent lamp, the electrodes of which must be preheated before the arc can be started. The preheating can be manual or automatic.

prehung door A packaged unit consisting of a finished door on a frame with all necessary hardware and trim.

preliminary drawings Drawings prepared in the early phase of building design. *See also* **schematic design phase** *and* **design development phase.**

preliminary estimate A rough estimate made in an early stage of the design work, prior to receipt of firm bids. *See also* **statement of probable construction cost.**

preliminary site assessment The first phase in an environmental remediation operation, in which it is determined whether there is a reasonable probability that a hazardous waste exists at a site.

premature stiffening *See* **false set** *and* **flash set.**

premises premium **1.** In commodity futures trading, a sum above the value of the item in the cash market. **2.** A product of better quality than another product.

premises wiring Strictly speaking, the external and internal wiring that runs from the service point of utility conductors into a structure and to its outlets. Also includes all associated hardware and fittings.

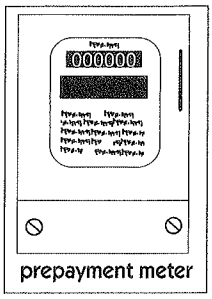
premium grade A general term describing the quality of one item as superior to another.

premolded asphalt panel A panel with a core of asphalt, minerals, and fibers, covered on each side with asphalt-impregnated felt or fabric and pressure-bonded. The outside is then coated with hot asphalt.

prepacked concrete *See* **concrete, preplaced-aggregate.**

prepared roofing *See* **asphalt prepared roofing.**

prepayment meter A coin-operated water or gas meter that passes a fixed amount of fluid for each coin.


prepayment meter

preplaced-aggregate concrete *See* **concrete, preplaced aggregate** *and* **colloidal concrete.**

prepostensioning A method of fabricating prestressed concrete in which some of the tendons are pretensioned and a portion of the tendons are posttensioned.

prepreg In reinforced plastic, the reinforcing with applied resin before molding.

prequalification of bidders The investigation and subsequent approval of prospective bidders' qualifications, experience, availability, and capability regarding a project.

present value The value of a benefit or cost found by discounting future cash flows to the base time. Also, the system of comparing proposed investments, which involves discounting at a known interest rate (representing a cost of capital or a minimum acceptable rate of return) in order to choose the alternative having the highest present value per unit of investment. *

present value method A means of evaluating capital expenditures by converting projections of cash inflows and outflows over time to their present value, using an estimated discounting rate.

preservationist A term applied to one who objects to the use of natural resources because of a belief that such use will destroy basic values of the resource. The term is often used to refer to a member of various groups opposed to the expansion of industrial/commercial uses of public lands.

preservative Any substance applied to wood that helps it resist decay, rotting, or harmful insects.

preset period *See* **presteaming period.**

pre-shrimmed tape sealant A pre-formed sealant that resists deformation when compressed.

preshrunk concrete **1.** Concrete that has been mixed for a short period in a stationary mixer before being transferred to a transit mixer. **2.** Grout, mortar, or concrete that has been mixed one to three hours before placing to reduce shrinkage during hardening.

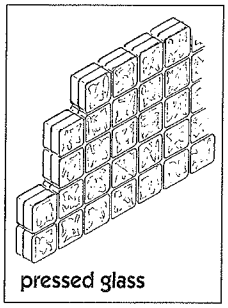
press brake A machine used to bend and shape cold-form metal sheets and strips.

pressed brick Brick that is molded under mechanical pressure. The resulting product is sharp-edged and smooth, and is used for exposed surfaces.

pressed earthen block Blocks of earthen material made by compressing a mixture of soil and aggregate without the use of chemical additives. Application and usage is similar to that of adobe.

pressed edge Edge of a footing along which the greatest soil pressure occurs under conditions of overturning.

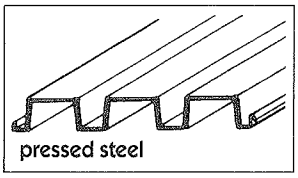
pressed glass Glass units, such as pavement units or glass block, that are pressed into shape.


pressed glass

P

pressed reflector lamp *See* **parabolic aluminized reflector lamp.**

pressed steel Die-stamped building components.


pressed steel

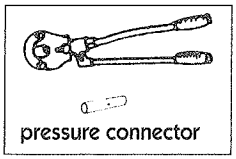
pressed wood A panel wood product manufactured by compressing wood fibers and adhesive under heat. Common examples include particleboard, hardwood plywood paneling and medium density fiberboard.

pressure **1.** The force per unit area exerted by a liquid or gas on the walls of a container. **2.** The force per unit area transferred between surfaces.

pressure bulb The zone in a loaded soil mass that is bounded by a selected stress isobar.

pressure cell An instrument used to measure the pressure within a soil mass or the pressure of the soil against a rigid wall.

pressure connector A mechanical device which forms a conductive connection between two or more electric conductors, or between one or more conductors and a terminal, without the use of solder.


pressure connector

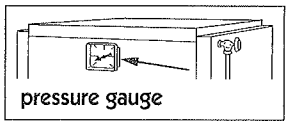
pressure creosoting The process of forcing creosote, by use of pressure chambers, into timber.

pressure differential valve A valve controlled by the pressure difference in the supply and return main to divert flow from the supply main to the return main.

pressure drop **1.** The drop in pressure between two ends of a pipe or duct, between two points in a system, or across valves, fittings, etc., caused by friction losses. **2.** In a water system, the drop caused by a difference in elevation.

pressure forming A thermoforming process for plastics in which pressure forces a sheet against a mold, as opposed to vacuum forming.

pressure gauge An instrument for measuring fluid pressure.


pressure gauge

pressure gluing A method used to glue wood that places the members under high pressure until the glue sets.

pressure gun *See* **caulking gun.**

pressure-injected footing A cast-in-situ concrete pile that features a steel cylindrical shaft with an enlarged base that is driven into the ground. It can be used in nearly all soil conditions and can safely withstand very high compressive and tensile forces and substantial horizontal loads.

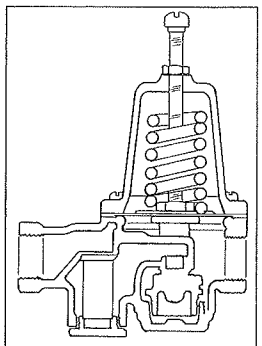
pressure line Locus of force points within a structure, resulting from combined prestressing force and externally applied load.

pressure-locked grating Metal grating in which cross bars and bearing bars are locked together at their intersections by deforming or swaging the metal.

pressure preserved Wood that has been treated with a preservative under pressure in a closed container.

pressure process The process of treating under pressure in a closed container. Pressure is usually preceded or followed by a vacuum.

pressure-reducing valve A valve which maintains a uniform fluid pressure on its outlet side as long as pressure on the inlet side is at or above a design pressure.


pressure-reducing valve

pressure regulating valve A valve that automatically reduces water pressure to maintain a predetermined design pressure.

pressure-relief damper A damper which will open when pressure on the inside exceeds a design pressure.

pressure-relief device A device or valve that is designed to open or rupture when pressure on a designated side exceeds a design value.

pressure-relief hatch A roof hatch designed to open or blow off under pressure from an explosion in a building. Some smoke and heat vents are also designed as pressure-relief hatches.

pressure-relieving joint A horizontal expansion joint in panel wall masonry, usually below supporting hangers at each floor. These joints prevent the weight of higher panels from being transmitted to the masonry below.

pressure reset system A control system for boilers and furnaces that allows wide fluctuations in pressure. As a result, the burners can be shut off for longer periods and stay on for longer amounts of time, with fewer cycles. Avoiding short cycles increases the net system efficiency.

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pressure-sensitive Capable of adhering to a surface when pressed against it.

pressure-sensitive adhesive An adhesive material that remains tacky after the solvents evaporate and will adhere to most solid surfaces with the application of light pressure.

pressure treating A process of treating lumber or other products with various chemicals, such as preservatives and fire retardants, by forcing the chemicals into the structure of the wood using high pressure.

pressure weather stripping Weather stripping designed to provide a seal by means of spring tension.

pressure wire connector Any device that maintains a mechanical connection between electrical conductors through the use of pressure.

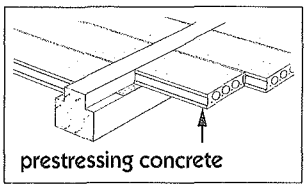
presteaming period In the manufacture of concrete products, the time between molding of a concrete product and start of the temperature-rise period.

prestressed concrete wire Steel wire with a very high tensile strength, used in prestressed concrete. The wire is initially stressed close to its tensile strength. Then some of this load is transferred to the concrete, by chemical bond or mechanical anchors, to compress the concrete.

prestressing Applying a load to a structural element to increase its effectiveness in resisting working loads. Prestressed concrete is a common example.

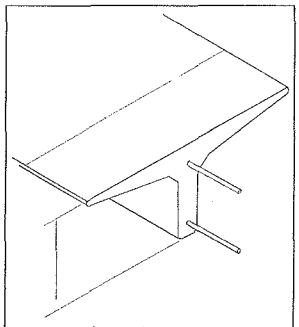
prestressing cable A cable or tendon made of prestressing wires.

prestressing concrete Concrete in which internal stresses of such magnitude and distribution are introduced that the tensile stresses resulting from the service loads are counteracted to a desired degree. In reinforced concrete, the prestress is commonly introduced by tensioning the tendons.


prestressing concrete

prestressing steel High-strength steel used to prestress concrete, commonly seven-wire strands, single wires, bars, rods, or groups of wires or strands. *See also* **prestressed concrete, pretensioning,** *and* **posttensioning.**

pretensioned concrete Concrete which has its reinforcing tendons stressed before the concrete is placed. Tension on the tendons is then released to provide load transfer where concrete has achieved strength.


pretensioned concrete

pretensioning A method of prestressing reinforced concrete in which the tendons are tensioned before the concrete has hardened.

pretensioning bed (or bench) The casting bed on which pretensioned members are manufactured and which resists the pretensioning force prior to release.

prevailing wage Wage set by Federal and State governments for construction work based upon wages paid for similar work in the same local area.

prevalent levels Air contamination levels measured under normal conditions.

preventive maintenance (PM) Periodic, scheduled work on selected equipment and building components, usually consisting of required inspection, cleaning, lubrication, and minor adjustment to help prevent systems failure.

price The amount of money asked or given for a product (e.g., exchange value). The chief function of price is rationing the existing supply among prospective buyers. *

price index A number which relates the price of an item at a specific time to the corresponding price at some specified time in the past. *

price out **1.** The activity of applying dollar values to the items in a takeoff. **2.** The final estimate sheet showing all dollar values.

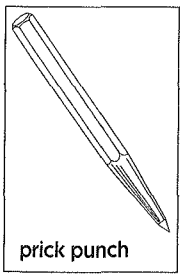
pricing In estimating practice, after costing an item, activity, or project, the determination of the amount of money asked in exchange for the item, activity, or project. Pricing determination considers business and other interests (e.g., profit, marketing, etc.) in addition to inherent costs. The price may be greater or less than the cost depending on the business or other objectives. In the cost estimating process, pricing follows costing and precedes budgeting. *

pricking up Scoring the first coat of plaster on lath.

pricking-up coat The first, or base, coat of plaster on lath.

prick post An intermediate post in a truss. Theoretically, no loads are placed on it.

prick punch A pointed steel hand punch used to mark metal.


prick punch

P

prills Bulk, porable dry explosive consisting of pea-sized granules.

primacord A detonating fuse for high explosives, consisting of an explosive core in a strong, waterproof covering. Also called detonating cord.

primacy of delay The concept of identifying which party is responsible in situations of concurrent delay.

primary air Air which is fed to a burner to be mixed with gas.

primary battery A battery of two or more primary cells.

primary blasting The blasting operation in which a natural rock formation is dislodged from its original location.

primary branch **1.** A drain between the base of a soil or waste stack and a building drain. **2.** The largest single branch of a water supply line or an air supply duct in a building.

primary cell A cell that generates electric current by electrochemical action. In the process, one of the electrodes is consumed and the process cannot be effectively reversed. The cell cannot be recharged from an external source of electric power.

primary consolidation Soil compaction in saturated fine grain soils caused by the application of sustained loads, principally due to the squeezing out of water in the voids of the affected soil.

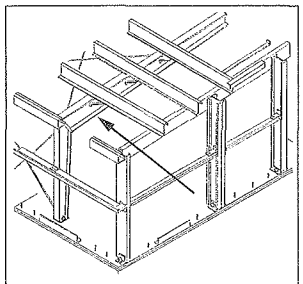
primary crusher A heavy crusher suitable for the first stage in a process of size reduction of rock, slag, or the like.

primary distribution feeder A feeder which operates at primary voltage supplying a distribution circuit.

primary excavation Excavating undisturbed soil.

primary light source **1.** A source of light in which the light is produced by a transformation of energy. **2.** The most obvious source of light when several sources are present.

primary member One of the main load-carrying members of a structural system, generally columns or posts. *See also* **secondary member.**



primary member

primary nuclear vessel Interior container in a nuclear reactor designed for sustained loads and for working conditions.

primary subcontractors Subcontractors who may perform major portions of the work in a construction project, such as installation of plumbing, mechanical, or electrical systems. They may have a contract directly with the owner.

prime **1.** A grade of finish lumber ranking below superior, the highest grade, and above E, the lowest grade of finish. Finish graded prime must present a fine appearance and is designed for application where finishing requirements are less exacting. **2.** To supply water to a pump to enable it to start pumping. **3.** In blasting, to place the detonator in a cartridge or charge of explosive. **4.** The primary architect or contractor on a job that features several. **5.** To seal a porous surface to prevent or reduce staining, shrinkage, and drying out.

prime bid A bid presented directly to the owner or his agent, rather than a subcontractor's bid to a general contractor.

prime coat **1.** An application of low-viscosity liquid asphalt to an absorbent surface. **2.** The first or preparatory coat in a paint system.

prime contract An agreement formed between the owner and the contractor for a major portion of the work on a construction contract.

prime contractor Any contractor on a project having a contract directly with the owner.

prime mover The parts or pieces of construction equipment that make it possible for the equipment to do its work, such as tracks on a dozer or cables on a crane. In the case of towed equipment, such as a scraper, the whole tractor becomes a prime mover.

prime professional A firm or individual performing contractually agreed upon professional services for an owner.

prime professional service The chief among multiple professional entities (each under separate contracts with the prime professional) responsible for providing services to an owner.

primer A base, preparatory paint that is applied to an uncoated surface to improve the adhesion and durability of the finish coat. Primer can be latex or alkyd (oil-based) paint.

prime rate The rate of interest charged by a lender to its most creditworthy borrowers.

primer/sealer A paint product manufactured to both prime a material for future paint application while sealing it from moisture.

priming **1.** The application of a prime coat. **2.** Filling a pump or siphon with fluid to enable flow. **3.** The first or annual filling of a canal or reservoir with water.

Prince Albert fir Another name for west coast hemlock.

princess pine Another name for jackpine.

princess post Subsidiary verticals, between queen posts or the king post, and walls, used to stiffen a roof truss.

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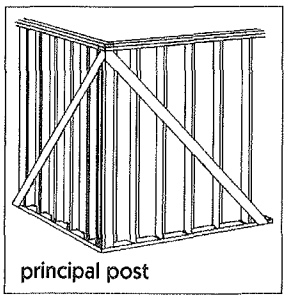
principal **1.** The principal authority or person responsible for a business such as architecture, engineering, or construction. **2.** The capital amount of a loan or other obligation as distinguished from the interest. **3.** In professional practice, any person legally responsible for the activities of that practice. **4.** The person or entity under whose debt or obligation is the subject or a performance or payment bond issued by a surety.

principal beam The main beam in a structural frame.

principal-in-charge The professional individual within a design firm ultimately responsible for monitoring services in connection with a given project.

principal planes *See* **principal stress.**

principal post A corner post in a framed building or a door post in a framed partition.



principal post

principal stress Maximum and minimum normal stresses at a point in a stressed body.

print *See* **blueprint.**

prism A surveying device used as a reference target when using electronic equipment to measure distance.

prismatic beam A beam with a uniform cross section. Both of its flanges run parallel along its longitudinal axis.

prismatic glass Glass with parallel prisms rolled into one face. The prisms refract light rays and change their direction.

prismatic rustication Rusticated masonry with a diamond-shaped projection worked into the face of each stone.

prism glass *See* **prismatic glass.**

private branch exchange (PBX) A telephone system, located on a customer's premises, that is owned and operated by the customer rather than a telephone company. A PBX system switches internal calls between the customer's users on local lines while also making external lines available. Using a PBX can save a customer money because it eliminates the need for direct lines from each user to the telephone company.

private sewer A sewer that is not in the public sewer system and subject only to the provisions of the local code.

private stairway A stairway intended to serve only one tenant.

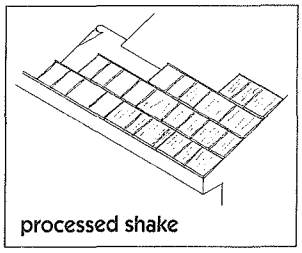
privity of contract This occurs when a party has a direct contractual relationship with another party.

privy An outhouse serving as a toilet.

probabilistic design Method of design of structures using the principles of statistics (probability) as a basis for evaluation of structural safety.

probable construction cost *See* **statement of probable construction cost.**

processed shake A sawn cedar shingle which is textured on one surface to resemble a split shingle.



processed shake

Proctor compaction test A test to determine the moisture content of a soil at which maximum compaction can be obtained. The test establishes the density-moisture relationship in a soil.

Proctor curve Plot of the dry density of soil resulting from standard lab compactive effort versus moisture content.

Proctor penetration needle An instrument that measures the resistance of a fine-grained soil to penetration by a standard needle at a standard rate.

procure To obtain or receive, such as a construction or material contract.

producer Provider of building materials or equipment such as processor, manufacturer, or equipment rental/sales firm.

product data Information furnished by the manufacturer to illustrate a material, product, or system for some portion of the work which includes illustrations, standard schedules, performance charts, instructions, brochures, diagrams, warranties.

production Total quantity of work performed.

production costs Parts of the actual, physical project, including materials, labor, tools, equipment, and subcontractor costs for each task or activity incorporated in the final structure.

production schedule A short-interval schedule used to plan and coordinate a group of activities. *

productivity Work performed per unit of time, or time to perform unit of work, such as square feet per hour.

P

products liability insurance Insurance for liability imposed for damages caused by an occurrence arising out of goods or products manufactured, sold, handled, or distributed by the insured or others trading under the insured's name. Occurrence must occur after product has been relinquished to others and away from premises of the insured. *See also* **completed operations insurance.**

product standard A published standard that establishes: **1.** dimensional requirements for standard sizes and types of various products; **2.** technical requirements for the product; and **3.** methods of testing, grading, and marking the product. The objective of product standards is to define requirements for specific products in accordance with the principal demands of the trade. Product standards are published by the National Bureau of Standards of the U.S. Department of Commerce, as well as by private organizations of manufacturers, distributors, and users.

professional advisor A design professional employed by the owner to conduct a design competition for the selection of project designer.

professional corporation A corporation created expressly for the purpose of providing professional practice and related services which may have special requirements under the law, as opposed to requirements for corporations in general.

professional engineer A professionally qualified and duly licensed individual that performs engineering services such as structural, mechanical, electrical, sanitary, and civil engineering.

professional fee *See* **fee.**

professional liability insurance Insurance coverage protecting against legal liability for damage claims sustained by others. Damage claims allege negligent acts, errors, or omissions in the performance of professional services. *See also* **negligence.**

professional practice The conduct and work of a design professional in which services are rendered within the framework of recognized professional ethics, standards, and applicable legal requirements. *See also* **environmental design.**

profile **1.** A drawing showing a vertical section of ground, usually taken along the center line of a highway or other construction project. **2.** A template used for shaping plaster. **3.** A guide used in masonry work. **4.** A British term for batter board.

profit **1.** Earnings from an on-going business after direct and project indirect costs of goods sold have been deducted from sales revenue for a given period (gross profit). **2.** Earnings or income after subtracting miscellaneous income and expenses (patent royalties, interest, capital gains) and federal income tax from operating profit (net profit). **3.** Earnings or income after all expenses (selling, administrative, depreciation) have been deducted from gross profit (operating profit). *

profit margin Ratio of profit to either total cost or total revenue. Usage often varies depending on the type of company. Retail companies generally use the profit to revenue ratio. Wholesale companies and contractors generally use the profit to cost ratio. *

profit sharing Provisions in special agreements or contracts for construction where the contractor, as an incentive to save money for the owner, is paid, in addition to the final contract sum, some percentage of any net savings he may achieve if he is able to deliver the finished project to the owner's satisfaction at a total cost below a specified limiting amount.

proforma A project specific projection of future income and expenses used to evaluate the project's investment worthiness.

pro forma invoice An invoice sent before the order has been shipped in order to obtain payment before shipment.

program A written statement presenting design objectives, constraints, and project criteria, including space requirements and relationships, flexibility and expandability, special equipment, and systems and site requirements.

program manager An official in the program division who has been assigned responsibility for accomplishing a specific set of program objectives. This involves planning, directing and controlling one or more projects of a new or continuing nature, initiation of any acquisition processes necessary to get project work under way, monitoring of contractor performance and the like.

programming phase The design stage in which the owner develops and provides full information regarding requirements for the project, including a program. *See also* **predesign services.**

progress chart **1.** A chart that shows various operations in a construction project, such as excavating and foundations, along with planned starting and finish dates in the form of horizontal bars. Progress is indicated by filling in the bars. **2.** A similar chart for the design phase of a project. The bars usually identify specific drawings.

progressive kiln A dry kiln in which green lumber enters one end and is dried progressively as it moves to the other end where it is removed.

progressive scaling The progressive disintegration of materials, such as concrete, which first appears as surface scaling but continues in deeper layers.

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progress payment A scheduled partial payment made during the work process to cover costs of work completed or materials delivered to date.

progress schedule A pictorial or written schedule (including a graph or diagram) that shows proposed and actual start and completion dates of the various work elements. *See also* **critical path method (CPM)** *and* **PERT schedule.**

project The total construction activities, usually on one site. The work performed under the contract documents may be the whole or a part of the project.

project application for payment Certified requests for payment from project contractors, requiring certification by the designer before submittal to the owner. *See also* **application for payment.**

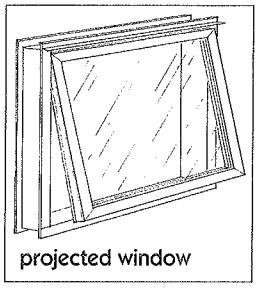
project architect The party designated by the principal-in- charge to manage a given project for a firm. *See also* **project manager.**

project certificate for payment A statement to the owner confirming the amounts due individual contractors. Issued by the design professional where multiple contractors have separate necessary agreements with the owner. *See also* **certificate for payment.**

project cost The total project cost, which includes the cost of construction, professional compensation, land, furnishings and equipment, financing, and other charges.

project designer **1.** (designer's office) The person assigned by the principal-in-charge to be responsible for guiding the overall direction of a project's design. **2.** (consultant's office) The individual responsible for the design of a specific portion of a project, including mechanical, structural, electrical, civil, sanitary, acoustical, etc. *See also* **project engineer.**

projected window A window with one or more sashes that swing either inward or outward.


projected window

project engineer The engineer in the architect's or consultant's office, who is responsible for the design and management of the engineering portions of a project.

project evaluation and review technique (PERT) schedule A schedule that charts the activities and events anticipated in a work process. *See also* **critical path method (CPM).**

project float The time that exists between the early finish of the last activity of a CPM network and the contractual completion date of the project. Project float can be internalized into the network and become network float. *

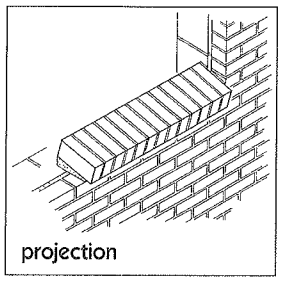
projecting belt course A course of masonry which projects beyond the face of the wall to form a decorative shelf.

projecting brick One of a number of bricks that project from a wall to form a pattern.

projecting scaffold A work platform which is cantilevered from the face of a building by means of brackets.

projecting sign A sign attached to the face of a building and extending outward.

projection Any component member or part which extends out from a building for a relatively short distance.


projection

projection booth A booth, usually at the rear of a room or hall, used for the operation of still or moving projectors or spotlights.

project management **1.** The utilization of skills and knowledge in coordinating the organizing, planning, scheduling, directing, controlling, monitoring and evaluating of prescribed activities to ensure that the stated objectives of a project, manufactured product, or service, are achieved. **2.** The art and science of managing a project from inception to closure as evidenced by successful product delivery and transfer. *

project manager The individual designated by the principal-in-charge to manage a given project. Normally includes administrative and technical responsibilities.

project manual A bound booklet that contains the contract documents, with the exception of the drawings, specifically organized into bid requirements, contract information, general conditions for constructions and technical specifications.

projector **1.** A lighting unit which concentrates light within a limited solid angle by means of lenses or mirrors. **2.** A line dropped perpendicularly from a point to a plane surface.

P

project record documents The documents, certificates, and other information relating to the work, materials, products, assemblies, and equipment that the contractor is required to accumulate during construction and convey to the owner for use prior to final payment and project closeout.

project representative The architect's representative at the project site who assists in the administration of the construction contract.

project site *See* **site.**

project team A collection of professional entities directed and otherwise coordinated to perform work or services for a project.

project web site An Internet site created for those involved in a specific construction project with the goal of increasing efficiency by improving access to information. Such sites can make a variety of information available—from a file of project team members and their e-mail addresses, to the project manual, field reports, meeting notes, and the shop drawing log.

promenade tile *See* **quarry tile.**

promissory estoppel An equitable doctrine that prevents subcontractors from withdrawing their bids prior to acceptance by the prime contractor, making a subcontractor's quote binding if it meets specific criteria.

promissory note A legal instrument, agreement or contract made between a lender and a borrower by which the lender conveys to the borrower a sum or other consideration known as principal for which the borrower promises repayment of the principal plus interest under conditions set forth in the agreement.

promoter *See* **catalyst.**

proof stress **1.** Stress applied to materials sufficient to produce a specified permanent strain. **2.** A specific stress to which some types of tendons are subjected in the manufacturing process as a means of reducing the deformation of anchorage, reducing the creep of steel, or ensuring that the tendon is sufficiently strong.

prop *See* **post and shore.**

propeller twist Twisted grain in a red cedar shake that prevents it from lying flat and causes it to take the shape roughly resembling an airplane propeller.

property damage insurance Insurance covering legal liability for claims for injury to or destruction of tangible property (including loss of use). *See also* **care, custody,** *and* **control.**

property insurance Insurance that compensates the insured for loss of property (real or personal) resulting from direct physical damage. Damages include fire, lightning, extended coverage perils, vandalism, and malicious mischief, among other damages. *See also* **builder's risk insurance, extended coverage insurance, measurable value,** *and* **special hazards insurance.**

property line A recorded boundary of a plot.

property survey A professional examination of documents and land to determine specific boundaries.

proportional control In an HVAC system, the controlled device (valve or damper) is positioned proportionally in response to slight changes in the controlled variable (temperature, pressure).

proportional dividers An instrument for enlarging or reducing lengths of lines that consists of two pivoted bars pointed at each end. The pivot is movable to adjust the relative lengths between the two pairs of points.

proportional limit The greatest stress which a material is capable of developing without any deviation from proportionality of stress to strain (Hooke's Law).

proportioning Selection of proportions of ingredients for mortar or concrete to make the most economical use of available materials to produce mortar or concrete of the required properties.

proposal (contractor's) *See* **bid.**

proposal form *See* **bid form.**

proprietary The naming of a product manufacturer as in a proprietary specification.

proprietary specification A specification that describes a product, material, assembly, or piece of equipment by trade name and/or by naming the manufacturer or manufacturers who may produce products acceptable to the owner or design professional.

prorate Distribute proportionately; divide by ratio.

proscription The acquisition of title to real property by one who openly and continuously is in adverse possession of it for a period sufficiently long that the statute of limitation bars the previous owner from reclaiming it (usually 20 years).

prospectus A document that describes the details of an investment offering.

protected corner Corner of a slab with adequate provision for load transfer, so that at least 20% of the load from one slab corner to the corner of an adjacent slab is transferred by mechanical means or aggregate interlock.

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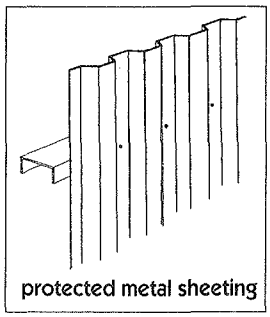
protected metal sheeting Sheet metal coated with zinc, paint, and/or a thin coating of asphalt for corrosion protection.


protected metal sheeting

protected noncombustible construction Noncombustible construction in which bearing walls (or bearing portions of walls), whether interior or exterior, have a minimum fire resistance rating of two hours and are stable under fire conditions. Roofs and floors, and their supports, have minimum fire resistance ratings of one hour. Stairways and other openings through floors are enclosed with partitions having minimum fire resistance ratings of one hour.

protected opening An opening, in a rated wall or partition which is fitted with a door, window, or shutter having a fire resistance rating appropriate to the use of the wall.

protected ordinary construction Construction in which roofs and floors and their supports have a minimum fire resistance rating of one hour, and stairways and other openings through floors are enclosed with partitions that have minimum fire resistance ratings of one hour. Such construction must also meet all the requirements of ordinary construction.

protected paste volume The portion of hardened cement paste that is protected from the effects of freezing by proximity to an entrained air void.

protected waste pipe A waste pipe from a fixture that is not directly connected to a drain, soil, vent, or waste pipe.

protected wood-frame construction Construction in which roofs and floors and their supports have minimum fire resistance ratings of one hour, and stairways and other openings through floors are enclosed with partitions with minimum fire resistance ratings of one hour. Such construction must also meet all the requirements of wood frame construction.

protection board Asphalt-impregnated boards used in roofing installations to protect bituminous coatings from damage.

protection screen A screen woven of moderately heavy stainless steel wires and set in a steel frame, used to protect windows at a psychiatric unit.

protective covenant **1.** An agreement in writing which restricts the use of real property. **2.** A restriction, in the legal document conveying title to real property, that restricts the use of the property.

protective lighting Lighting that is provided to facilitate the nighttime policing of a property or area.

protocol A procedure or practice established by long or traditional usage and currently accepted by a majority of practitioners in similar professions or trades. Protocol represents the generally accepted method of action or reaction that may be expected to be followed in a transaction.

protractor A graduated drafting instrument used to lay out angles.

proving ring A device for calibrating load indicators of testing machines, consisting of a calibrated elastic ring and a mechanism or device for indicating the magnitude of deformation under load.

proximate cause The cause of an injury or of damages which, in natural and continuous sequence, unbroken by any legally recognized intervening cause, produces the injury, and without which the result would not have occurred. Existence of proximate cause involves both **1.** causation in fact, i.e., that the wrongdoer actually produced an injury or damages, and **2.** a public policy determination that the wrongdoer should be held responsible.

proximity switch A sensor which is activated by the intrusion of objects into an area.

proximo (prox) A credit term meaning next month.

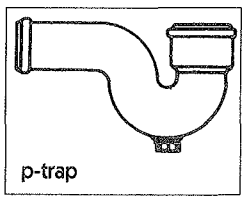
prybar *See* **pinch bar.**

psychrometer An instrument for measuring water vapor in the atmosphere, utilizing both wet- and dry-bulb thermometers. A wet-bulb thermometer is kept moistened and is cooled by evaporation, giving a slightly lower reading than the dry-bulb thermometer. Because evaporation is greater in dry air, the difference between the two thermometer readings is greater in a dry atmosphere.

psychrometric Relating to the measurement of atmospheric conditions, particularly regarding the moisture mixed with air.

psychrometric chart A chart that graphically represents the interrelation of air temperature and moisture content. Commonly used by building engineers and designers.

p-trap P-shaped trap that provides a water seal in a waste or soil pipe, used mostly at sinks and lavatories.


p-trap

P

public area An area that is open to the public.

public garage Garage for temporary parking or storage of small- to medium-size motor vehicles, usually for a fee.

public housing Low cost housing owned, maintained, and administered by a municipal or other government agency.

public liability insurance Insurance covering liability for negligent acts causing bodily injury, disease, or death of persons other than employees of the insured. Also covers liability for property damage. *See also* **comprehensive general liability insurance** *and* **contractor's liability insurance.**

public sewer A common sewer controlled completely by a public authority.

public space **1.** An area within a building to which the public has free access, such as a foyer or lobby. **2.** An area or piece of land legally designated for public use.

public system A water or sewer system owned and operated by a governmental authority or by a utility company that is controlled by a government authority.

public utility A service for the public such as water, sewers, telephone, electricity, or gas.

public water main A water supply pipe controlled by public authority.

public way A street, alley, or other parcel of land open to the outside air and leading to a public street. A public way is deeded or otherwise permanently appropriated for public use. A minimum width is usually specified by code.

puddle **1.** To settle loose soil by flooding and turning it over. **2.** To vibrate and/or work concrete to eliminate honeycomb. **3.** Clay which has been worked with some water to make it homogeneous and increase its plasticity so it can be used to seal against the passage of water.

puddle weld A weld used to join two sheets of light-gauge metal. A hole is burned in the upper sheet and filled with weld metal to fasten the two together.

puddling *See* **puddle.**

puff pipe A short vent pipe on the outlet side of a trap; used to prevent siphoning.

pug box **1.** A box, with a removable cover, placed in an electric raceway to facilitate the pulling of conductors through the raceway. **2.** A manual activator for a fire alarm system.

Puget Sound pine An archaic term for Douglas fir.

pugging A layer of clay, mortar, sawdust, or felt used for soundproofing purposes.

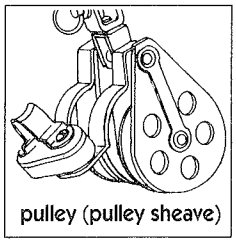
pug mill **1.** A machine for mixing and tempering clay. **2.** The part of an asphaltic concrete plant where the heated batch materials are mixed.

pull **1.** A handle used for opening a door, drawer, etc. **2.** To loosen rock at the bottom of a hole by blasting.

pull-chain operator A chain or control used to open or close a device such as a damper.

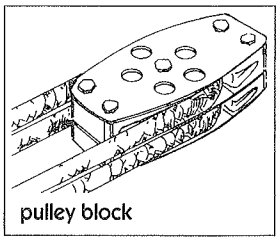
pulldown handle A handle fixed to the bottom rail of the upper sash of some double-hung windows.

pulley (pulley sheave) A wheel, with a grooved rim, that carries a rope or chain, and turns on a frame.



pulley (pulley sheave)

pulley block A frame that contains one or more pulleys.



pulley block

pulley mortise *See* **chase mortise.**

pulley sheave *See* **pulley.**

pulley stile The upright in a window frame on which the sash pulleys are supported and along which the sash slides.

pull hardware A handle or grip on a door for opening the door.

pulling **1.** The drag on a paintbrush caused by high paint viscosity. **2.** Installing and connecting wires in an electric system.

pulling over Smoothing a lacquer on wood by rubbing with a solvent-soaked cloth.

pulling up The softening of a coat of paint as the next coat is applied.

pull scraper A hand scraper, consisting of a steel blade at approximately right angles to the handle, that is used to remove old finishes or for smoothing wood.

pull shovel *See* **backhoe.**

pull switch *See* **chain-pull switch.**

pulpboard A solid board composed of wood pulp. *See also* **fiberboard.**

pulsed arc transfer An arc welding method that involves operating a power source between low and high current levels. The high current level, called a "pulse," forces an electrode drop to the workpiece, while the low current level, or "background,"

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maintains the arc between pulses. Major benefits of the process include better arc characteristics and greatly reduced spatter and fume generation.

pulse tube boiler A boiler using a sealed combustion system in which residual heat from the initial cycle ignites all subsequent air-gas mixtures, and flue gas condensation takes place in the heat exchanger.

pulverized fuel ash *See* **fly ash.**

pumice A highly porous lava, usually of relatively high silica content, composed largely of glass drawn into approximately parallel or loosely entwined fibers.

pumice concrete A lightweight concrete in which pumice is used as the coarse aggregate and which has good thermal insulation value.

pumice stone A solid block of pumice used to rub or polish surfaces.

pumicite Naturally occurring finely divided pumice.

pump A machine, operated by hand or a prime mover, used to compress and/or move a fluid.

pumped concrete Concrete which is transported through hose or pipe by means of a pump.

pump head The pressure differential produced by an operating pump.

pumping (of pavements) The ejection of water, or water and solid materials, such as clay or silt, along transverse or longitudinal joints and cracks, and along pavement edges. Pumping is caused by downward slab movement activated by the passage of loads over the pavement after the accumulation of free water on or in the base course, subgrade, or subbase.

pump jack An adjustable support used to raise and lower scaffolding.

pump mix Concrete formulated for placement using a pump.

punch **1.** A small pointed tool which is struck with a hammer and used for centering and starting holes. **2.** A steel tool, usually cylindrical, with sharpened edges and used in a hydraulic machine to make holes through metal.

puncheon **1.** Roughly dressed, heavy timber used as flooring, or as a footing for a foundation. **2.** Short timbers supporting horizontal members in a cofferdam.

punching shear **1.** Shear stress calculated by dividing the load on a column by the product of its perimeter and the thickness of the base or cap, or by the product of the perimeter taken at one half the slab thickness away from the column and the thickness of the base or cap. **2.** Failure of a base when a heavily loaded column punches a hole through it.

punch list A list of items within a project, prepared by the owner or his representative, and confirmed by the contractor, which remain to be replaced or completed in accordance with the requirements of the contract for construction at the time of substantial completion.

punitive damages (exemplary damages) Damages are awarded by a judge to a plaintiff not merely to compensate the plaintiff for losses incurred, but to punish the defendant for wrongful conduct and to use the plight of the defendant as an example to potential wrongdoers.

punning An obsolete term designating a light form of ramming. *See also* **ramming** *and* **tamping.**

PUR insulation *See* **polyurethane insulation.**

purchase and sale agreement The written contract for the sale of real property. The statute of frauds requires that a contract for the sale of real property must be in writing.

purchase order A formal written authorization to a vendor to provide certain goods or services and to bill the buyer for them at the specified price. The purchase order becomes a contract when it is accepted by the vendor.

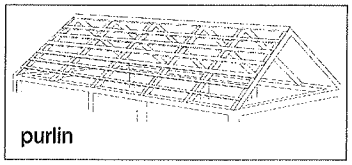
purchaser A person or company that buys or contracts to buy real property or other items or services.. *See also* **vendor.**

purge To remove unwanted liquid, sediment, air or gas from a ductline, pipeline, container, space, or furnace.

purge pump A compressor that removes noncondensibles from a refrigeration system.

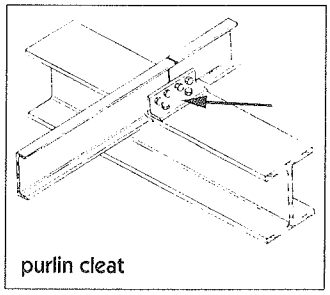
purge valve *See* **air purge valve.**

purlin One of several horizontal structural members that support roof loads and transfer them to roof beams.



purlin

purlin cleat A shaped metal fastener used to secure a purlin to its support.



purlin cleat

purlin plate A purlin, in a curb roof, located at the curb and supporting the ends of the upper rafters.

purlin post A strut which supports a purlin to reduce sag.

purlin roof A roof in which purlins are supported directly on walls rather than rafters.

push bar A heavy bar across a glazed door, screen door, or horizontally pivoted window sash, used to open or close the door or window.

P

push button A device in an electric circuit with a button that is pressed to activate or disconnect the circuit.

push drill A hand drill which is operated by pushing on its handle. A spiral ratchet rotates the bit.

push hardware A fixed bar or plate operated by pushing.

push plate A metal plate used to protect a door while it is pushed open.

push point A thin piece of metal used in glazing to hold glass in a wooden frame. A bent section of the point makes it easy to push the point into the wood.

push-pull rule A thin steel rule which coils into a case when not in use.

push stick A tool or piece of wood used with a table saw to guide the wood being cut.

putlog Short pieces of timber that support the planks of a scaffold. One end of the timber is supported by the scaffold, the other is inserted in a temporary hole left in the masonry.

putlog hole The temporary hole in masonry that supports one end of a putlog.

puttied split A split in a wood product, such as a panel surface, that has been filled with putty, usually an epoxy, then sanded.

putty A dough-like mixture of pigment and vehicle, used to set glass in window frames and fill nail holes and cracks.

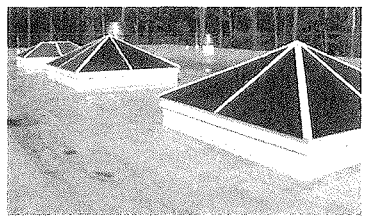
putty coat Final smooth coat of plaster.

putty knife A knife, with a broad flexible blade with a flat end, used to apply putty.

pycnometer A vessel for determining the specific gravity of liquids or solids.

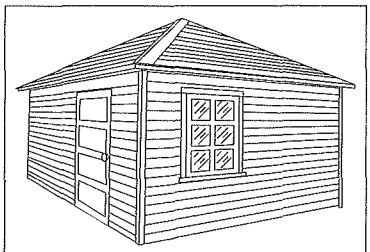
pylon **1.** A steel tower used to support electrical high-tension lines. **2.** A movable tower for carrying lights.

pyramidal light A skylight shaped like a pyramid.



pyramidal light

pyramid roof A roof with four slopes terminating at a peak.



pyramid roof

pyrolyze To bring about a chemical change through the action of heat.

pyrometer An apparatus for measuring high temperatures.

pyrometric cone A small, slender, three-sided oblique pyramid made of ceramic or refractory material for use in determining the time-temperature effect of heating and in obtaining the pyrometric cone equivalent of refractory material.

pyrometric cone equivalent The number of that cone whose tip would touch the supporting plaque simultaneously with that of a cone of the refractory material being investigated, when tested in accordance with a specified procedure such as ASTM C 24.

pyrophoric Liable to ignite or burn.

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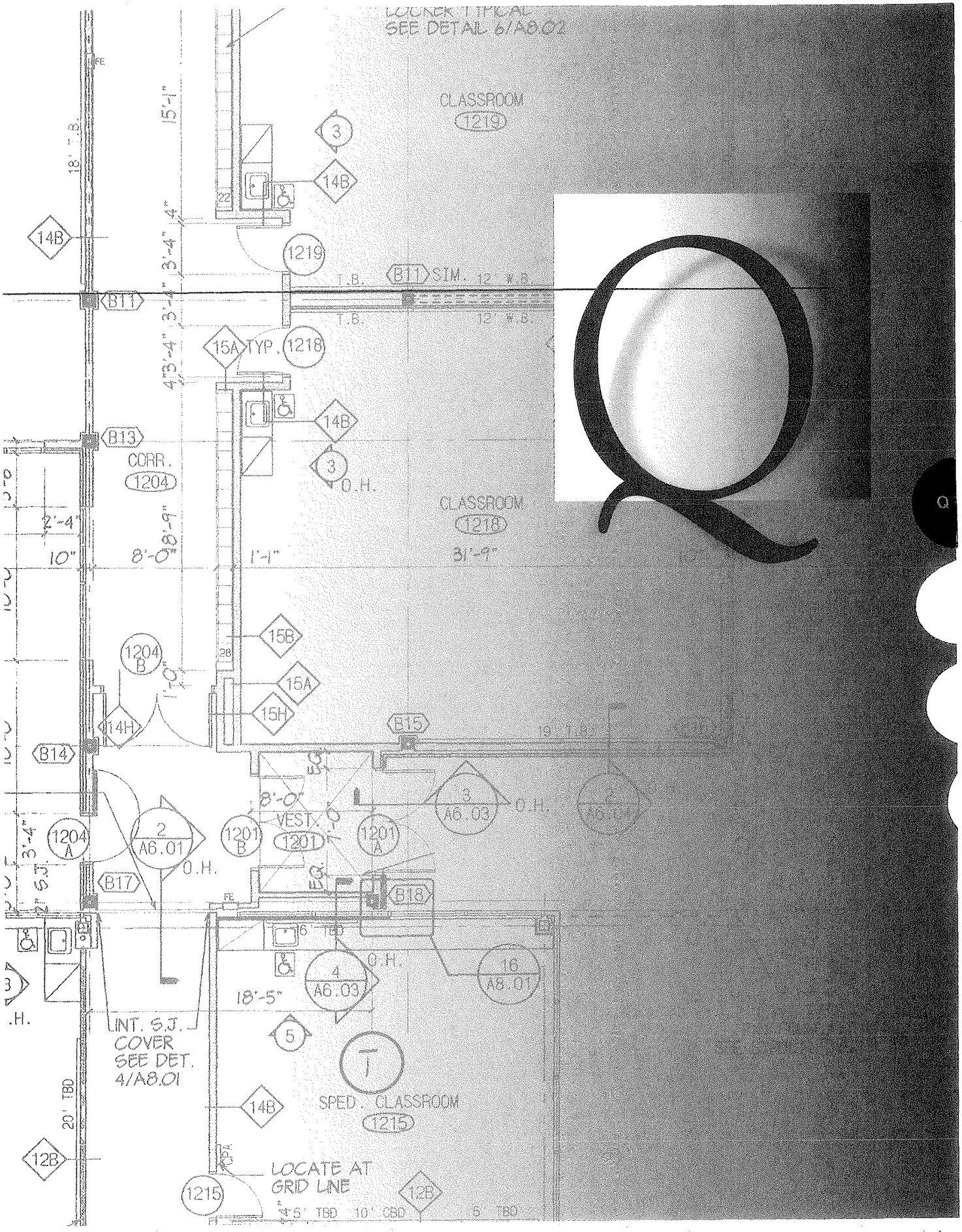
LOCKER TYPICAL
SEE DETAIL 6/A8.02
CLASSROOM
1219
3
14B
22
1219
B11
SIM.
12' W.B.
T.B.
15A
TYP.
1218
14B
3
O.H.
B13
CORR.
1204
CLASSROOM
1218
31'-9"
2'-4"
10"
8'-0"
8'-9"
1'-1"
15B
15A
15H
1204
B
14H
B14
B15
19' T.B.
8'-0"
VEST.
1201
1201
A
1201
B
3
A6.03
O.H.
2
A6.01
O.H.
1204
A
B17
B18
16' TBD
4
A6.03
O.H.
16
A8.01
18'-5"
5
INT. S.J.
COVER
SEE DET.
4/A8.01
SPED. CLASSROOM
1215
14B
12B
LOCATE AT
GRID LINE
1215
12B
5' TBD
10' CBD
5' TBD
20' TBD
18' T.B.
15'-1"
3'-4"
3'-4"
3'-4"
3'-4"
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4"
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2' S.J.
3'-4"
1'-0"
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EQ.
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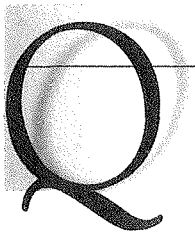
Q



Abbreviations

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

q quart

Q quantity heat flow

qa quality assurance

QA/QC quality assurance/quality control

qc quality control

QC quick coupling

qda quantity discount agreement

QF quick firing

qr quarter

QR quarter-round

Qrtz quartz

qs quartersawn

qt quart

QTR quarry-tile roof; on drawings, quarter

qty quantity

quad quadrant

QUAD quadrangle

QUAL quality

QUAN quantity

quar quarterly

quadrangle (quad) An open rectangular courtyard surrounded on all sides by buildings.

quadrant **1.** One quarter of the circumference of a circle; an arc of 90°. **2.** An angle-measuring instrument. **3.** *See* **Dutch door bolt.**

quadripartite An assembly involving four parts; usually describing groined vaulting.

quad-tube lamp A compact fluorescent lamp with a double twin tube configuration.

quaking concrete A method of vibrating *mass concrete.*

qualifications and assumptions Items that are not completely defined in the project documents for which the estimator is required to use judgment in developing the estimate. *

qualification submittals Data pertaining to a bidder's qualifications that must be submitted as set forth in the instructions to bidders. *

qualitative analysis The analysis of a sample (solid, liquid, or gas) to identify its components.

quality **1.** Characteristics of a product, material, or installation/workmanship that may determine its durability, longevity, appearance, safety, efficiency, and/or other attributes. **2.** A grade of Idaho white pine equivalent to D *select* in other species.

quality acceptance criteria Specified limits placed on characteristics of a product, process, or service defined by codes, standards, or other requirement documents. *

quality appraisal Quality activities employed to determine whether a product, process, or service conforms to established requirements, including: design review, specification review, other documentation review, constructability review, materials inspection/tests, personnel testing, quality status documentation, and post project reviews. *

quality assurance A system of procedures for selecting the levels of quality required for a project or portion thereof in order to perform the functions intended, and for assuring that these levels are obtained.

quality audit A formal, independent examination with intent to verify conformance with the acceptance criteria. An audit does not include surveillance or inspection for the purpose of process control or product acceptance. *

quality conformance Quality management activities associated with appraisal, training, and prevention adapted to achieve zero deviations from the established requirements. *

quality control A system of procedures and standards by which a constructor, product manufacturer, materials processor, or the like, monitor the properties of the finished work.

quality corrective action Measures taken to rectify conditions adverse to quality and, where necessary, to preclude repetition. Corrective action includes rework and remedial action for nonconformance deviations.*

quality management Concerns the optimization of the quality activities involved in producing a quality product, process, or service. As such, it includes appraisal, training, and prevention activities. *

quality performance tracking system A management tool providing data for the quantitative analysis of certain quality-related aspects of projects by systematically collecting and classifying costs of quality. *

quantification In estimating an activity to translate project scope information into resource quantities suitable for costing. In the engineering and construction industry, a takeoff is a specific type of quantification that is a measurement and listing of quantities of materials from drawings. *

quantitative analysis The analysis of a sample (solid, liquid, or gas) to determine the proportions of its various components.

quantities Measured amounts of construction items expressed in their customary units.

quantity overrun/underrun The difference between estimated quantities and the actual quantities in the completed work.

quantity survey A detailed analysis of material and equipment required to construct a project.

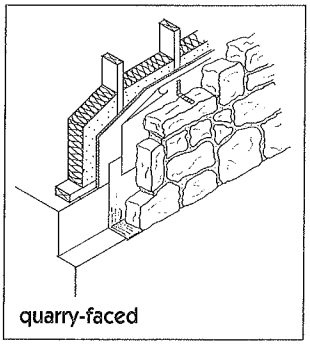
quantity takeoff *See* **takeoff.**

quantum meruit A method of calculating damages that allows the claimant to recover the reasonable value of goods and services provided rather than the contract price.

quarrel A small diamond or square-shaped tile or piece of glass, often set diagonally.

quarry An open excavation in the surface of the earth for mining stone.

quarry-faced Freshly-split ashlar squared off at the joints only, used for facing a masonry wall.


quarry-faced

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Q

quarry run Indiscriminate building stone as it comes from the pit without regard to color or structure.

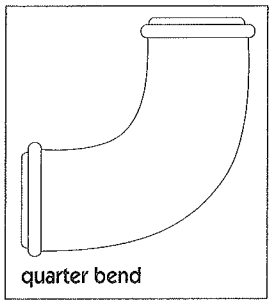
quarry sap (quarry water) Groundwater contained in stone that has just been quarried.

quarrystone bond In masonry, a term applied to the manner in which stone is arranged in rubblework.

quarry (promenade) tile **1.** Machine-made, unglazed tile. **2.** Clay tile used for flooring or walls.

quart A liquid measure containing one-fourth of a gallon.

quarter bend A 90° bend, as in piping.


quarter bend

quarter closer (quarter closure) A brick cut to 1/4 of its normal length; used either as a spacer, or to complete a course.

quarter-cut *See* **quartersawn.**

quartered *See* **quartersawn.**

quartered lumber Lumber that has been quartersawn approximately radially from the log.

quartered veneer Veneer that has been sliced in a radial direction, at right angles to the growth rings. The term quartered comes from the use of blocks that have been cut into quarters before slicing. Quarter slicing brings out the presence of medullary rays; quarter-sliced veneer appears striped.

Quarterfoil An architectural ornamentation with four elements.

quarter hollow A concave molding formed by a 90° arc; the opposite of a quarter round.

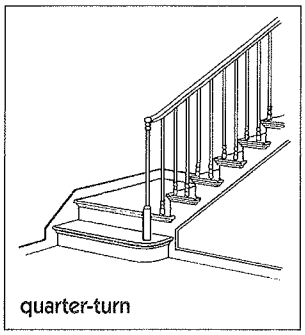
quartering **1.** A method of obtaining a representative sample by dividing a circular pile of a large sample into four equal parts and discarding opposite quarters successively until the desired size of sample is obtained. **2.** Process of using small timbers as studs in a framed partition. **3.** Quarter sawing.

quarterpace landing Platform between flights of stairs turning at a 90° angle.

quarter round A type of molding used as a base shoe, presenting the profile of a quarter circle.

quartersawn (rift-sawn) Lumber sawn so that the annual rings form angles from 45° to 90° with the surface of the piece.

quarter-turn Descriptive of a stair that turns 90° as it progresses from top to bottom.


quarter-turn

quartz glass (silica glass) Glass consisting of pure, or nearly pure, amorphous silica. Of all glass, quartz glass has the highest heat resistance and ultraviolet transmittance.

quartz-idiode lamp Obsolete term for a tungsten-halogen lamp.

quartzite A sandstone composition consisting primarily of quartz and a siliceous cement.

Quebec pine *Pinus resinosa*. Red pine.

Quebec spruce *Picea alba., P. glauca.* White spruce.

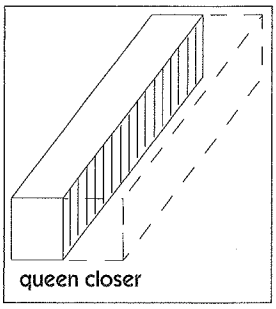
Queen Anne arch The arch over a Palladian window with the middle curved over the higher central section, and flat above the lower side openings.

Queen Anne style **1.** An architectural style common in Britain in the early 1700s that utilized brick exteriors, carved relief ornamentation, and often stone parapets. **2.** The earlier style was reinterpreted in more exuberant fashion in the late 1800s in North America and Britain. Exteriors often incorporated turrets, dormers, hip and gable roofs, bay windows, and extensive decorative moldings or carvings. Wood, stone, or stucco was also used.

Queen Anne window A window with small lights or panes arranged in various patterns. Usually found on the top sash only.

queen bolt *See* **queen rod.**

queen closer A half brick of normal thickness, but half-normal width. Used in a course of brick masonry to prevent vertical joints from falling above one another.


queen closer

queen post One of the two vertical members in a queen-post truss.

queen-post truss (queen truss) A pitched roof support using two vertical tie posts connected between the tie beam and the rafters.

queen rod (queen bolt) A metal rod used as a queen post.

quenching Immersing hot, solid items in a cool liquid. Used as a means of tempering metals.

quetta bond Vertical voids in brickwork where reinforcing rods are installed. The voids are then filled with mortar.

quick assets The amount of immediate cash available to pay current debt and an informal measure of a business' liquidity. When the ratio of cash on hand to current debt is 1.0 or greater, the company is considered liquid.

quick condition Soil that is weakened by the upward flow of water. Minute channels are created that significantly reduce the bearing capacity of the soil.

quick-leveling head A ball and socket attachment under the head of a surveyor's level or transit.

quicklime Calcium oxide (CaO). *See also* **lime**.

quick-load test Compression testing of piles that applies loads of increasing weight for brief time periods.

quick response sprinkler A sprinkler that is sensitive to high temperatures and reacts quickly to a fire, helping to limit smoke damage by arresting the fire at an earlier stage.

quicksand Fine sand in a *quick condition*, having virtually no bearing capacity.

quick set *See* **flash set** *and* **false set**.

quick test A test performed on a cohesive soil to measure shear before the sample has drained.

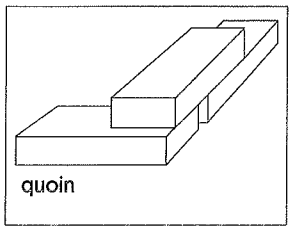
quilt insulation A thermal barrier with paper faces that are stitched or woven.

quirk **1.** A narrow groove or bead located at or near the intersection of two surfaces or next to a molding, so as to reduce the possibility of uncontrolled cracking. **2.** Acute angle between adjoining pieces of molding. **3.** Thin groove on the bottom of a drip cap to keep water away from the joint.

quirk molding **1.** Trim piece with a narrow groove. **2.** Trim with both inward and outward curves.

quitclaim deed A document that transfers the seller's interest in property to another party.

quoin (coign, coin) **1.** A right-angle stone in the corner of a masonry wall to strengthen and tie the corner together. **2.** Keystone in an arch.



quoin bonding In masonry, the interlocking of stones in the corner of a wall with staggered stretchers and headers.

Quonset hut A prefabricated building with a semicircular cross section, usually built with corrugated steel and thermal insulation.

quotation A price for materials or services provided by a contractor, subcontractor, supplier, or vendor.

quote To make an offer at a guaranteed price.

QUV A method of testing, using high-intensity ultraviolet light, moisture, and heat to simulate weathering, to determine a coating's rate of aging and color fading.