

## GLOSSARY

### A

**ABS:** Plastic pipe used for plumbing construction.

**Absolute Pressure:** The total pressure measured from absolute vacuum; the sum of gauge optional and atmospheric pressure corresponding to the barometer reading expressed in PSI.

**Absolute Zero:** A point of total absence of heat,  $-273.18^{\circ}\text{C}$ .

**Absorption:** Loss of power in an optical fiber, resulting from conversion of optical power into heat.

**Abut:** Joining end to end.

**Accelerator:** An additive used to speed curing time of freshly poured concrete.

**Access Line:** A line or circuit that connects a customer site to a network switching center or local exchange. Local loop.

**Accessible:** Having access, which may require removal of an access panel, etc.

**Accumulator:** A container in which fluid or gas is stored under pressure.

**AC Current:** Electrical current that reverses direction at regular intervals (cycles).

**Acid Vent:** A pipe venting an acid waste system.

**Acid Waste:** A pipe which conveys liquid waste matter.

**AC Line Filter:** Absorbs electrical interference.

**Acme Thread:** A thread used for feed screws.

**Acoustical:** Referring to the study of sound transmission.

**Active Sludge:** Sewage sediment, rich in destructive bacteria, that can be used to break down fresh sewage.

**AC Voltage:** Electrical pressure that reverses direction at regular intervals.

**Adapter Fitting:** Designed to fit two pipes or fittings different in design or material when connecting the two together would not be possible.

**Adhesive:** A bonding material.

**Adjacent:** Touching; next to.

**Administrative Authority:** The individual agency authorized by a political subdivision to

## GLOSSARY (cont.)

enforce the provisions of a building code.

**Admixtures:** Materials added to concrete or mortar to alter it in some way, as an accelerator, retarder, etc.

**Aeration:** An artificial method in which water and air are brought into direct contact with each other.

**Aerial Cable:** Telecommunications cable installed on aerial supporting structures such as poles, sides of buildings, and other structures.

**Aerobic:** Bacteria living or active only in free oxygen.

**Aggregate:** Grades of sand, vermiculite, perlite, or gravel added to cement for concrete or plaster.

**Air Break:** A physical separation in which a drain discharges indirectly into a fixture, receptacle, or interceptor at a point below the rim of the receptacle to prevent backflow.

**Air Chamber:** A continuation of the water piping beyond the branch to fixtures finished with a cap designed to eliminate shock or vibration.

**Air, Compressed:** Air at any pressure greater than atmospheric pressure.

**Air Drying:** Method of removing excess moisture from lumber using natural circulation of air.

**Air, Free:** Air which is subject only to atmospheric conditions.

**Air Gap:** The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water or waste to a tank, plumbing fixture, receptor, or other device, and the flood level rim of the receptacle normally twice the diameter of the inlet.

**Air-Handling Unit:** A mechanical unit used for air conditioning or movement of air, as supply or exhaust.

**Air, Standard:** Air having a temperature of 70°F (21.1°C), a standard density of 0.0075 lb/ft<sup>3</sup> (0.11 kg/m<sup>3</sup>), and under pressure of 14.70 psia (101.4 kPa); the gas industry standard is 60°F (15.6°C).

**Air Test:** A test applied to a plumbing system upon its completion.

**Alarm Check Valve:** A check valve equipped with a signaling device which will announce a remote alarm.

**Allowable Load:** Maximum supportable load of any construction components(s).

## GLOSSARY (cont.)

**Allowable Span:** Maximum length permissible for any framing component without support.

**Alloy:** A substance composed of two or more metals.

**Alloy Pipe:** A steel pipe with one or more elements other than carbon which give it greater resistance to corrosion and more strength.

**Alternator:** Converts mechanical energy into electrical energy.

**Ambient Temperature:** The prevailing temperature of the area surrounding an object.

**American National Standards Institute (ANSI):** A private organization that coordinates standards.

**American Standard Code for Information Interchange (ASCII):** A standard character set that (typically) assigns a 7-bit sequence to each letter, number, and selected control character.

**American Standard Pipe Thread:** A type of screw thread commonly used on pipe and fittings.

**American Wire Gauge (AWG):** Standard used to describe the size of a wire.

**Ammeter:** An instrument (meter) for measuring electrical current.

**Ampacity:** The amount of current (amps) that a conductor can carry without overheating.

**Ampere (A):** Unit of current measurement.

**Ampere-hour:** The flow of one ampere for one hour.

**Amplitude:** The size, in voltage, of signals in a data transmission.

**Anaerobic:** Bacteria living in the absence of free oxygen.

**Anchor:** A device used to secure pipes to a structure.

**Anchor Bolt:** A J- or L-shaped steel rod threaded on one end for securing structural members to concrete.

**Angle of Bend:** In a pipe, the angle between radial lines from the beginning and end of the bend to the center.

**Angle Valve:** A device in which the inlet and outlet are at right angles.

**Annunciator:** A sound-generating device that intercepts and speaks the condition of circuits.

**Anode:** The positive electrode in a battery.

## GLOSSARY (cont.)

**Anodize:** An electrolytic means of coating aluminum or magnesium by oxidizing.

**Apparent Power ( $P_A$ ):** Product of the voltage and current in a circuit calculated without considering the phase shift. Expressed in terms of volt-amperes (VA).

**Approved:** Accepted under an applicable specification or standard by the administrative authority.

**Approved Ground:** A grounding bus or strap suitable for connecting to data com equip.

**Approved Testing Agency:** An organization established for purposes of testing to approved standards.

**Apron:** A piece of window trim beneath the window sill; also used to designate the front of a building, such as the concrete apron in front of a garage.

**Arbor:** An axle on which a cutting tool is mounted.

**Arc Tube:** The light-producing element of an HID lamp.

**Architect's Scale:** A rule with scales indicating feet, inches, and fractions of inches.

**Arcing:** A luminous discharge formed by the span of

electrical current across a space between terminals.

**Area Drain:** A receptacle designed to collect surface or rain water.

**Areaway:** The open space around foundation walls, doorways or windows to permit light and air to reach the below-ground-level floors.

**Arrestor (Lightning):** A device that reduces the voltage of a surge applied to its terminals and restores itself to its original condition.

**Arterial Vent:** A vent serving a drain and a public sewer.

**Asbestos:** A mineral material used for exterior wall siding and for fireproofing.

**Ashlar:** A stone cut by sawing to a rectangular shape.

**Asphalt:** A black material produced as a by-product of oil or coal.

**Asphalt Shingle:** A composition-type shingle used on a roof and is fire-resistant.

**Aspirator:** A fitting or device supplied with water or other fluid under positive pressure which passes through an integral orifice or constriction causing a vacuum.

## GLOSSARY (cont.)

### **Atmospheric Vacuum**

**Breaker:** A mechanical device consisting of a check valve opening to the atmosphere when the pressure in the piping drops to atmospheric.

**Attenuation:** Denotes the loss in strength of power between that transmitted and that received. Expressed as a ratio in decibels (dB).

### **Authority Having**

**Jurisdiction:** The organization responsible for approving equipment, installation, or procedure.

**Autotransformer:** Changes voltage level using the same common coil for both the primary and the secondary.

**Awl:** A tool used to mark wood or make pilot holes.

**Awning Window:** A window that is hinged at the top and the bottom swings outward.

## **B**

**Backboard:** A wooden (or metal) panel used for mounting equipment.

**Backbone:** The main connectivity device of a distributed system.

### **Back Electromagnetic**

**Force:** The voltage created in an inductive circuit by a

changing current flowing through the circuit.

**Backfill:** Any deleterious material (sand, gravel, etc.) used to fill an excavation.

**Backflow:** The flow of water or other liquids into the distributing pipes of a potable water supply from any source other than its intended source.

**Backflow Connection:** A condition in any arrangement where backflow may occur.

**Backflow Preventer:** Device to prevent backflow into the potable water system.

**Backhoe:** Self-powered excavation equipment.

**Backing Ring:** A metal strip used to prevent melted metal from entering a pipe when making a butt-welded joint.

**Back-Siphonage:** The flowing back of used or contaminated water from a fixture or vessel into a water supply pipe due to negative pressure in the pipe.

**Backsplash:** The vertical part of a countertop that runs along the wall to prevent splashing the wall.

**Back Up:** A condition in which waste water may flow back into another fixture or compartment but not into the potable water system.

## GLOSSARY (cont.)

**Backwater Valve:** A device which permits drainage in one direction but has a check valve that closes against back pressure.

**Baffle Plate:** A tray or partition placed in process equipment to change the direction of flow.

**Ballast:** A component used with fluorescent lamps to provide the voltage necessary to strike the mercury arc, then limit the amount of current that flows through the lamp.

**Ball Check Valve:** A device used to stop flow in one direction while allowing flow in the opposite direction.

**Balloon Framing:** Wall construction extending from the foundation to the roof structure without interruption.

**Ball Valve:** A valve providing a tight shutoff.

**Baluster:** That part of a staircase which supports the handrail or bannister.

**Balustrade:** A complete handrail assembly.

**Bank:** An assemblage of fixed contacts.

**Bank Plugs:** Pieces of lumber driven into the ground so surveyors can string a line between them to measure grade.

**Bannister:** That part of a staircase which fits on top of the balusters.

**Base:** The lowest portion or lowest point of a stack of vertical pipe.

**Baseboard:** Molding covering the joint between a finished wall and the floor.

**Base Shoe:** A molding added at the bottom of a baseboard used to cover the edge of finish flooring or carpeting.

**Batten:** A narrow piece of wood used to cover a joint.

**Batter Boards:** Boards used to frame in the corners of a proposed building during layout and excavation.

**Battery:** A device that converts chemical energy into electrical current.

**Battery of Fixtures:** Two or more similar adjacent fixtures which discharge into a common horizontal waste or soil branch.

**Batt Insulation:** An insulating material to be installed between framing members.

**Beam:** A horizontal framing member made of steel or wood at least 5 inches thick and at least 7 inches wide.

## GLOSSARY (cont.)

**Bearing Partition:** An interior divider or wall that supports the structure above it.

**Bearing Wall:** A wall having weight-bearing properties associated with holding up a building's roof or second floor.

**Bell:** That portion of a pipe which is sufficiently enlarged to receive the end of another pipe of the same diameter.

**Bell-and-Spigot Joint:** Commonly used joint in cast-iron soil pipe end.

**Benching:** Making steplike cuts into a slope used for erosion control.

**Benchmark:** Point of known elevation from which surveyors can establish grades.

**Berm:** A raised earth embankment; the shoulder of a paved road; the area between the curb and the gutter and a sidewalk.

**Bevel:** A tool that can be adjusted to any angle; it helps make cuts at the number of degrees that is desired.

**Bevel Siding:** A siding material which is tapered from a thick edge to a thinner edge.

**Bibb:** A faucet used to connect a hose.

**Bi-Fold:** A double-leaf door used primarily for closet doors.

**Bird Mouth:** A notch cut into a roof rafter so that it can rest smoothly on the top plate.

**Bitumen:** The term used to identify asphalt and coal tar.

**Black Pipe:** Nongalvanized steel pipe.

**Blank Flange:** A soil plate flange used to seal off the flow in a pipe.

**Blind Flange:** A flange used to seal off the end of a pipe.

**Blistering:** The condition that paint presents when air or moisture is trapped underneath.

**Blocking:** A piece of wood fastened between structural members to strengthen them.

**Board Foot (B.F.):** A unit of lumber measure equaling 144 cubic inches; the base unit is 1 inch thick and 12 inches square or  $1 \times 12 \times 12 = 144$  cubic inches.

**Boiler Blow-Off:** An outlet on a boiler to permit discharge of sediment.

**Boiler Blow-Off Tank:** A vessel designed to receive the discharge from a boiler blow-off outlet.

**Bolster:** A bent-wire device used in holding reinforcing bars in place during the pouring of concrete.

## GLOSSARY (cont.)

**Bond:** In masonry, the interlocking system of brick or block to be installed.

**Bond Beam:** A steel-reinforced concrete masonry beam running horizontally around a masonry wall to provide added strength. Vertical bond beams are formed by inserting reinforcing bars in a cell after the wall is laid and filling with grout.

**Bonding:** A very-low-impedance path accomplished by permanently joining non-current-carrying metal parts is made to provide electrical continuity and to conduct current safely.

**Bonding:** The process of joining two surfaces together.

**Bonding Conductor:** The conductor that connects the non-current-carrying parts to the approved system ground conductor.

**Bonding Jumper:** A conductor used to connect the metal parts of an electrical system.

**Bond Wire:** Bare grounding wire that runs inside an armored cable.

**Bonnet:** Connects the valve actuator to the valve body.

**Borrow Site:** An area from which earth is taken for haul-

ing to a jobsite which is short of earth.

**Bottom or Heel Cut:** The cutout of a rafter end which rests against the plate.

**Bow:** A term used to indicate an upward warp along the length of a piece of lumber.

**Bow Window:** A window unit that projects from an exterior wall.

**Brace:** An inclined piece of lumber applied to a wall or to roof rafters to add strength.

**Branch:** Any part of the piping system other than a main, riser, or stack.

**Branch Circuit:** Conductors between the last overcurrent device and the outlets.

**Branch Circuit, Multiwire:** A branch circuit having two or more ungrounded circuit conductors, each having a voltage difference between them, and a grounded circuit conductor (neutral) having an equal voltage difference between it and each ungrounded conductor.

**Branch Interval:** A length of soil or waste stack corresponding to a story height within which the horizontal branches are connected to the stack.

## GLOSSARY (cont.)

**Branch Tee:** A tee having one side branch.

**Branch Vent:** A vent connecting one or more individual vents with a vent stack or stack vent.

**Brazed:** Joined by hard solder.

**Brazing Ends:** The ends of a valve or fitting which are prepared for silver brazing.

**Break:** The number of separate places on a contact that open or close a circuit.

**Breakout Box:** A device that allows access to individual points on a physical interface connector for testing.

**Brick Veneer:** A brick wall of single brick, usually covering a frame structure.

**Bridging:** Used to keep joists from twisting or bending.

**British Thermal Unit (BTU):** The amount of heat necessary to raise the temperature of one pound of water 1°F.

**Bronze Trim or Bronze Mounted:** Indicates that certain internal parts of the valves are made of copper alloy.

**Bubble Tight:** The condition of a valve seat that prohibits the leakage of visible bubbles.

**Builder's Level:** A tripod-mounted device that uses

optical sighting to make sure that a straight line is sighted and reference point is level.

**Building Codes:** Rules and regulations instituted by a local housing authority or governing body.

**Building Drain:** The lowest piping of the drainage system which receives the discharge from waste, etc., inside the building and conveys it to the sewer.

**Building Paper:** Also called tar paper, roofing paper, etc.

**Building Permits:** Must be obtained for construction and allows for inspections of the work and for placing project on the tax roles.

**Building Sewer:** That part of the horizontal piping of a drainage system which extends from the end of the building drain and conveys it to any sewer.

**Building Sewer, Combined:** Conveys both sewage and storm water.

**Building Sewer, Sanitary:** Conveys sewage only.

**Building Sewer, Storm:** Conveys storm water only.

**Building Subdrain:** That portion of a drainage system which cannot drain by gravity in a building sewer.

## GLOSSARY (cont.)

**Building Trap:** A fitting or assembly of fittings installed in a building drain to prevent circulation of air between the drainage of the building and the building sewer.

**Bull Head Tee:** A branch of the tee is larger than the run.

**Burst Pressure:** The pressure which can be slowly applied to the valve at room temperature for 30 seconds without causing rupture.

**Bus:** A group of conductors that serve as a common connection for circuits.

**Bus Bar:** A heavy copper or aluminum bar used to carry currents in switchboards.

**Bushing:** A pipe fitting for connecting a pipe with a female or larger-size fitting.

**Busway:** A metal-enclosed distribution of bus bars.

**Butt:** To meet edge to edge.

**Butterfly Valve:** A device which operates at right angles to the flow.

**Butt-Weld Joint:** A welded pipe joint made with the ends of two pipes butting each other.

**Butt-Weld Pipe:** Pipe welded along a seam butted edge to edge and not scarfed or lapped.

**By-Pass:** An auxiliary loop in a pipeline intended for diverting flow around a device.

**By-Pass Valve:** A valve used to divert the flow past the part of the system through which it normally passes.

### C

**Cable:** One or more insulated or noninsulated wires used to conduct electrical current.

**Calcium Chloride:** A concrete admixture used for accelerating the cure time.

**California Bearing Ratio (CBR):** A system used for determining the bearing capacity of a foundation.

**Calorie (Cal):** The amount of heat required to raise one gallon of water 1°C.

**Camber:** A slight vertical curve (arch) formed in a beam or girder to counteract deflection due to loading.

**Cantilever:** A projecting structural member or slab supported at one end only.

**Cant Strip:** A wooden strip used to raise the first course of shingles in plane; an angular board placed at the junction of the roof deck and wall to relieve the sharp angle when the roofing material is installed.

## GLOSSARY (cont.)

**Capacitance (C):** The ability of a circuit or component to store an electrical charge, measured in farads (F).

**Capacitive Circuit:** A circuit in which current leads voltage.

**Capacitive Reactance (Xc):** The opposition to current flow by a capacitor, in ohms ( $\Omega$ ).

**Capacitor:** A device that stores electrical energy by an electrostatic field.

**Capacity:** The maximum or minimum flows possible under given conditions of media, temperature, pressure, velocity, etc.

**Capillary:** The action by which the surface of a liquid, where it is in contact with a solid, is elevated or depressed.

**Carbon Steel Pipe:** Owes its properties mostly to the carbon it contains.

**Carriage:** A notched stair frame.

**Casement:** A type of window hinged to swing outward.

**Casing:** The trim that goes on around the edge of a door or window opening.

**Catch Basin:** A complete drain box where water drains into a pit, then through a pipe connected to the box.

**Catch Point:** Another name for hinge point or top of shoulder.

**Cathode:** The negative electrode in a battery.

**Cathodic Protection:** The control of the electrolytic corrosion of an underground or underwater metallic structure by the application of an electric current.

**Caulk:** Any type of material used to seal walls, windows, and doors to weatherize.

**Cavitation:** A localized gaseous condition that is found within a liquid stream.

**Cement:** A material that is the basis for a concrete mix.

**Cementitious:** Able to harden like cement.

**Cement Joint:** The union of two fittings by insertion of material.

**Cement Plaster:** A mixture of gypsum, cement, hydrated lime, sand, and water, used primarily for exterior wall finish.

**Center Line:** The point on stakes or drawings which indicates the halfway point between two sides.

**Cesspool:** A lined excavation in the ground which receives the discharge of a drainage system so as to retain the organic matter and solids but

## GLOSSARY (cont.)

permit the liquids to seep through the bottom and sides.

**Chainwheel-Operated Valve:**

A device which opens and closes valve seats.

**Chair:** Small device used to support horizontal rebar.

**Chamfer:** A beveled outside corner or edge on a beam or column.

**Chase:** A recess in a wall in which pipes can be run.

**Check Valve:** A device designed to allow a fluid to pass through in one direction only.

**Chemical Waste System:**

Piping which conveys corrosive or harmful wastes to the drainage system.

**Choke Coil:** An inductor used to limit the flow of AC.

**Chord:** Top or bottom member of a truss.

**Circuit:** A complete path through which electricity flows.

**Circuit Breaker:** A device used to open and close a circuit.

**Circuit Vent:** A branch vent that serves two or more traps and extends from in front of the last fixture connection of a horizontal branch to the vent stack.

**Circular Mil (cm):** A measurement of the cross-sectional area of a conductor.

**Clamp Gate Valve:** A gate valve whose body and bonnet are held together by a U-bolt.

**Cleanout:** A plug joined to an opening in a pipe which can be removed for the purpose of cleaning.

**Clear and Grub:** To remove all vegetation, trees, concrete, or anything that will interfere with construction.

**Clear Water Waste:** Cooling water and condensate drainage from HVAC/R, cooled condensate from steam heating, cooled boiler blowdown water and waste water drainage in which impurities have been reduced below a minimum concentration considered harmful.

**Cleat:** Any strip of material attached to the surface of another material to support a third material.

**Clerestory:** A windowed area between roof planes or rising above lower story, to admit light and/or ventilation.

**Closed Circuit:** A continuous path for electrical flow.

## GLOSSARY (cont.)

**Close Nipple:** A nipple with a length twice the length of a standard pipe thread.

**Cock:** A form of valve having a hole in a tapered plug which is rotated to provide passageway for fluid.

**Coefficient of Expansion:** The increase in unit length, area, or volume for a one degree rise in temperature.

**Coil:** A winding of insulated conductors arranged to produce magnetic flux.

**Cold Joint:** Construction joint in concrete occurring at a place where the continuous pouring has been interrupted.

**Collar Tie:** Horizontal framing member tying the rafters together above the plate line.

**Column:** A vertical structural member.

**Combined Waste and Vent System:** A specially designed system of waste piping, embodying the horizontal wet venting of one or more floor sinks or floor drains by means of a common waste and vent pipe, adequately sized to provide free movement of air above the flow line of the drain.

**Common Noise:** Noise produced between the ground and the hot or neutral line.

**Common Rafter:** A structural member that extends without interruption from the ridge to the plate line in a sloped roof structure.

**Common Vent:** A vent which connects at the junction of two fixture drains and serves as a vent for both fixtures.

**Compactor:** A machine for compacting soil.

**Companion Flange:** A pipe flange to connect with another flange or with a flanged valve or fitting.

**Compression Joint:** A multi-piece joint with cup-shaped threaded nuts which, when tightened, compress tapered sleeves so that they form a tight joint.

**Compressor:** A mechanical device for increasing the pressure of air or gas.

**Concrete:** A mixture of sand, gravel, and cement in water.

**Condensate:** Water which has liquified from steam.

**Condensation:** The process by which moisture in the air becomes water or ice on a surface (such as a window) whose temperature is colder than the air's temperature.

**Conductance:** A measure of the ability of a component to conduct electricity in mohs.

## GLOSSARY (cont.)

**Conductor:** A substance which offers little resistance to the flow of electrical currents. The piping from the roof to the building storm drain or combined sewer, located inside of the building.

**Conduit:** Metal, fiber pipe or raceway used to carry electrical conductors.

**Conduit Body:** The part of a conduit system, at the junction of two or more sections of the system, that allows access through a removable cover.

**Confluent Vent:** A vent serving more than one fixture vent or stack vent.

**Construction Joint:** Separation between two placements of concrete; a means for keying two sections together.

**Contact:** A control device that uses a small current to energize or de-energize.

**Contacts:** The conducting part of a switch that operates with another conducting part to make or break a circuit.

**Continuous Load:** A load whose maximum current continues for three hours.

**Continuous Vent:** A vent that is a continuation of the drain to which it connects.

**Continuous Waste:** A continuous drain from two or three fixtures connected to a single trap.

**Contour Line:** Solid or dashed lines showing the elevation of the earth.

**Control:** A device used to regulate the function of a component or system.

**Convection:** Transfer of heat through the movement of a liquid or gas.

**Convactor:** A heat transfer device (radiator) used in a hydronic (hot water) system.

**Coping:** The top course or cap on a masonry wall protecting the masonry below.

**Corbel:** A stone, masonry, or wood bracket projecting out from a wall.

**Corner Beads:** Metal strips that prevent damage to drywall corners.

**Cornice:** That part of the roof extending horizontally out from the wall.

**Corporation Cock:** A stopcock screwed into the street water main to supply a house service connection.

**Coulomb:** Current of one ampere per second.

## GLOSSARY (cont.)

**Coupling:** A pipe fitting with female threads used to connect two pipes.

**Course:** A horizontal layer of masonry units.

**Crawl Space:** The area under a floor that is only excavated to allow one to crawl under it.

**Cripple Jack:** A jack rafter with a cut that fits in between a hip and a valley rafter.

**Cripple Rafter:** A cripple rafter is not as long as the regular rafter.

**Cripple Stud:** A short stud that fills out the position where the stud would have been located if a window, door, or some other opening had not been there.

**Critical Level:** The point on a backflow-prevention device or vacuum breaker marked C/L which determines the minimum elevation above the flood-level rim of the fixture served at which the device may be installed; when a backflow-prevention device is not marked C/L, the bottom of the vacuum breaker or combination valve constitutes the critical level.

**Cross:** A pipe fitting with four branches in pairs, each pair on one axis.

**Cross Brace:** Wood or metal diagonal bracing used to aid in structural support between joists and beams.

**Cross Connection:** Any physical connection between two otherwise separated piping systems, one of which contains potable water and the other of unknown safety, whereby flow may occur from one system to the other.

**Crossover:** A pipe fitting with a double offset or shaped like the letter "U" with ends turned out; used to pass the flow of one pipe past another.

**Crosstalk:** The unwanted energy transferred from one circuit or wire to another.

**Cross Valve:** A valve fitted on a transverse pipe so as to open communication between two parallel pipes.

**Crown:** The top of a trap.

**Crown Vent:** A vent pipe connected at the uppermost point in the crown of a trap.

**Crows Foot:** A lath set by the grade setter with markings to indicate the final grade at a certain point.

**Cup:** To warp across the grain.

**Cup Weld:** A pipe weld in which one pipe is expanded on the end to allow the

## GLOSSARY (cont.)

entrance of the end of the other pipe.

**Curb Box:** A device at the curb that contains a valve used to shut off a supply line.

**Current:** The flow of electricity in a circuit, in AMPS.

**Curtain Wall:** Inside walls that do not carry loads.

**Cutout Box:** A surface-mounted electrical enclosure with a hinged door.

**Cutting Plane Line:** A heavy broken line with arrows, letters, and numbers at each end indicating the section view that is being identified.

**Cycle:** Measured in hertz (Hz), it is the flow of AC in one direction and then in the opposite direction in one time interval.

### **D**

**Dado:** A rectangular groove cut into a board across the grain.

**Daisy Chaining:** The connection of multiple devices in a serial fashion.

**Dampen:** To check or reduce.

**Dampproofing:** A surfacing used to coat and protect concrete and masonry from moisture.

**Data Rate:** The number of bits of information in a

transmission system, expressed in bits per second.

**Datum Point:** See Benchmark; identification of the elevation above mean sea level.

**DC Compound Motor:** The field is connected in both series and shunt with the armature.

**DC Permanent Magnet Motor:** Uses magnets, not a coil, for the field winding.

**DC Series Motor:** The field is connected in series with the armature.

**DC Shunt Motor:** The field is connected in parallel with the armature.

**DC Voltage:** Voltage that flows in one direction only.

**Dead End:** A branch leading from a soil, waste, or vent pipe, a building drain, or a building sewer which is terminated at a developed distance of 2 feet or more by means of a plug, etc.

**Dead Load:** The weight of a structure and all its fixed components.

**Decibel:** A standard logarithmic unit for the ratio of two powers, voltages, or currents. In fiber optics, the ratio is power.

## GLOSSARY (cont.)

**Deck:** The part of a roof that covers the rafters.

**Deep Cycle:** Battery type that can be discharged to a large fraction of capacity.

**Deformed Bar:** Steel reinforcement bar with ridges to prevent the bar from loosening during the concrete curing process.

**Degauss:** To remove residual permanent magnetism.

**Delta Connection:** A connection that has each coil connected end-to-end.

**Department Having Jurisdiction:** The administrative authority affected by any provision of a building code.

**Depth of Discharge (DOD):** The percent of the rated battery capacity that has been withdrawn.

**Developed Length:** The length along the center line of a pipe and fittings.

**Device (Wiring Device):** The part of an electrical system that is designed to carry, but not use, electrical energy.

**Dewpoint:** The temperature of a gas or liquid at which condensation or evaporation occurs.

**Diagonal Brace:** A wood or metal member placed diagonally over wood or metal framing to add rigidity at corners and at 25'0" of unbroken wall space.

**Diaphragm:** A flexible disk which actuates the valve stem.

**Diaphragm Control Valve:** A control valve having a spring diaphragm actuator.

**Dielectric Fitting:** A fitting having insulating parts or material that prohibits flow of electrical current.

**Differential:** The variance between two target values, one is high, the other low.

**Diffuser:** A grille or register over the air duct opening into a room which controls and directs the flow of air.

**Digestion:** The portion of the sewage treatment process where biochemical decomposition of organic matter takes place, resulting in the formation of simple organic and mineral matter.

**Dimension Line:** A line on a drawing with a measurement indicating length.

**Direct Current (DC):** Electrical current which flows in one direction only.

## GLOSSARY (cont.)

**Disk:** That part of a valve which actually closes off the flow.

**Displacement:** The volume or weight of a fluid displaced by a floating body.

**Diverter:** A piece, usually metal, used to direct moisture to a desired path or location.

**Domestic Sewage:** Liquid and water-borne wastes that are free from industrial wastes and permit satisfactory disposal without special treatment into a public or private sewer.

**Dormer:** A projection built out from a sloping roof, including one or more vertical windows.

**Dosing Tank:** A watertight tank in a septic system placed between the tank and the distribution box equipped with a pump or automatic siphon designed to discharge sewage to a disposal field.

**Double Break Contacts:** Contacts that break the current in two separate places.

**Double Disk:** A two-piece disk used in a gate valve.

**Double Offset:** Two changes of direction installed in succession or series in continuous pipe.

**Double Plate:** Usually refers to the practice of using two

pieces of dimensional lumber for support over the top section or wall section.

**Double Ported Valve:** A valve having two parts to overcome line-pressure imbalance.

**Double-Sweep Tee:** A tee made with long-radius curves between body and branch.

**Double Trimmer:** Double joists used on the sides of openings placed without regard to regular joist spacings for stairs or chimneys.

**Double Wedge:** A device used in gate valves, similar to a double disk, in which the split wedges seal independently.

**Dowel:** Straight metal bars used to connect or position two sections of concrete or masonry.

**Down:** Refers to piping running through the floor to a lower level.

**Downspout:** The rainleader from the roof to a building storm drain.

**Downstream:** Refers to a location in the direction of flow after passing a reference point.

**Drain:** Any pipe which carries waste water or water-borne wastes in a drainage system.

## GLOSSARY (cont.)

**Drainage Fitting:** A type of fitting used for draining fluid from pipes and making a smooth and continuous interior surface.

**Drainage System:** The drainage piping within public or private premises which conveys sewage, rain water, or other liquid wastes to an approved point of disposal, but not including the mains of a public sewer system.

**Drain Field:** An area of a piping system arranged in troughs for disposing liquid waste.

**Drain Tile:** Usually 4" plastic pipe with small holes that allow water to drain into it; laid along the foundation footing to drain the seepage into a sump or storm sewer.

**Droop:** The amount by which the controlled variable pressure, temperature, liquid level, or differential pressure deviates from a set value.

**Drop:** Refers to piping running to a lower elevation within the same floor level.

**Drop Elbow:** A small elbow having wings cast on each side to secure to a ceiling, wall, etc.

**Drop Siding:** Has a special groove cut into it that lets

each board fit into the next board.

**Drop Tee:** A tee having wings as in a drop elbow.

**Dross:** Solid scum that forms on the surface of a metal when molten or melting as a result of oxidation or dirt.

**Dry Wall:** A type of wall covering (gypsum board) used in place of plaster.

**Dry-Pipe Valve:** A valve used with a dry-pipe sprinkler system in which water is on one side and air is on the other.

**Dry-Weather Flow:** Sewage collected during the summer which contains little or no ground water by infiltration and no storm water.

**Duct:** A round or rectangular pipe, usually metal, used for transferring conditioned air in a heating and cooling system.

**Ductwork:** A system of pipes used to distribute air to all parts of a structure.

**Durham System:** A term used to describe soil or waste systems in which all piping is of threaded pipe, tubing, or other rigid construction.

**DWV:** Type of copper or plastic tubing used for drain, waste, or venting pipe.

## GLOSSARY (cont.)

### **E**

**Earthwork:** Excavating and grading soil.

**Easement:** A portion of land on or off a property which is set aside for utilities.

**Eave:** The lowest edge on a gable roof.

**Eaves:** The overhang of a roof projecting over walls.

**Eaves Trough:** A gutter.

**Eccentric Fittings:** Fittings whose openings are offset and allow liquid to flow freely.

**Effective Openings:** The minimum cross-sectional area at the point of discharge.

**Efficiency (EFF):** The ratio of output power to input power, expressed in percent.

**Effluent:** Sewage, treated or partially treated, flowing out of sewage treatment equipment.

**Elastic Limit:** The greatest stress which a material can withstand without a permanent deformation after release of the stress.

**Elbow:** A fitting that makes an angle between adjacent pipes.

**Electricity:** The movement of electrons through a conductor.

**Electrolysis:** The process of producing chemical changes by passage of an electric current through an electrolyte.

**Electromagnet:** Coil of wire that exhibits magnetic properties when current passes through it.

**Elevation:** An exterior or interior orthographic view of a structure, identifying the design and the materials to be used.

**Elevation Numbers:** The vertical distance above or below sea level.

**Embankment:** Area being filled with earth.

**End Connection:** The method of connecting the parts of a piping system.

**Engineered Plumbing System:** Designed by using engineering design criteria other than those given in plumbing codes.

**Equalization:** The process of restoring all cells in a battery to an equal state of charge.

**Erosion:** The gradual destruction of metal or other material by the abrasive action of liquids, gases, etc.

**Evapotranspiration:** Loss of water from the soil by evaporation and plants.

**Excavation:** The recess or pit formed by removing the earth in preparation for footings, etc.

**Excitation:** The power required to energize the

## GLOSSARY (cont.)

magnetic field of motors, transformers, generators, etc.

**Existing Work:** A plumbing system which has been installed prior to the effective date of applicable code.

**Expansion Joint:** A joint whose primary purpose is to absorb longitudinal thermal expansion in a pipe line.

**Expansion Joint:** Formed in concrete or masonry units by a bituminous fiber strip to allow for expansion and contraction.

**Expansion Loop:** A large-radius bend in a pipe line to absorb longitudinal expansion.

**Extra Heavy:** Description of piping material, usually cast iron, indicating thicker than standard.

**Extrusion:** Metal which has been shaped by forcing it in the hot or cold state through dies of the desired shape.

### **F**

**Face:** The exposed side of a framing or masonry unit.

**Face Brick:** A select brick fired to produce a desired color and effect for use in the face of a wall.

**Face-to-Face Dimensions:** The dimensions from the face

of the inlet port to the face of the outlet port of a valve, etc.

**Farad (F):** The unit of measurement of capacitance.

**Fascia:** A flat board covering the ends of rafters on the cornice or eaves.

**Fault Current:** Any current that travels an unwanted path.

**Feathering:** Raking new asphalt to join smoothly with the existing asphalt.

**Feeder:** Circuit conductors between the service and the final branch circuit OCPD.

**Female Thread:** Internal thread in pipe fittings, etc.

**Ferrule:** A precision tube that holds a fiber for alignment.

**Fiber Optics:** A technology that uses light as a digital information carrier.

**Field:** The stationary windings (magnets) of a DC motor.

**Filament:** A conductor that has a high enough resistance to cause heat.

**Filter:** A combination of circuit elements designed specifically to pass certain frequencies and resist all others.

**Filter:** Device through which fluid is passed to separate contaminants from it.

## GLOSSARY (cont.)

**Filter Element or Media:** A porous device which performs the process of filtration.

**Finish:** Any material used to complete an installation that provides an esthetic or finished appearance.

**Firebrick:** A special type of brick that is not damaged by fire; used to line the firebox.

**Fire Hydrant Valve:** A valve that drains at an underground level to prevent freezing.

### **Fire Pumps:**

**Can Pump:** A vertical-shaft turbine-type pump used to raise water pressure.

**Centrifugal Pump:** The pressure is developed by centrifugal force.

**End Suction Pump:** A single suction pump having its suction nozzle on the opposite side of the casing from the stuffing box and having the face of the suction nozzle perpendicular to the shaft.

**Excess Pressure Pump:** Low-flow, high-head pump for sprinkler systems not being supplied from a fire pump.

**Fire Pump:** A pump with driver, controls, and accessories used for fire protection service; fire

pumps are centrifugal or turbine type.

**Horizontal Pump:** The shaft is in a horizontal position.

**Horizontal Split-Case Pump:** A centrifugal pump characterized by a housing which is split parallel to the shaft.

**In-Line Pump:** A centrifugal pump whose drive unit is supported by the pump, having its suction and discharge flanges on approximately the same center line.

**Pressure Maintenance (Jockey) Pump:** A pump used to maintain pressure in a fire protection system without the operation of the fire pump.

**Vertical-Shaft Turbine Pump:** A centrifugal pump with one or more impellers discharging into one or more bowls and a vertical educator or column pipe used to connect the bowl(s) to the discharge head on which the pump driver is mounted.

**Fire Stop/Draft Stop/Fire Blocking:** A framing member used to reduce the ability of a fire to spread.

**Firewall/Fire Separation Wall/Fire Division Wall:** Any

## GLOSSARY (cont.)

wall that is used to prevent the spread of fire.

**Fitting:** The connector or closure for fluid lines.

**Fitting, Compression:** A fitting designed to join pipe or tubing by means of pressure.

**Fitting, Flange:** A fitting which utilizes a radially extending collar for sealing.

**Fitting, Welded:** A fitting attached by welding.

**Fixture Branch:** A pipe connecting several fixtures.

**Fixture Carrier:** A metal unit designed to support a plumbing fixture off the floor.

**Fixture Carrier Fittings:** Special fittings for wall-mounted fixture carriers.

**Fixture Drain:** The drain from the trap of a fixture to the junction of that drain with any other drain pipe.

**Fixture Supply:** A water-supply pipe connecting the fixture with the fixture branch or directly to a water main.

**Fixture Unit:** A measure of probable discharge into a drainage system by various types of plumbing fixtures.

**Fixture Unit Flow:** A measure of the probable hydraulic demand on a water supply by

various types of plumbing fixtures.

**Flange:** A ring-shaped plate on the end of a pipe at right angles to the end of the pipe and provided with holes for bolts to allow fastening.

**Flange Bonnet:** A valve bonnet having a flange which bolts to a matching flange on the valve body.

**Flange Ends:** A valve or fitting having flanges for joining to other piping, etc.

**Flange Faces:** Pipe flanges which have the entire surface faced straight across, using a full face or ring gasket.

**Flanges:** The parallel faces of a structural beam joined by the web of the beam.

**Flap Valve:** A Nonreturn valve in the form of a hinged disk or flap.

**Flashing:** Metal or plastic strips or sheets used for moisture protection in conjunction with other construction materials.

**Flashover:** A disruptive electrical discharge around or over an insulator.

**Flash Point:** The temperature at which a fluid gives off sufficient flammable vapor to ignite.

## GLOSSARY (cont.)

**Flat:** In roofing, any roof structure up to a 3:12 slope.

**Float Valve:** A valve which is operated by means of a bulb or ball floating on the surface of a liquid within a tank.

**Flooded:** A condition when the liquid rises to the flood-level rim of a fixture.

**Flood-Level Rim:** The top edge of a plumbing receptacle, from which water overflows.

**Flow Pressure:** The pressure in a water supply pipe near the water outlet while the faucet or outlet is fully open.

**Flue:** An enclosed passage, normally vertical, for removal of gaseous products of combustion to the outer air.

**Fluorescence:** The emission of light by a substance when exposed to radiation.

**Flush:** To be even with.

**Flush Door:** A smooth-surface door without panels or molding.

**Flushing-Type Floor Drain:** A floor drain which is equipped with an integral water supply, enabling flushing.

**Flushometer Valve:** A device which discharges a predetermined quantity of water to fixtures for flushing purposes.

**Flux:** An electrical field energy distributed in space and represented diagrammatically by means of flux lines denoting magnetic or electrical forces.

**Fly Ash:** Fine, powdery coal residue used with a hydraulic (water-resistant) concrete mix.

**Footcandle (fc):** The amount of light produced by a lamp measured in lumens divided by the area that is illuminated.

**Footing:** The part of a foundation wall or column resting on the bearing soil, rock, or piling which transmits the superimposed load to the bearing material.

**Foot Valve:** A check valve installed at the base of a pump suction pipe to maintain pump prime.

**Form:** A temporary construction member used to hold permanent materials in place.

**Foundation:** The base on which a house or building rests.

**Four-Wire Circuits:** Telephone circuits which use two separate one-way transmission paths of two wires each.

**Framing:** The wood or metal structure of a building which gives it shape and strength.

## GLOSSARY (cont.)

**French Drain:** A drain consisting of an underground passage made by filling a trench with loose stones.

**Frequency:** The number of times per second a signal regenerates itself at a peak amplitude.

**Fresh-Air Inlet:** A vent line connected with the building drain just inside the house trap and extending to the outer air providing fresh air to the lowest point of a plumbing system.

**Frostline:** The depth to which ground freezes.

**Frostproof Closet:** A hopper that has no water in the bowl and has the trap and the control valve for its water supply installed below the frost line.

**Full-Load Current (FLC):** The current required by a motor to produce the full-load torque at the motor's rated speed.

**Full-Load Torque (FLT):** The torque required to produce the rated power of the motor at full speed.

**Furring Strips:** Strips of wood attached to concrete or stone that form a nail base for wood or paneling.

**Fuse:** A protective device, also called an OCPD.

**Fusion Weld:** Joining metals by fusion, using oxyacetylene or electric arc.

### G

**Gable:** The simplest kind of roof; two large surfaces come together at a common edge, forming an inverted V.

**Gain:** A ratio of the amplitude of the output signal to the input signal.

**Galvanize:** A coating of zinc used primarily on sheet metal or pipe.

**Gambrel Roof:** A barn-shaped roof.

**Gate Valve:** A valve employing a gate, often wedge-shaped, allowing fluid to flow when the gate is lifted from the seat.

**Gauge:** The thickness of metal, glass or wire.

**Ghost Voltage:** A voltage that appears on a motor that is not connected.

**Girder:** A support for joists at one end; usually placed halfway between the outside walls and runs the length of the building.

**Glaze:** To install glass.

**Globe Valve:** Globe-shaped body with a manually raised or lowered disc.

## GLOSSARY (cont.)

**Glu-lam (GLB):** Beam made from milled 2x lumber bonded together.

**Grade:** An existing or finished elevation in earthwork; a sloped portion of a roadway; sizing of gravel and sand; the structural classification of lumber.

**Grade:** The slope or fall of a line of pipe with reference to a horizontal plane; in drainage it is expressed as the fall in a fraction of an inch.

**Grade Beam:** A low foundation wall or a beam, usually at ground level, which provides support for the walls of a building.

**Grade Break:** A change in slope from one incline ratio to another.

**Grade Lath:** A piece of lath that the surveyor marked to indicate the correct grade to the operators.

**Grade Pins:** Steel rods driven into the ground at each surveyor's hub.

**Grader:** A power excavating machine with a central blade that can be angled to cast soil on either side.

**Gravel Stop:** The edge metal used at the eaves of a built-up roof to hold the gravel.

**Green:** Uncured or set concrete or masonry; freshly cut lumber.

**Grid:** An electrical utility distribution network.

**Grid System:** A system of metal strips that supports a drop ceiling.

**Ground:** An electrical connect between equipment and the earth.

**Ground Fault:** Current from a hot line is flowing to the ground.

**Ground-Fault Circuit Interrupter (GFCI):** An electrical device which protects personnel by detecting hazardous ground faults and quickly disconnects power from the circuit.

**Grounding:** The connection of all exposed non-current-carrying metal parts to earth.

**Ground Joint:** The parts are precisely finished and then ground in so that the seal is tight.

**Grout:** A cementitious mixture of high water content made from Portland cement, lime, and aggregate, used to secure anchor bolts and vertical reinforcing rods in masonry walls.

## GLOSSARY (cont.)

**Guinea:** A survey marker driven to grade; it may be colored with paint.

**Gusset:** A triangular or rectangular piece of wood or metal that is usually fastened to the joint of a truss to strengthen it.

**Gutter:** A metal trough set below the eaves to catch and conduct water to a downspout.

**Guy:** A wire having one end secured and the other fastened to a pole or structure under tension.

**Gypsum:** A chalk used to make wallboard; made into a paste, inserted between two layers of paper and allowed to dry.

### **H**

**Habitable Space:** In residential construction, the interior areas of a residence used for eating, sleeping, living, and cooking; excludes bathrooms, storage rooms, utility rooms, and garages.

**Hanger:** Metal fabrication made for placing and supporting joists and rafters.

**Hardware:** Any component used to hang, support, or position another component.

**Hardwood:** Wood from a tree that sheds its leaves.

**Haunch:** Portion of a beam that increases in depth toward the support.

**Header:** A framing member used to hide the ends of joists along the perimeter of a structure; also known as a rim joist; the horizontal structural framing member installed over wall openings to aid in the support of the structure above.

**Header:** A large pipe or drum into which each of a group of boilers is connected; also used for a large pipe from which a number of smaller ones are connected in line from the side of the large pipe.

**Header Course:** In masonry, a horizontal row of brick laid perpendicular to the wall face; used to tie a double-wythe brick wall together.

**Head Joint:** The end face of a brick or concrete masonry unit to which the mortar is applied.

**Heater:** A device that is placed in a motor starter to measure the amount of current in the power line.

**Heating Element:** A conductor (wire) that offers enough resistance to produce heat when connected to power.

## GLOSSARY (cont.)

**Henry (H):** The unit of measure of inductance.

**Hertz (Hz):** One Hertz is equal to one cycle of the AC sine wave per second.

**Hidden Line:** A dashed line identifying portions of construction that are a part of the drawing but cannot be seen; e.g., footings on foundation plans.

**HID Lamp:** High-intensity discharge lamp.

**Hip Rafters:** A member that extends diagonally from the corner of the plate to the ridge.

**Hip Roof:** A structural sloped roof design with sloped perimeters from ridge to plate line.

**Hollow-Core Door:** A lightweight flush door with an interior core of glued strips forming a honeycomb and two exterior smooth panels.

**Honeycomb:** Voids or open spaces left in concrete due to a loss or a shortage of mortar.

**Horizontal Branch:** A drain pipe extending laterally from a soil, waste stack, or drain.

**Horsepower (HP):** A unit of power equal to 746 watts that describes the output of electric motors.

**Hose Bibb:** A faucet used to connect a hose.

**Hub:** A device which connects to several other devices, usually in a star topology.

**Hub and Spigot:** Piping made with an enlarged diameter or hub at one end and plain or spigot at the other end; the joint is made tight by oakum, lead, or gasket.

**Hubless:** Soil piping with plain ends; the joint is made tight with a clamp and gasket.

**HVAC:** Heating, Ventilating and Air Conditioning.

**Hybrid:** An electronic circuit that uses different cable types to complete the circuit.

**Hydraulic Cement:** A cement used in a concrete mix capable of curing under water.

### I

**Impedance (Z):** The total opposition offered to the flow of AC from resistance and reactance measured in ohms ( $\Omega$ ).

**Increaser:** A pipe coupling used between pipes of different sizes.

**Indirect Waste Pipe:** A pipe that does not connect directly with the drainage system but discharges into a plumbing

## GLOSSARY (cont.)

fixture or receptacle that is connected directly to the drainage system.

**Individual Vent:** A pipe installed to vent a fixture trap that connects with the vent system above the fixture served or terminates in air.

**Induced Siphonage:** Loss of liquid from a fixture trap due to pressure differential between the inlet and outlet of the trap.

**Inductance (L):** The property of a circuit that determines how much voltage will be induced into it by a change in current of another circuit; measured in henrys (H).

**Inductive Circuit:** A circuit in which current lags voltage.

**Inductive Reactance ( $X_L$ ):** The opposition to the flow of AC in a circuit due to inductance, measured in ohms ( $\Omega$ ).

**Industrial Waste:** All liquid or water-borne waste from industrial or commercial processes.

**In-Phase:** The state when voltage and current reach maximum amplitude and zero level at the same time.

**Insanitary:** A condition which is contrary to sanitary principles or is unhealthy.

**Insulating Glass:** A window or door glass consisting of two sheets of glass separated by a sealed air space.

**Insulation:** Any material capable of resisting thermal, sound, or electrical travel.

**Insulation Resistance:** The R factor in insulation calculations.

**Insulator:** Material in which current cannot flow easily.

**Integrally Cast:** Element (such as concrete joist and top slab) cast in one piece. See Monolithic.

**Interceptor:** A device that separates and retains hazardous or undesirable matter from normal wastes and permits normal liquid wastes to discharge into the disposal terminal by gravity.

**Interface:** The point at which two systems connect.

**Invert:** The lowest point on the interior of a horizontal pipe.

**Isolated Grounded Receptacle:** Minimizes electrical noise by providing a separate grounding path.

**Isolation Transformer:** A one-to-one transformer used to isolate equipment at the secondary from earth ground.

## GLOSSARY (cont.)

**Isometric Projection:** A pictorial drawing positioned so that its principal axis make equal angles with the plane of projection.

### J

**Jack:** A receptacle (female) used with a plug (male) to make a connection.

**Jacket:** The protective and insulating outer housing on a cable. Also called a sheath.

**Jack Rafter:** A part of the roof structure raftering that does not extend the full length from the ridge beam to the top plate.

**Jamb:** The part that surrounds a door or window frame.

**Joint Compound:** Material used with a paper or fiber tape for sealing indentations and breaks in drywall construction.

**Joist:** A structural horizontal framing member used for floor and ceiling support.

**Joist Hangers:** Metal brackets that hold up the joist.

**Joule:** A unit of electrical energy also called a watt-second.

**Jumper:** Patch cable or wire used to establish a circuit, often temporarily, for testing.

**Junction Box:** A box, usually metal, that encloses cable connections.

### K

**Kalamein Door:** A metal-covered, fireproof door.

**Key:** A depression made in a footing so that the foundation or wall can be poured into the footing, preventing the wall or foundation from moving during changes in temperature or settling.

**Kicker Blocks:** Cement poured behind each bend or angle of water pipe for support.

**Kiln-Dried Lumber:** Lumber that is seasoned under controlled conditions.

**Kilo:** The metric system prefix meaning one thousand.

**King Stud:** A full-length stud from the bottom plate to the top plate, supporting both sides of a wall opening.

**Knee Wall:** Vertical framing members supporting and shortening the span of the roof rafters.

**kWH:** Kilowatt hour. The basic unit of electrical energy for utilities, equal to one thousand watts of power supplied for one hour.

## GLOSSARY (cont.)

### L

**Labeled:** Equipment or materials bearing a label of a listing agency.

**Lally Column:** A vertical steel pipe, usually filled with concrete, used to support beams and girders.

**Laminated Plastic:** Layers of cloth or other fiber impregnated with plastic.

**Lamination:** A method of constructing by placing layer upon layer of material and bonding with an adhesive.

**Lamp:** A light source. Reference is to a light bulb.

**Landing:** A platform in a flight of stairs to change the direction or break a run.

**Lapped Joint:** A pipe joint made by using loose flanges on lengths of pipe whose ends are lapped over to produce a bearing surface for a gasket or metal-to-metal joint.

**Lap Weld Pipe:** Made by welding along a scarfed longitudinal seam in which one part is overlapped by the other.

**Lateral:** Underground electrical service.

**Lateral Sewer:** A sewer which does not receive sewage from any other

common sewer except house connections.

**Lath:** Backup support for plaster; may be of wood, metal, or gypsum board.

**Lavatory:** Bathroom; vanity basin.

**Lay-In Ceiling:** A suspended ceiling system.

**Leaching Well:** A pit or receptacle having porous walls which permit the contents to seep into the ground; also called a dry well.

**Leach Line:** A perforated pipe used as a part of a septic system to allow liquid overflow to dissipate into the soil.

**Leader:** The water conductor from the roof to the building storm drain.

**Lead Joint:** A joint made by pouring molten lead into the space between a bell and spigot and making the lead tight by caulking.

**Leakage Current:** Current that flows through insulation.

**Ledger:** Structural framing member used to support ceiling and roof joists at the perimeter walls.

**Leg (Circuit):** One of the conductors in a supply circuit in which the maximum voltage is maintained.

## GLOSSARY (cont.)

**Level-Transit:** An optical device that is a combination of a level and a means for checking vertical and horizontal angles.

**Lift:** Any layer of material or soil placed upon another.

**Lift Slab:** Concrete floor construction in which slabs are cast directly on one another secured by column brackets or collars.

**Lintel:** Support for a masonry opening, usually steel angles or special forms.

**Lip Union:** A union characterized by a lip that prevents a gasket from being squeezed into the pipe.

**Liquid Waste:** The discharge of a plumbing system which does not receive fecal matter.

**Listed:** Equipment or materials that comply with approved standards or has been tested and found suitable for use in a specified manner.

**Live Load:** Any movable equipment or personal weight to which a structure is subjected.

**Load:** The amount of electric power used by any electrical unit or appliance at any given moment.

**Load:** The weight of a building.

**Load Conditions:** The conditions under which a roof must perform.

**Load Factor:** The percentage of the total connected fixture unit flow which is likely to occur at any point in a drainage system.

**Location, Damp:** Partially protected locations, such as under canopies, roofed open porches, basements, barns, etc.

**Location, Wet:** Locations underground, in concrete slabs, where saturation occurs, or outdoors.

**Locked Rotor:** Condition when a motor is loaded so heavily that the shaft cannot turn.

**Locked Rotor Current (LRC):** The steady-state current with the rotor locked and the voltage applied.

**Locked Rotor Torque (LRT):** The torque a motor produces when the rotor is stationary and full power is applied.

**Lockset:** The doorknob and associated locking parts inserted in a door.

**Longitudinal:** The long dimension of an object.

**Lookout:** The structural member running from the outside wall to the ends of

## GLOSSARY (cont.)

rafters to carry the plancier or soffit.

**Louver:** A ventilated opening in the attic, usually at a gabled end, made of inclined horizontal slats, to permit air to pass but to exclude moisture.

**Lumen (lm):** The unit used to measure the total amount of light produced by a source.

### **M**

**Magnetic Field:** The invisible field produced by a current-carrying conductor, coil, etc. which develops a north and south polarity.

**Magnetic Flux:** The invisible lines of force that make up a magnetic field.

**Main:** The principal artery of a system of continuous piping, to which branches may be connected.

**Main Vent:** A vent header to which vent stacks are connected.

**Malleable:** Capable of being shaped by hammer or rolling pressure.

**Malleable Iron:** Cast iron that is heat-treated.

**Manifold:** A fitting with a number of branches in line connecting to smaller pipes.

**Masonry:** Manufactured materials of clay (brick), concrete (CMU), and stone.

**Mastic:** An adhesive used to hold tiles in place; also refers to adhesives used to glue many types of materials.

**Mat:** Asphalt as it comes out of a spreader box or paving machine in a smooth, flat form.

**Maximum Density and Optimum Moisture:** The highest point on the moisture–density curve; considered the best compaction of the soil.

**Medium Pressure:** Means that valves and fittings are suitable for a working pressure of 125 to 175 psi.

**MEE Pipe:** Pipe that has been milled on each end and left rough in the center; MEE stands for “milled each end.”

**Membrane Roofing:** Built-up roofing.

**Mesh:** Common term for welded-wire fabric, plaster lath.

**Mil:** 0.001 inch.

**Mill Length:** Also known as random length; run-of mill pipe is 16 to 20 feet in length; some pipe is made in double lengths of 30 to 35 feet.

**Minute:** 1/60th of a degree.

## GLOSSARY (cont.)

**MOA Pipe:** Pipe that has been milled end to end; MOA stands for “milled over all”.

**Modular Measurement:** The design of a structure to use standard-size building materials. In the customary system of measurement the module is 4 inches. In the metric system, the recommended module is 100 millimeters.

**Moisture Barrier:** A material used for the purpose of resisting exterior moisture penetration.

**Moisture-Density Curve:** A graph showing at what point of added moisture the maximum density occurs.

**Moldings:** Trim mounted around windows, floors, etc.

**Monolithic Concrete:** Concrete placed as a single unit including footings.

**Mortar:** A concrete mix used for bonding masonry.

**Motor:** A machine that develops torque on a shaft to produce work.

**Motor Efficiency:** The effectiveness of a motor to convert electrical energy into mechanical energy.

**Motor Starter:** An electrically operated switch (contactor)

that includes overload protection.

**Motor Torque:** The force that produces rotation in a shaft.

**Multiplex:** To combine multiple input signals into one for transmission over a single high-speed channel.

### **N**

**Natural Grade:** Existing or original grade elevation.

**Neat Cement:** A pure cement mixture, with no sand or other material added.

**NEC:** National Electrical Code, which contains safety rules for installations.

**Needle Valve:** A valve with a long tapering point in place of an ordinary valve disk.

**Nipple:** A tubular pipe fitting normally threaded on both ends and less than 12 inches in length.

**No-Load Current:** The current demand of a transformer primary when no current demand is made on the secondary.

**Nominal Size:** A general classification term used to designate size of commercial products, such as a 2 × 4. This is not an actual size.

## GLOSSARY (cont.)

**Nominal Size:** Original cut size of a piece of lumber prior to milling and drying; size of a masonry unit, including mortar bed and head joint.

**Nonbearing:** Not supporting any structural load.

**Normally Closed Contacts:** Contacts that are closed before being energized.

**Normally Open Contacts:** Contacts that are open before being energized.

**Nuclear Test:** A test to determine soil compaction by sending nuclear impulses into the compacted soil and measuring the returned impulses reflected from the compacted particles.

### **O**

**O.D. Pipe:** Pipe that measures over 14 inches normal pipe size, where the nominal size is the outside diameter and not the inside diameter.

**Offset:** A combination of pipe and/or fittings which join two nearly parallel sections of a pipe line.

**Ohm:** The unit of measurement of electrical resistance.

**Ohm's Law:** A law which describes the mathematical relationship among voltage, current, and resistance.

**On Center (O/C):** The distance between the centers of two adjacent components.

**Open Circuit:** A condition that provides no path for electric current to flow in a circuit.

**Open-Circuit Voltage:** The maximum voltage produced without a load applied.

**Open-Web Joist:** Roof joist made of wood or steel construction with a top chord and bottom chord connected by diagonal braces. Some manufacturers make a joist with chords of wood and a steel web and refer to it as a truss joist.

**Orthographic Projection:** The basis of architectural plan and elevation drawings.

**Oscillation:** Fluctuations in a circuit.

**Outfall Sewers:** Sewers receiving sewage from a collection system and carrying it to the point of final discharge or treatment.

**Outlet:** Where the current is taken to supply equipment.

**Overload Protection:** A device that prevents overloading a circuit or motor.

**Oxidized Sewage:** Sewage in which the organic matter has been combined with oxygen, resulting in natural stability.

## GLOSSARY (cont.)

### **P**

#### **Package Air Conditioner or**

**Boiler:** All components are packaged in a single unit.

**Pad:** In earthwork or concrete foundation work, the base materials used on which to place the concrete footing and/or slab.

**Panel Door:** A door of solid frame strips with inset panels.

**Parallel Circuit:** More than one path through which current flows.

**Parapet:** An extension of an exterior wall above the line of the roof.

**Parging:** A thin moisture-protection coating of plaster or mortar over a masonry wall.

**Partition:** An interior wall separating two rooms or areas of building; usually nonbearing.

**Penny (d):** Unit of measure of nails used by carpenters.

**Percolation:** The seeping of a liquid downward through a filtering medium.

**Perimeter:** The outside edges of a plot of land or building; it represents the sum of all the individual sides.

**Perimeter Insulation:** Insulation placed around the outside edges of a slab.

**Photovoltaic:** Changing light into electricity.

**Pier:** A heavy column of masonry between two openings used to support other structural members.

**Pilaster:** A column projecting on the outside or inside of a masonry wall to add strength or decorative effect.

**Pile:** A steel or wooden pole driven into the ground sufficiently to support the weight of a wall and building.

**Pillar:** A pole or reinforced wall section used to support the floor and consequently the building.

**Pitch:** The amount of slope or grade given to horizontal piping and expressed in inches.

**Pitch:** The slant or slope from the ridge to the plate.

**Plan View:** A bird's-eye view of a construction layout cut at 5'0" above finish floor level.

**Plancier:** The board or panel forming the underside of the eave or cornice.

**Plaster:** A mixture of cement, water, and sand.

**Plat:** A drawing of a parcel of land indicating lot number, location, boundaries, and dimensions. Contains

## GLOSSARY (cont.)

information as to easements and restrictions.

**Plate:** A roof member which has the rafters fastened to it at their lower ends.

**Platform Framing:** Also known as western framing; structural construction in which all studs are only one story high with joists over.

**Plenum:** A chamber in an A/C system which receives air under pressure before distribution to ducts.

**Plug Valve:** A valve with a short section of a cone or tapered plug.

**Plumb:** Perpendicular or vertical. Also: to make a structure vertical.

**Plumbing:** The practice, materials, and fixtures used in the installation, maintenance, and alteration of all piping, fixtures, appliances, etc, in connection with sanitary or storm drainage facilities; venting systems; public or private water supply systems within or adjacent to any building or structure.

**Plumbing Appliance:** A plumbing fixture which is intended to perform a special function; its operation may be dependent on one or more energized components; and

these fixtures may operate automatically through a time cycle, temperature range, pressure range, etc.

**Plumbing Appurtenances:** A manufactured device, prefabricated assembly, or job-assembled component which is added to a basic plumbing system.

**Plumbing Fixtures:** Installed receptacles, devices, or appliances which are supplied with water or which receive liquid or liquid-borne wastes and discharge such wastes into a drainage system.

**Plumbing Inspector:** Is authorized to inspect plumbing and drainage as defined in the code for the municipality.

**Plumbing System:** All potable water supply and distribution pipes, plumbing fixtures and traps, drainage and vent pipes, and all building (house) drains, devices, receptacles, and appurtenances within the property lines of the premises.

**Pocket Door:** A door which slides into a partition or wall.

**Point of Beginning (POB):** The point on a property from which all measurements and azimuths are established.

## GLOSSARY (cont.)

**Polarity:** The particular state of an object, either positive or negative.

**Polymer:** A chemical compound formed by polymerization.

**Polyvinyl Chloride (PVC):** A plastic material commonly used for pipe and plumbing.

**Pool:** A water receptacle used for swimming or bathing, designed to accommodate more than one person.

**Portland Cement:** One variety of cement and the basis of concrete and mortar.

### **Post-and-Beam**

**Construction:** A type of wood frame construction using timber for the structural support.

**Post-Tensioning:** The application of stretching steel cables embedded in a concrete slab to aid in strengthening the concrete.

**Potable Water:** Water which is satisfactory for drinking, cooking, etc.

**Power:** A basic unit of electrical energy, measured in watts.

**Power Factor:** The ratio of true power (kW) to apparent power (kVA).

**Precipitation:** The total measurable supply of water received directly from clouds

as snow, rain, etc, expressed in inches.

**Prehung:** Refers to doors or windows that are already mounted in a frame and are ready for installation.

**Pressure Treatment:** Impregnating lumber with a preservative chemical under pressure in a tank.

**Prestressed Concrete:** Concrete in which the steel is tensioned (stretched) and anchored to compress the concrete.

**Primary Winding:** The input side of a transformer.

**Primer:** The first coat of paint or glue when more than one coat will be applied.

**Private Sewage Disposal System:** A septic tank with the effluent discharging into a subsurface disposal field and/or one or more seepage pits.

**Private Sewer:** A sewer not directly controlled by public authority.

**Private Use:** Plumbing fixtures in residences, apartments, private bathrooms in hotels and hospitals, rest rooms in commercial establishments containing restricted-use single fixture or groups of

## GLOSSARY (cont.)

single fixtures, etc. where the fixtures are intended for use of family or individual.

**Public Sewer:** A common sewer directly controlled by public authority.

**Public Use:** Applies to locked and unlocked bathrooms used by employees, occupants, or patrons in any premises.

**Purlin:** A horizontal framing member spanning between rafters.

**Putrefaction:** Biological decomposition of organic matter with the production of foul-smelling products.

### **Q**

**Quarry Tile:** An unglazed clay or shale flooring material produced by extrusion.

**Quick Set:** A fast-curing cement plaster.

### **R**

**Rabbet:** A groove cut in or near the edge of a piece of lumber to fit the edge of another piece.

**Raceway:** Any partially or totally enclosed container for placing electrical wires.

**Rafter:** In sloped roof construction, the framing member extending from the ridge or hip to the top plate.

**Reactance (X):** The measure of inductance of a circuit, measured in ohms.

**Rebar:** A reinforcement steel rod in a concrete footing.

**Receptacle:** An electrical outlet to which an electrical device may be connected by means of a plug.

**Receptor:** A plumbing fixture that receives the discharge from indirect waste pipes that is made and located to be cleaned easily.

**Reduced-Size Vent:** Dry vents which are smaller than those allowed by codes.

**Reducer:** A pipe fitting with inside threads that are larger at one end than at the other.

**Register:** A grille used to cover an air duct opening.

**Reglet:** A long narrow slot in concrete to receive flashing or to serve as anchorage.

**Relay:** A device that controls one electrical circuit by opening and closing the contacts in another circuit.

**Relief Valve:** Designed to open automatically to relieve excess pressure.

**Relief Vent:** A vent designed to provide circulation of air between drainage and vent

## GLOSSARY (cont.)

systems or to act as an auxiliary vent.

**Residual Pressure:** Pressure remaining in a system while water is being discharged from outlets.

**Resilient Flooring:** Flooring made of plastics rather than wood products.

**Resistance (R):** The opposition to the flow of current in an electrical circuit, measured in ohms.

**Resistance-Weld Pipe:** Pipe made by bending plate into circular form and passing current through to obtain a welding heat.

**Resistive Circuit:** A circuit containing resistive loads such as heating elements.

**Resonance (f):** When the inductive reactance ( $X_L$ ) equals capacitive reactance ( $X_C$ ) in a circuit, measured in hertz (Hz).

**Return Offset:** A double offset installed to return a pipe to its original alignment.

**Revent Pipe:** That part of a vent pipe line which connects directly with an individual waste or group of wastes, underneath or back of the fixture, and extends to the main or branch vent pipe.

**R Factor:** The numerical rating given any material that is able to resist heat transfer for a specific period of time.

**Ridge:** The highest point on a sloped roof.

**Ridge Board:** A horizontal member that connects the upper ends of the rafters on one side to the rafters on the opposite side.

**Right-of-Way Line:** A line on the side of a road marking the limit of the construction area and, usually, the beginning of private property.

**Rim:** An unobstructed open edge of a fixture.

**Rise:** In roofing, rise is the vertical distance between the top of the double plate and the center of the ridge board; in stairs, it is the vertical distance from the top of a stair tread to the top of the next tread.

**Riser:** A water supply pipe which extends vertically one full story or more to convey water to branches or fixtures; a vertical pipe used for fire protection to elevations above or below grade.

**Riser:** The vertical part at the edge of a stair.

## GLOSSARY (cont.)

**Rolling Offset:** Same as offset, but used where the two lines are not in the same vertical or horizontal plane.

**Roll Roofing:** A type of built-up roofing material made of rag, paper, and asphalt.

**Roof Drain:** A drain installed to remove water collecting on the surface of a roof and to discharge it into a leader.

**Roof Jack:** The sheet metal device placed around a pipe projecting through the roof to prevent moisture.

**Roof Pitch:** The ratio of total span to total rise expressed as a fraction.

**Rotary Converter:** A type of phase converter.

**Rotary-Pressure Joint:** A joint for connecting a pipe under pressure to a rotating machine.

**Roughing-In:** The installation of all parts of a plumbing system which can be completed prior to the installation of fixtures; this includes drainage, water supply, and vent piping.

**Rough Opening:** A large opening made in a wall frame or roof frame to allow the insertion of a door or window.

**RS:** Reference Stake, from which measurements and grades are established.

**Run:** A length of pipe made up of more than one piece; a portion of a fitting having its ends in line.

**Run:** The shortest horizontal distance measured from a plumb line through the center of the ridge to the outer edge of the plate.

**R Value:** The unit that measures the effectiveness of insulation; the higher the number, the better the insulation qualities.

### **S**

**Saddle:** A small, gable-type roof constructed between a vertical surface such as the chimney and a sloped roof.

**Saddle Flange:** A flange curved to fit a boiler or tank and to be attached to a threaded pipe.

**Sand Cone Test:** A test for determining the compaction level of soil, by removing an unknown quantity of soil and replacing it with a known quantity of sand.

**Sand Filter:** A water treatment device for removing solid or colloidal material.

## GLOSSARY (cont.)

**Sanitary Sewer:** A conduit or pipe carrying sanitary sewage.

**Saturated Steam:** Steam at the same temperature as water boils under the same pressure.

**Scabs:** Boards used to join the ends of a girder.

**Scale:** A measuring device with graduations for laying off distances. Also: the ratio of size that a structure is drawn, such as  $\frac{1}{4}'' \times 1'-0''$  which is  $\frac{1}{48}$  size.

**Schedule:** A list of details or sizes for building components, such as doors, windows, or beams.

**Schematic:** A one-line drawing for electrical circuitry or isometric plumbing diagrams.

**Scissors Truss:** A truss constructed to the roof slope at the top chord with the bottom chord designed with a lower slope for interior vaulted or cathedral ceilings.

**Scraper:** A digging, hauling, and grading machine having a cutting edge, a carrying bowl, a movable front wall, and a dumping mechanism.

**Scratch Coat:** First coat of plaster placed over lath in a three-coat plaster system.

**Screed:** A template to guide finishers in leveling off the top

of fresh concrete. Screeding is "rough leveling."

**Screwed Flange:** A flange screwed on a pipe.

**Screwed Joint:** A pipe joint consisting of threaded male and female parts.

**Scupper:** An opening in a parapet wall attached to a downspout for water drainage from the roof.

**Scuttle:** Attic or roof access with cover or door.

**Sealant:** A material used to seal off openings against moisture and air penetration.

**Seamless Pipe:** Pipe or tube formed by piercing a billet of steel and then rolling.

**Secondary Winding:** The output side of a transformer.

**Section:** A vertical drawing showing architectural or structural interior design developed at the point of a cutting-plane line on a plan view; the section may be transverse—the gable end—or longitudinal—parallel to the ridge.

**Seepage Pit:** A lined excavation in the ground which receives the discharge of a septic tank and the effluent seeps through its bottom and sides.

## GLOSSARY (cont.)

**Seismic Design:**

Construction designed to withstand earthquakes.

**Septic System:** A waste system that includes a line from the structure to a tank and a leach field.

**Septic Tank:** Receives the discharge of a drainage system so as to separate solids from liquids and digest organic matter through a period of retention.

**Series Circuit:** A circuit that has only one current path.

**Service Fitting:** A street ell or tee with male threads at one end and female at the other.

**Service Pipe:** A pipe connecting water or gas mains with a building.

**Set:** Same as offset, but used where the connected pipes are not in the same vertical or horizontal plane.

**Setback:** In a pipe bend, the distance measured back from the intersection of the center lines to start of bend.

**Setback:** The distance from the property boundaries to the building location.

**Sewage:** Any liquid waste containing animal, vegetable, or chemical wastes in suspension or solution.

**Sewage Ejector:** A mechanical device or pump for lifting sewage.

**Shakes:** Shingles made of hand-split wood, in most cases western cedar.

**Shear Wall:** A wall construction designed to withstand shear pressure caused by wind or earthquake.

**Sheathing:** The outside layer of wood applied to studs to close up a house or wall; also used to cover the rafters.

**Sheepsfoot Roller:** A compacting roller with feet expanded at their outer tips used in compacting soil.

**Shelf Angles:** Structural angles which are bolted to a concrete wall to support brick work, stone, or terra cotta.

**Shoring:** Temporary support made of metal or wood, used to support other components.

**Short Circuit:** An undesired path for electrical current.

**Short Nipple:** A nipple whose length is longer than a close nipple.

**Shoulder Nipple:** Halfway between the length of a close nipple and a short nipple.

**Shunt:** Denotes a parallel connection.

## GLOSSARY (cont.)

**Siamese:** A hose fitting for combining the flow from two or more lines into a single stream.

**Side Vent:** A vent connected to a drain pipe through a fitting at an angle not greater than 45° to the vertical.

**Sill:** A piece of wood that is anchored to the foundation.

**Sill Cock:** A hose bibb.

**Single-Phase Power:** One of the three alternating currents in a circuit.

**Sinker Nail:** A nail for laying subflooring.

**Size:** Size is a special coating used for walls before wallpaper is applied.

**Skewed:** At an angle other than 99°.

**Slab:** A flat area of concrete such as a floor or drive.

**Slab-on-Grade:** The foundation construction for a structure with no crawl space or basement.

**Sleeper:** Wood strips laid over or embedded in a concrete floor for attaching a finished floor.

**Sleeve Weld:** Butting two pipes together and welding a sleeve over the outside.

**Slip-On Flange:** A flange slipped over the end of the pipe and then welded.

**Sludge:** The accumulated suspended solids of sewage deposited in tanks, beds, or basins and mixed with water to form a semiliquid.

**Slump:** The consistency of concrete at the time of placement.

**Socket Weld:** A joint made by use of a socket-weld fitting which has a prepared female end for insertion of the pipe to which it is welded.

**Soffit:** A covering for the underside of the overhang of a roof.

**Soil Pipe:** Any pipe which conveys the discharge of water closets, urinals, or fixtures to a building drain or sewer.

**Solder Joint:** A method of joining tube by use of solder.

**Solenoid:** An electromagnet with a movable iron core.

**Soleplate:** A 2 × 4 or 2 × 6 used to support studs in a horizontal position; it is placed against the flooring and nailed into position onto the subflooring.

**Solid-Core Door:** A flush door having an interior core of solid wood blocks glued together and an exterior of finished veneer paneling or other material, such as hardboard.

## GLOSSARY (cont.)

**Span:** The horizontal distance between exterior bearing walls in a transverse section.

**Spandrel Beam:** The beam in an exterior wall of a structure.

**Spandrel Wall:** The portion of a wall above the head of a window and below the sill of the window above.

**Special Wastes:** Wastes which require some special method of handling, such as corrosion-resistant piping, sand, oil or grease interceptors, condensers, or other pretreatment facilities.

**Specifications:** The written instructions detailing the requirements for a project.

**Specs:** Short for Specifications. The written directions and detailed instructions which are used with the blueprints.

**Spiral Pipe:** Pipe made by coiling a plate into a helix and riveting or welding the edges.

**Split-Phase Motor:** A single-phase AC motor that has a running and a starting winding.

**Split-Wired Receptacle:** A receptacle that has the metal tap removed between the hot terminals.

**Spoil Site:** Area used to dispose of unsuitable or excess excavation material.

**Spreader:** Brace used across the top of concrete forms.

**Sprinkler System:** An integrated system of underground and overhead piping designed in accordance with fire protection standards.

**Sprinkler System Classification:**

1. Wet-pipe systems
2. Dry-pipe systems
3. Pre-action systems
4. Deluge systems
5. Combined dry-pipe and pre-action systems

**Square:** Refers to a roof-covering area; a square consists of 100 square feet.

**Stack:** The vertical main of a system of soil, waste, or vent piping extending through one or more stories.

**Stack Group:** The location of fixtures in relation to the stack.

**Stack Vent:** The extension of a soil or waste stack above the highest horizontal drain connected to the stack; also known as a waste or soil vent.

**Stain:** A paintlike material that imparts a color to wood.

**Stainless Steel Pipe:** An alloy steel pipe with corrosion-resisting properties.

## GLOSSARY (cont.)

**Standard Pressure:** Formerly used to designate cast-iron flanges, fittings, valves, etc., suitable for a maximum working steam pressure of 125 psi.

**Standpipe:** A vertical pipe generally used for the storage and distribution of water for fire extinguishing purposes.

**Standpipe System:** An arrangement of piping, valves, hose connections, and equipment installed in a structure with the hose connections located in such a manner that water can be discharged in streams or spray patterns for extinguishing fires.

**Stepped Footing:** A footing that may be located on a number of levels.

**Stool:** The flat shelf that rims the bottom of a window frame on the inside of a wall.

**Stop Valve:** The control of water supply to a single fixture.

**Storm Sewer:** A sewer used for conveying rain water, surface water condensate, cooling water, or similar liquid wastes exclusive of sewage.

**Story:** The space between two floors of a building or between a floor and the ceiling above.

**Strain:** Change of shape or size of body produced by stress.

**Street Elbow:** An elbow with male thread on one end and female thread on the other.

**Stress:** Reactions within a body resisting external forces acting on it.

**Stress Skin Panels:** Large prebuilt panels used as walls, floors, and roof decks built in a factory and hauled to the building site.

**String Line:** A nylon line usually strung tightly between supports to indicate both direction and elevation; used in checking grades or deviations in slopes or rises.

**Strip Flooring:** Wooden strips that are applied perpendicular to the joists.

**Strongbacks:** Braces used across ceiling joints that help align, space, and strengthen joists for drywall installation.

**Structural Steel:** Heavy steel larger than 12 gauge, identified by shape.

**Stucco:** A type of masonry finish used on the outside of a building applied over a wire mesh.

**Studs:** The vertical boards (usually  $2 \times 4$  or  $2 \times 6$ ) that make up the walls of a building.

## GLOSSARY (cont.)

**Subfloor:** A platform that supports the rest of the structure underlayment.

**Subgrade:** The uppermost level of material placed in embankments or left at cuts in the normal grading of a road bed.

**Sub-Main Sewer:** A branch sewer into which the sewage from two or more lateral sewers is discharged.

**Subsoil Drain:** A drain which receives only subsurface or seepage water.

**Summit:** The highest point of any area or grade.

**Sump:** A tank or pit which receives sewage or liquid waste located below the grade of the gravity system.

**Sump Pump:** A mechanical device for removing liquid waste from a sump.

**Super:** A continuous slope in one direction on a road.

**Superheated Steam:** Steam at a higher temperature than that at which water would boil under the same pressure.

**Superstructure:** Frame of the building, usually above grade.

**Supervisory Switch:** A device attached to the handle of a valve, which, when the

valve is closed, will announce a trouble signal.

**Supports:** Devices for supporting and securing pipe and fixtures.

**Swale:** A shallow dip made to allow the passage of water.

**Sway Brace:** A piece of 2 × 4 or similar material used to temporarily brace a wall from wind until it is secured.

**Swedes:** A method of setting grades at a center point by sighting across the tops of three laths; two laths are placed at a known correct elevation and the third is adjusted until it is at the correct elevation.

**Swing Joint:** An arrangement of screwed fittings and pipe that provides for expansion.

**Switch (Electrical):** A device to start or stop the flow of electricity.

**Swivel Joint:** A joint employing a special fitting that is pressure-tight under movement.

**Symbol:** A pictorial representation of a material or component on a plan.

### **T**

**Tail Joist:** A short beam or joist supported in a wall on one end and by a header on the other.

## GLOSSARY (cont.)

**Tail/Rafter Tail:** That portion of a roof rafter extending beyond the plate line.

**Tamp:** To pack tightly; usually refers to making sand tightly packed or making concrete mixed properly in a form to get rid of air pockets.

**Tangent:** A straight line from one point to another, which passes over the edge of a curve.

**Taping and Bedding:** Refers to drywall finishing; the application of specially prepared tape to drywall joints; bedding means embedding the tape in the joint to increase strength.

**Taps:** Connecting points on a transformer coil.

**T-Beam:** Beam which has a T-shaped cross section.

**Tee:** A fitting, either cast or wrought, that has one side outlet at right angles to the run.

**Tempered Water:** Water ranging in temperature from 85°F (29°C) up to 110°F (43°C).

**Tensile Strength:** The maximum stretching of a piece of metal (rebar, etc.) before breaking; calculated in kps.

**Tensioning:** Pulling or stretching of steel tendons to reinforce concrete.

**Termite Shield:** Sheet metal placed in or on a foundation wall to prevent intrusion.

**Terrazzo:** A mixture of concrete, crushed stone, calcium shells, and/or glass, polished to a tile-like finish.

**Texture Paint:** A very thick paint that will leave a texture or pattern.

**Thermal Ceilings:** Ceilings that are insulated with batts of insulation to prevent loss of heat or cooling.

**Thermal Protection:** Refers to an electrical device which has inherent protection from overheating.

**Thermostat:** An automatic device controlling the operation of HVAC equip.

**Three-Phase Power:** A combination of three alternating currents in a circuit with their voltages displaced 120° or one-third of a cycle.

**Tie:** A soft metal wire that is twisted around a rebar or rod and chair to hold in place until concrete is poured.

**Tied Out:** The process of determining the fixed location of existing objects (manholes, meter boxes, etc.) in a street so that they may be uncovered and raised after paving.

## GLOSSARY (cont.)

**Toe of Slope:** The bottom of an incline.

**Top Chord:** The topmost member of a truss.

**Top Plate:** The horizontal framing member fastened to the top of the wall studs; usually doubled.

**Trailer Park Sewer:** The horizontal piping of a drainage system which begins 2 feet downstream from the last trailer site connection, receives the discharge of the trailer site, and conveys it to a sewage disposal system.

**Transformer:** A device which uses magnetic force to transfer electrical energy from one coil of wire to another.

**Transverse:** Across the short dimension of an object or structure.

**Trap:** A fitting designed to provide a liquid seal which will prevent the back passage of air without significantly affecting the flow of waste water through it.

**Trap Primer:** A device or system of piping to maintain a water seal in a trap.

**Trap Seal:** The maximum vertical depth of liquid that a trap will retain.

**Travel:** See Offset.

**Tread:** The part of a stair on which people step.

**Trimmer:** A piece of lumber, usually a 2 × 4, that is shorter than the stud or rafter but is used to fill in where the longer piece would normally have been spaced except for the opening in the roof, floor or wall.

**True Power ( $P_T$ ):** The actual power used in an electrical circuit, measured in watts.

**Truss:** A prefabricated sloped roof system incorporating a top chord, bottom chord, and bracing.

**Turbulence:** Any deviation from parallel flow in a pipe due to rough inner wall surfaces, obstructions, etc.

**Typical (Typ):** This term, when associated with any dimension or feature, means the dimension or feature applies to the locations that appear to be identical in size and shape unless otherwise noted.

## **U**

**Underground Piping:** Piping in contact with the earth below grade.

**Underlayment:** Also known as subfloor; used to support the rest of the building; also

## GLOSSARY (cont.)

refers to the sheathing used to cover rafters.

**Unfaced Insulation:**

Insulation which does not have a facing or plastic membrane over one side of it.

**Union Ell:** An ell with a male or female union at one end.

**Union Joint:** A pipe coupling, usually threaded, which permits disconnection without disturbing other sections.

**Union Tee:** A tee with a male or female union at one end of the run.

**Upstream:** Referring to a location in the direction of flow before reaching a reference point.

### **V**

**Vacuum:** Any pressure less than that exerted by the atmosphere.

**Vacuum Breaker:** A backflow preventer.

**Vacuum Relief Valve:** A device to prevent excessive vacuum in a pressure vessel.

**Valley:** The area of a roof where two sections come together and form a depression.

**Valley Rafters:** A rafter which extends diagonally from the plate to the ridge at the line of intersection of two roof surfaces.

**Vapor Barrier:** A moisture barrier.

**Veneer:** A thin layer or sheet of wood.

**Veneered Wall:** A single-thickness (one-wythe) masonry unit wall with a backup wall of frame or other masonry; tied but not bonded to the backup wall.

**Vent:** Usually a hole in the eaves or soffit to allow the circulation of air over an insulated ceiling; usually covered with a screen.

**Vent, Loop:** Any vent connecting a horizontal branch or fixture drain with the stack vent of the originating waste or soil stack.

**Ventilation:** The movement of air through a building; may be done naturally through doors and windows or mechanically by fans.

**Vent Stack:** A system of pipes used for air circulation to prevent water from being suctioned from the traps in a waste disposal system.

**Vertical Pipe:** Any pipe or fitting installed in a vertical position or which makes an angle of not more than 45° with the vertical.

**Vitrified Clay Tile:** A ceramic tile fired at a high temperature

## GLOSSARY (cont.)

to make it very hard and waterproof.

**Vitrified Sewer Pipe:**

Conduit made of fired and glazed earthenware.

**Void:** Vacant space between material, such as a space in a column.

**Volt (E) or (V):** The unit of measurement of electrical pressure (force).

**Voltage Drop:** Voltage reduction due to resistance.

### W

**Waler:** A 2x piece of lumber installed horizontally to formwork to give added stability and strength.

**Waste Pipe:** Discharge pipe from any fixture, appliance, or appurtenance in connection with a plumbing system which does not contain fecal matter.

**Water-Cement Ratio:** The ratio of the weight of water to cement.

**Water Conditioner:** Treats a water supply to change its chemical content or remove suspended solids by filtration.

**Water-Distributing Pipe:** A pipe which conveys potable water from a building supply pipe to the plumbing fixtures.

**Water Hammer:** The noise and vibration which develop in a piping system when a column of noncompressible liquid flowing through a pipe line at a given pressure and velocity is abruptly stopped.

**Water Hammer Arrester:** A device designed to provide protection against excessive (hammering).

**Water Main:** The water supply pipe for public or community use.

**Waterproofing:** Preferably called moisture protection; materials used to protect below- and on-grade construction from moisture penetration.

**Water Riser:** A water supply pipe which extends vertically one full story or more.

**Water-Service Pipe:** The pipe from a water main or other source of water supply to the building served.

**Water Supply System:** The building supply pipe, the water-distributing pipes, and the necessary connecting pipes, fittings, control valves, and all appurtenances carrying or supplying potable water in or adjacent to the building or premises.

## GLOSSARY (cont.)

**Water Table:** The amount that is present in any area.

**Watt (W):** The measure of electrical power.

**Weep Holes:** Small holes in a wall to permit water to exit from behind.

**Welded-Wire Fabric (WWF):** A reinforcement used for horizontal concrete.

**Welding-End Valves:** Valves with ends tapered and beveled for butt welding.

**Welding Fittings:** Beveled for welding to pipe.

**Wet Vent:** A vent which also serves as a drain.

**Winder:** Fan-shaped steps that allow a stairway to change direction without a landing.

**Wind Lift (Wind Load):** The force exerted by the wind against a structure.

**Window Apron:** The flat part of the interior trim of a window located directly beneath the window stool.

**Window Stool:** The flat, narrow shelf which forms the top member of the interior trim at the bottom of a window.

**Windrow:** The spill-off from the ends of a dozer or grader blade which forms a ridge of loose material.

**Wiped Joint:** A lead pipe joint in which molten solder is poured after scraping and fitting the parts together.

**Working Drawings:** A set of drawings which provide the necessary details and dimensions to construct the object. May include specs.

**Wrought Iron:** Iron refined to a plastic state in a puddling furnace.

**Wrought Pipe:** Refers to both wrought steel and wrought iron.

**Wye (Y):** A fitting that has one side outlet at any angle other than 90°

**Wye Connection:** Has one end of each coil connected together and the other end open for connections.

**Wythe:** A continuous masonry wall width.

### **X**

**X Brace:** Cross brace for joist construction.

### **Y**

**Yoke Vent:** A pipe connecting upward from a soil or waste stack to a vent stack for the purpose of preventing pressure changes in the stacks.