

BUILDER 's DICTIONARY

ASIF WASI SIDDIQUI - The PUBLISHER of this ISMAIL ZAIEE dictionary.

ABOVE-GRADE - The portion of a building that is above ground level.

ACRE - 43,500 square feet.

AVC CIRCUIT - (Alternating Current) The flow of current through a conductor first in one direction then in reverse. It is used exclusively in residential and commercial wiring because it provides greater flexibility in voltage selection and simplicity of equipment design.

ACCELERATOR - Any material added to stucco, plaster or mortar which speeds up the natural set.

ADHESION - The property of a coating or sealant to bond to the surface to which it is applied.

ADHESIVE FAILURE - Loss of bond of a coating or sealant from the surface to which it is applied.

AGGREGATE - Crushed stone, slag or water-worn gravel that comes in a wide range of sizes that is used to surface built-up roofs.

AIR DUCT - Ducts, usually made of sheet metal, that carry cooled air to all rooms.

AIR INFILTRATION - The amount of air leaking in and out of a building through cracks in walls, windows and doors.

AIR FILTERS - Adhesive filters made of metal or various fibers that are coated with adhesive liquid to which the particles of lint and dust adhere. These filters will remove as much as 90% of the dirt if they do not become clogged. The more common filters are of the throwaway or disposable type.

ALLIGATORING - A condition of paint or aged asphalt brought about by the loss of volatile oils and the oxidation caused by solar radiation. "Alligatoring" produces a pattern of cracks resembling an alligator hide and is ultimately the result of the limited tolerance of paint or asphalt to thermal expansion or contraction.

ALUMINUM WIRE - Conductors made of aluminum for carrying electricity. Aluminum generally is limited to the larger wire sizes. Due to its lower conductivity, aluminum wire smaller than No. 12 is not made. Aluminum is lighter and less expensive than copper but not as good a conductor. It also breaks easily.

AMPS (AMPERES) - The rate at which electricity flows through a conductor.

AMMETER - Device to measure the current flowing in a circuit

ANCHOR BOLTS - Bolts which fasten columns, girders or other members to concrete or masonry such as bolts used to anchor sills to masonry foundation. Foundation plates or sills shall be bolted to the foundation with not less than 1/2" diameter steel bolts embedded at least 7" into the concrete or reinforced masonry or 15" into unreinforced grouted masonry & spaced not more than 8' apart.

ANGLE IRON - A piece of iron that forms a right angle and is used to span openings and support masonry at the openings. In brick veneer, they are used to secure the veneer to the foundation. Also known as shelf angle.

ANNEALING - In the manufacturing of float glass, it is the process of controlled cooling done in a layer to prevent residual stresses in the glass. Re-annealing is the process of removing objectionable stresses in glass by re-heating to a suitable temperature followed by controlled cooling.

ANTI-WALK BLOCKS - Elastomeric blocks that limit lateral glass movement in the glazing channel which may result from thermal, seismic, wind load effects, building movement, and other forces that may apply.

APPROACH - The area between the sidewalk and the street that leads to a driveway or the transition from the street as you approach a driveway.

ARCHITECT - A tradesman who designs and produces plans for buildings, often overseeing the building process.

ARCHITECTS RULE (ruler) - Three sided ruler with different scales on each side. Also referred to as a "scale."

ASPHALT - A dark brown to black, highly viscous, hydrocarbon produced from the residue left after the distillation of petroleum. Asphalt is used on roofs and highways as a waterproofing agent.

AUGER - In carpentry, a wood-boring tool used by a carpenter to bore holes

B

BACKER ROD - In glazing, a polyethylene or polyurethane foam material installed under compression and used to control sealant joint depth, provide a surface for sealant tooling, serve as a bond breaker to prevent three-sided adhesion, and provide an hour-glass contour of the finished bead.

BACKFILL - (1) filling in any previously excavated area. (2) In carpentry, the process of fastening together two pieces of board by gluing blocks of wood in the interior angle.

BACKFLOW- The flow of liquids through irrigation into the pipes of a potable or drinking water supply from any source which is opposite to the intended direction of flow.

BACKFLOW PREVENTER - A device or means to prevent backflow into the potable water supply.

BACKHOE - Self powered excavation equipment that digs by pulling a boom mounted bucket towards itself. It is used to dig basements and/or footings and to install drainage or sewer systems.

BACK NAILING - The practice of nailing roofing felts to the deck under the overlap, in addition to hot mopping, to prevent slippage of felts.

BALLOON FRAMING - In carpentry, the lightest and most economical form of construction, in which the studding and corner plates are set up in continuous lengths from the first floor line or sill to the roof plate.

BAROMETER - Instrument for measuring atmospheric pressure.

BARREL ROOF - A roof design which in cross section is arched.

BASE PLY - An asphalt-saturated and/or coated felt installed as the first ply with 4 inch laps in a built-up roof system under the following felts which can be installed in a shingle-like fashion.

BATTEN PLATE - A formed piece of metal designed to cover the joint between two lengths of metal edge.

BATT INSULATION- Strips of insulation - usually fiberglass that fit between studs or other framing.

BEAD - In glazing, an applied sealant in a joint irrespective of the method of application, such as caulking bead, glazing bead, etc. Also a molding or stop used to hold glass or panels in position.

BEAM - Structural support member (steel, concrete, lumber) that transfers weight from one location to another.

BED OR BEDDING - In glazing, the bead compound or sealant applied between a lit of glass or panel and the stationary stop or sight bar of the sash or frame. It is usually the first bead of compound or sealant to be applied when setting glass or panels.

BELL REDUCER - In plumbing, a fitting shaped like a bell which has one opening of a smaller diameter used to reduce the size of the pipe in the line, and the opposite opening of larger diameter.

BELOW-GRADE - The portion of a building that is below ground level.

BENT GLASS – Flat glass that has been shaped while hot into curved shapes.

BEVEL – (of a door) is the angle of the front edge of a door usually from 1/8" to 2".

BID BOND – Security posted by a bidder to ensure performance in accordance with a bid.

BIDDING – Getting prices from various contractors and/or subcontractors.

BID DOCUMENTS – Drawings, details, and specifications for a particular project.

BITE – The dimension by which the framing system overlaps the edge of the glazing infill.

BITUMEN – Any of various mixtures of hydrocarbons occurring naturally or obtained through the distillation of coal or petroleum. (See Coat Tar Pitch and Asphalt)

BLEEDING – A migration of a liquid to the surface of a component or into/onto an adjacent material.

BLISTER – An enclosed raised spot evident on the surface of a building. They are mainly caused by the expansion of trapped air, water vapor, moisture or other gases.

BLOCKING – In carpentry, the process of fastening together two pieces of board by gluing blocks of wood in the interior angle.

BLUE PRINTS – Architectural plans for a building or construction project, which are likely to include floor plans, footing and foundation plans, elevations, plot plans, and various schedules and or details.

BOARD FOOT – In carpentry, the equivalent of a board 1 foot square and 1 inch thick.

BOND BREAKER – A substance or a tape applied between two adjoining materials to prevent adhesion between them.

BOND PLASTER – In addition to gypsum, bond plaster contains 2-5% lime by weight and chemical additives which improve the bond with dense non-porous surfaces such as concrete. It is used as a base coat.

BOW (AND WARP) – A curve, bend or other deviation from flatness in glass.

BRACING – Ties and rods used for supporting and strengthening various parts of a building used for lateral stability for columns and beams.

BRAKE METAL – Sheet metal that has been bent to the desired configuration.

BROWN COAT – The coat of plaster directly beneath the finish coat. In three-coat work, the brown is the

second coat.

BTU - British Thermal Unit - The amount of heat energy required to raise the temperature of one pound of water through a change of one degree F.

BUBBLING - In glazing, open or closed pockets in a sealant caused by release, production or expansion of gasses.

BUILDING BRICK - Brick for building purposes not especially treated for texture or color, formerly called "common brick." It is stronger than face brick.

BUILDING PERMIT - Written authorization from the city, county or other governing regulatory body giving permission to construct or renovate a building. A building permit is specific to the building project described in the application.

BULLFLOAT - A tool used to finish and flatten a slab. After spreading, the first stage in the final finish of concrete, smooths and levels hills and voids left after spreading. Sometimes substituted for draying. A large flat or tool usually of wood, aluminum or magnesium with a handle.

BUTTERFLY ROOF - A roof assembly which pitches sharply from either side toward the center.

BUTTERING - In glazing, application of sealant or compound to the flat surface of some member before placing the member in position, such as the buttering of a removable stop before fastening the stop in place.

BUTT GLAZING - The installation of glass products where the vertical glass edges are without structural supporting mullions.

BUTYL - Type of non-curing and non-skinning sealant made from butylenes. Usually used for internal applications.

BX-ARMORED CABLE - A factory assembly of insulated conductors inside a flexible metallic covering. It can be run except where exposed to excessive moisture and should not be run below grade. It must always be grounded and uses its armor as an equipment ground. It is difficult to pull out old wires or insert new ones.

C

CALCIUM CHLORIDE - A chemical used to speed up curing of concrete during damp conditions.

CANOPY - An overhanging roof.

CANTILEVER - A projecting beam or other structure supported only at one end.

CANT STRIP - A beveled support used at the intersection of the roof deck with vertical surfaces so that bends in the roofing membrane to form base flashings can be made without breaking the felts.

CAP SHEETS - In roofing, one to four plies of felt bonded and top coated with bitumen that is laid over an existing roof as a treatment for defective roofs.

CAPE CHISEL - Tool used to clean out mortar joints on brick.

CARBIDE BIT - Tool used to drill holes in brick or block.

CAULK - (v) The application of sealant to a joint, crack or crevice. (n) A compound used for sealing that has minimum joint movement capability; sometimes called low performance sealant.

C/D CIRCUIT - A circuit where electricity flows in one direction only, at a constant rate.

CELLULOSE INSULATION - Ground up newspaper that is treated with a fire retardant.

CEMENT MIXTURES - Rich - 1 part cement, 2 parts sand, 3 parts coarse aggregate. Used for concrete roads and waterproof structures. Standard - 1 part cement, 2 parts sand, 4 parts coarse aggregate. Used for reinforced work floors, roofs, columns, arches, tanks, sewers, conduits, etc. Medium - 1 part cement, 2 1/2 parts sand, 5 parts coarse aggregate. Used for foundations, walls, abutments, piers, etc. Lean - 1 part cement, 3 parts sand, 6 parts coarse aggregate. Used for all mass concrete work, large foundations, backing for stone masonry, etc. Mixtures are always listed Cement to Sand to Aggregate

CEMENT TYPES - Type I Normal - is general purpose cement suitable for practically all uses in residential construction but should not be used where it will be in contact with high sulfate soils or be subject to excessive temperatures during curing. Type II Moderate is used where precaution against moderate sulfate attack is important, as in drainage structures where sulfate concentrations in groundwaters are higher than normal. Type III High Early Strength is used when high strengths are desired at very early periods, usually a week or less. It is used when it is desirable to remove forms as soon as possible or to put the concrete into service quickly. Type IV Low Heat is special cement for use where the amount and rate of heat generated during curing must be kept to a minimum. The development of strength is slow and is intended in large masses of concrete such as dams. Type V Sulfate Resisting is special cement intended for use only in construction exposed to severe sulfate action, such as western states having soils of high alkali content.

CERTIFICATE OF OCCUPANCY - A document stating that a building is approved for occupancy. The building authority issues the Certificate of Occupancy.

CFM (Cubic Feet per Minute) - The measure of volume of air. When testing systems, find the CFM by multiplying the face velocity times the free area in square feet. The face velocity is the amount of air passing

through the face of an outlet or return. Free area is the total area of the openings in the outlet or inlet through which air can pass.

CHAIR RAIL - A molding that runs horizontally along the wall at about 3 feet from the ground. In storefront, window wall, or curtain wall systems, a chair rail is an aluminum extrusion applied horizontally to the inside of the system 3 feet from the floor to create a barrier in floor-to-ceiling glazing applications.

CHANNEL GLAZING - The installation of glass products into U-shaped glazing channels. The channels may have fixed stops; however, at least one glazing stop on one edge must be removable.

CHECKING - A pattern of surface cracks running in irregular lines. When found in the top pour of an asphalt built-up roof, checking is the preliminary stage of alligatoring.

CHEMICAL INJECTION GROUTING - Leak repair technique usually used below grade in cracks and joints in concrete walls and floors that involves injection of sealant (usually urethane) that reacts with water to form a seal.

CIRCUIT BREAKER - Simple switch-like device which automatically opens a circuit when the rated current is exceeded as in the case of a short circuit.

CLEAT - A wedge-shaped piece (usually of metal) which serves as a support or check. A strip fastened across something to give strength or hold something in position.

COAL TAR PITCH (Tar) - A bituminous material which is a by product from the coking of coal. It is used as the waterproofing material for tar and gravel built-up roofing.

COATING - A layer of any liquid product spread over a surface for protection.

COHESIVE FAILURE - Internal splitting of a compound resulting from over-stressing of the compound.

COLD APPLIED - Products that can be applied without heating. These are in contrast to products which need to be heated to be applied.

COLD PATCH - In roofing, a roof repair done with cold applied material.

COLLAR - In roofing, a conical metal cap flashing used in conjunction with vent pipes or stacks usually located several inches above the plane of the roof, for the purpose of shedding water away from the base of the vent.

COLLAR BEAM - In carpentry, a tie that keeps the roof from spreading. Connects similar rafters on

opposite sides of roof.

COMPATIBLE - Two or more substances which can be mixed or blended without separating, reacting, or affecting either material adversely.

COMPONENT - Any one part of an assembly associated with construction.

COMPOSITE BOARD - An insulation board which has two different insulation types laminated together in 2 or 3 layers.

COMPOUND - A chemical formulation of ingredients used to produce a caulking, elastomeric joint sealant, etc.

COMPRESSION GASKET - A gasket designed to function under compression.

COMPRESSION SET - The permanent deformation of a material after removal of the compressive stress.

CONDENSATION - The appearance of moisture (water vapor) on the surface of an object caused by warm moist air coming into contact with a colder object.

CONDUCTOR - (1) In roofing, a pipe for conveying rain water from the roof gutter to a drain, or from a roof drain to the storm drain; also called a leader, downspout, or downpipe. (2) In electrical contracting, a wire through which a current of electricity flows, better known as an electric wire.

CONDUCTION - The flow of heat from one part of a substance to another part. A piece of iron with one end placed in a fire will soon become warm from end to end, from the transfer of heat by the actual collision of the air molecules.

CONDUIT - A tube for protecting electric wires.

CONSTRUCTION LOAN - A loan provided by a lending institution specifically to construct or renovate a building.

CONTROL JOINT - A control joint controls or accommodates movement in the surface component of a roof.

CONVECTION - A method of transferring heat by the actual movement of heated molecules, usually by a freestanding unit such as a furnace.

COOLING TOWER - A large device mounted on roofs, consisting of many baffles over which water is

pumped in order to reduce its temperature.

COPING - A construction unit placed at the top of the parapet wall to serve as a cover for the wall.

COPPER PIPE TYPES - Type K has the heaviest or thickest wall and is generally used underground. It has a green stripe. (Kelly Green). Type L has a medium wall thickness and is most commonly used for water service and for general interior water piping. It has a blue stripe (Lavender Blue). Type M has a thin wall and many codes permit its use in general water piping installation. It has a red stripe. (Mad Red)

CORE - A small section cut from any material to show internal composition.

CORNICE - A horizontal projecting course on the exterior of a building, usually at the base of the parapet.

CORROSION - The deterioration of metal by chemical or electrochemical reaction resulting from exposure to weathering, moisture, chemicals or other agents or media.

CORRUGATED - Folded or shaped into parallel ridges or furrows so as to form a symmetrically wavy surface.

COST BREAKDOWN - A breakdowns of all the anticipated costs on a construction or

Renovation project.

COUPLING - In plumbing, a short collar with only inside threads at each end, for receiving the ends of two pipes which are to be fitted and joined together. A right/left coupling is one used to join 2 gas pipes in limited space.

COURSE - A single layer of brick or stone or other building material.

Covenants - Rules usually developed by a builder or developer regarding the physical appearance of buildings in a particular geographic area. Typical covenants address building height, appropriate fencing and landscaping, and the type of exterior material (stucco, brick, stone, siding, etc) that may be used.

CRAWL SPACE - An open area between the floor of a building and the ground.

CRAZING - A series of hairline cracks in the surface of weathered materials, having a web-like appearance. Also, hairline cracks in pre-finished metals caused by bending or forming. (see brake metal)

CUPOLA - A small monitor or dome at the peak of a pitched roof.

CURB - A short wall or masonry built above the level of the roof that provides a means of flashing the deck

equipment.

CURING – In concrete application, the process in which mortar and concrete harden. The length of time is dependent upon the type of cement, mix proportion, required strength, size and shape of the concrete section, weather and future exposure conditions. The period may be 3 weeks or longer for lean concrete mixtures used in structures such as dams or it may be only a few days for richer mixes. Favorable curing temperatures range from 50 to 70 degrees F. Design strength is achieved in 28 days.

CURING AGENT – One part of a multi-part sealant which, when added to the base, will cause the base to change its physical state by chemical reaction between the two parts.

CURTAIN WALL – A thin wall, supported by the structural steel or concrete frame of the building independent of the wall below. Also a metal (most often aluminum) framing system on the face of a building containing vision glass panels and spandrel panels made of glass, aluminum, or other material.

CUTBACK – In roofing, basic asphalt or tar which has been "cut back" with solvents and oils so that the material become fluid.

CUT OFF - A piece of roofing membrane consisting of one or more narrow plies of felt usually moped in hot to seal the edge of insulation at the end of a day's work.

D

DAMPER - Valve for controlling airflow. When ordering registers, make sure each supply outlet has a damper so the air flow can be adjusted and turned off. Dampers may be either manually or automatically operated. Automatic dampers are required for exhaust air ducts.

DAMP PROOFING - A process used on concrete, masonry or stone surfaces to repel water, the main purpose of which is to prevent the coated surface from absorbing rain water while still permitting moisture vapor to escape from the structure. (Moisture vapor readily penetrates coatings of this type.) "Damp proofing" generally applies to surfaces above grade; "waterproofing" generally applies to surfaces below grade.

DARBY - A flat tool used to smooth concrete flatwork immediately after spreading. See Bull floating

DEAD LOAD - The constant, design-weight (of the roof) and any permanent fixtures attached above or below.

DECK - An elevated platform. "Deck" is also commonly used to refer to the above-ground floors in multi-level parking garage.

DEFLECT - To bend or deform under weight.

DEFLECTION - The amount of bending movement of any part of a structural member perpendicular to the axis of the member under an applied load.

DESIGN PRESSURE - Specified pressure a product is designed to withstand.

DEW POINT - The critical temperature at which vapor condenses from the atmosphere and forms water.

DISTORTION - Alteration of viewed images caused by variations in glass flatness or inhomogeneous portions within the glass. An inherent characteristic of heat-treated glass.

DORMER - The house-like structure which projects from a sloping roof.

DOUBLE-GLAZING - In general, any use of two layers of glass, separated by an air space, within an opening, to improve insulation against heat transfer and/or sound transmission. In insulating glass units the air between the glass sheets is thoroughly dried and the space is sealed, eliminating possible condensation and providing superior insulating properties.

DOUBLE PLATE - when two layers of 2 x 4's are placed on top of studs in framing a wall.

DOUBLE STRENGTH - In float glass, approximately 1/8" (3 mm.) thick.

DOUBLE TEE - Refers usually to a precast roof deck panel poured with two fins in its underside to impart flexural rigidity.

DOWNSPOUT - The metal pipe used to drain water from a roof.

DRAWING OUTLINE - A top view drawing of a building or roof showing only the perimeter drawn to scale.

DRAWING DETAIL - A top view drawing of a building or roof showing the roof perimeter and indicating the projections and roof mounted equipment, drawn to scale.

DRIP EDGE - A device designed to prevent water from running back or under an overhang.

DRIPPAGE - Bitumen material that drips through roof deck joints, or over the edge of a roof deck.

"DROPPING" A STRINGER - In carpentry, means cutting short on the bottom of a stairs, to allow for thickness of the first tread.

DRY GLAZING - Also called compression glazing, a term used to describe various means of sealing

monolithic and insulating glass in the supporting framing system with synthetic rubber and other elastomeric gasket materials.

DRY IN - To make a building waterproof.

DRY SEAL - Accomplishment of weather seal between glass and sash by use of strips or gaskets of Neoprene, EPDM, silicone or other flexible material. A dry seal may not be completely watertight.

DRY SHEET - A ply mechanically attached to wood or gypsum decks to prevent asphalt or pitch from penetrating the deck and leaking into the building below.

DRYWALL - Sheetrock (gypsum board) that covers the framing and taping, coating, and finishing making the interior walls and ceilings of a building. Drywall is also used as a verb to refer to installation process.

DRYWALL HAMMER - A special hammer used for nailing up gypsum board. It is also known as an ax or hatchet. Edges should be smooth and the corners rounded off. The head has a convex round & checkered head.

DRYWALL NAIL - Nails used for hanging regular drywall that is to be taped and finished later must have adequate holding power and a head design that does not cut the face paper. They must also be of the proper depth to provide exactly 1 inch penetration into the framing member. Nails commonly used are chemically-etched and are designed with a cupped head.

DUCT - A cylindrical or rectangular "tube" used to move air either from exhaust or intake. The installation is referred to as "duct work".

DUMBWAITER - An elevator with a maximum footage of not more than 9 sq. ft. floor area; not more than 4" headroom and a maximum capacity of 500 lbs. used for carrying materials only.

DUROMETER - The measurement of hardness of a material. A gauge to measure the hardness of an elastomeric material.

E

EPDM - Ethylene Propylene Diene Monomer. A single ply membrane consisting of

Synthetic rubber; usually 45 or 60 mils. Application can be ballasted,

Fully adhered or mechanically attached.

EAVE - The part of a roof which projects out from the side wall, or the lower edge of the part of a roof that

overhangs a wall.

EDGE CLEARANCE – Nominal spacing between the edge of the glass product and the bottom of the glazing pocket (channel).

EDGE METAL - A term relating to brake or extruded metal around the perimeter of a roof.

EER - Energy Efficiency Ratio; is figured by dividing BTU hours by watts.

EFFLORESCENCE - The process by which water leeches soluble salts out of concrete or mortar and deposits them on the surface. Also used as the name for these deposits.

EIFS - Exterior Insulating Finish System; exterior wall cladding system consisting primarily of polystyrene foam board with a textured acrylic finish that resembles plaster or stucco.

ELASTOMER – An elastic rubber-like substance, such as natural or synthetic rubber.

ELASTOMERIC – Of or pertaining to any of the numerous flexible membranes that contain rubber or plastic.

ELECTROLYTIC COUPLING - A fitting required to join copper to galvanized pipe and gasket to prevent galvanic action. Connecting pipes of different materials may result in electrolysis.

ELEVATION - A side of a building.

EMISSIVITY – the measure of a surface's ability to emit long-wave infrared radiation.

EMT - Electrical Metallic Tubing- This electrical pipe, also called thin-wall conduit, may be used for both concealed and exposed areas. It is the most common type of raceway used in single family and low rise residential and commercial buildings.

EMULSION - In roofing, a coating consisting of asphalt and fillers suspended in water.

END DAMS – Internal flashing (dam) that prevents water from moving laterally within a curtain wall or window wall system.

END LAP - The amount or location of overlap at the end of a roll of roofing felts in the Application.

EXCAVATE - Dig the basement and or all areas that will need footings/foundations below ground.

EXPANSION COEFFICIENT - The amount that a specific material will vary in any one dimension

with a change of temperature.

EXPANSION JOINT - A device used to permit a structure to expand or contract without breakage.

EXTERIOR GLAZED - Glazing in fills set from the exterior of the building.

EXTERIOR STOP - The molding or bead that holds the lit or panel in place when it is on the exterior side of the lit or panel.

EXTRUSION - An item formed by forcing a base metal (frequently aluminum) or plastic, at a malleable temperature, through a die to achieve a desired shape.

EYEBROW - A flat, normally concrete, projection which protrudes horizontally from a building wall; Eyebrows are generally located above windows.

F

FAÇADE - The front of a building. Frequently, in architectural terms an artificial or decorative effort.

FACE BRICK - Brick made especially for exterior use with special consideration of color, texture and size, and used as a facing on a building.

FACE GLAZING - A system having a triangular bead of compound applied with a putty knife, after bedding, setting, and clipping the glazing infill in place on a rabbeted sash.

FACTORY MUTUAL FM - A major insurance agency who has established stringent guidelines for maximum construction integrity as it relates to fire and environmental hazards. Their specifications have become industry standards.

FASCIA - Any cover board or framed metal assembly at the edge or eaves of a flat, sloping, or overhanging roof which is placed in a vertical position to protect the edge of the roof assembly.

FASTENERS - A general term covering a wide variety of screws and nails which may be used for mechanically securing various components of a building.

FELT - A very general term used to describe composition of roofing ply sheets, consisting of a mat of organic or inorganic fibers unsaturated, impregnated with asphalt or coal tar pitch, or impregnated and coated with asphalt.

FENESTRATION - Any glass panel, window, door, and curtain wall or skylight unit on the exterior of a building.

FERROUS - Refers to objects made of or partially made of iron, such as ferrous pipe.

FILLET BEAD - Caulking or sealant placed in such a manner that it forms an angle between the materials being caulked.

FINISH - In hardware, metal fastenings on cabinets which are usually exposed such as hinges and locks.

FINISH CARPENTRY - The hanging of all interior doors, installation of door molding, base molding, chair rail, built in shelves, etc.

FINISH COAT - The last coat applied in plastering intended as a base for further decorating or as a final decorative surface. Finish coat usually consists of calcified gypsum, lime and sometimes an aggregate. Some may require the addition of lime or sand on the job. The three basic methods of applying it are (1) trowel (2) flat and (3) spray.

FINISH GRADE - Any surface which has been cut to or built to the elevation indicated for that point. Surface elevation of lawn, driveway or other improved surfaces after completion of grading operations.

FIRE-RATED - Descriptive of materials that has been tested for use in fire walls.

FIRE WALL - Any wall built for the purpose of restricting or preventing the spread of fire in a building. Such walls of solid masonry or concrete generally sub-divide a building from the foundations to two or more feet above the plane of the roof.

FISH TAPE (Fish Wire) - Material used to advance wire through a conduit.

FLAKE - A scale-like particle. To lose bond from a surface in small thin pieces. Sometimes a paint film "flakes".

FLASHING - Weatherproof material installed between roof sheathing (and wall sheathing) and the finish materials to help keep moisture away from the sheathing.

FLASHING BASE - The upturned edge of the watertight membrane formed at a roof termination point by the extension of the felts vertically over the cant strip and up the wall for a varying distance where they are secured with mechanical fasteners.

FLASHING, COUNTER - The formed metal secured to a wall, curb, or roof top unit to cover and protect the upper edge of a base flashing and its associated fasteners.

FLASHING, STEP - Individual small pieces of metal flashing material used to flash around chimneys, dormers, and such projections along the slope of a roof. The individual pieces are overlapped and stepped up

the vertical surface.

FLASH POINT - The critical temperature at which a material will ignite.

FLASHING, THRU-WALL - Flashing extended completely through a masonry wall. Designed and applied in combination with counter-flashings, to prevent water which may enter the wall above from proceeding downward in the wall or into the roof deck or roofing system.

FLAT GLASS - A general term that describes float glass, sheet, glass, plate glass, and rolled glass.

FLAT SEAM - A seam at the junction of sheet metal roof components that has been bent at the plane of the roof.

FLEET AVERAGING - By using a point system, builders can show compliance with energy building requirements by using average figures for all air conditioning units in the same sub division.

FLEXIBLE METAL CONDUIT - Conduit similar to armored cable in appearance but does not have the pre-inserted conductors.

FLOAT GLASS - Glass formed on a bath of molten tin. The surface in contact with the tin is known as the tin surface or tin side. The top surface is known as the atmosphere surface or air side.

FLOOR PLAN - The basic layout of building or addition, which includes placement of walls, windows and doors as well as dimensions.

FLOOR PLATE - See Floor Plan.

FLUSH GLAZING (Pocket Glazing) - The setting of a lit of glass or panel into a four-sided sash or frame opening containing a recessed "U" shaped channel without removable stops on three sides of the sash or frame and one channel with a removable stop along the fourth side.

FOLDED SEAM - In sheet metal work, a joint between sheets of metal wherein the edges of the sheets are crimped together and folded flat.

FOOTINGS - Wide pours of cement reinforced with re-bar (reinforcing bar) that support foundation walls, pillars, or posts. Footings are part of the foundation and are often poured before the foundation walls.

FOOT PRINT - See Floor Plan.

FULLY ADHERED - A completely attached (adhered) roof membrane.

FULLY TEMPERED GLASS - Flat or bent glass that has been heat-treated to a high surface

and/or edge compression to meet the requirements of ASTM C 1048, kind FT. Fully tempered glass, if broken, will fracture into many small pieces (dice) which are more or less cubical. Fully tempered glass is approximately four times stronger than annealed glass of the same thickness when exposed to uniform static pressure loads.

FURNACE: A heating system that uses the principle of thermal convection. When air is heated, it rises and as the air cools it settles. Ducts are installed to carry the hot air from the top of the furnace to the rooms. Other ducts, called cold air returns, return the cooler air back to the furnace.

G

GABLE - The end of a building as distinguished from the front or rear side. The triangular end of an exterior wall from the level of the eaves to the ridge of a double-sloped roof.

GAMBREL ROOF - A type of roof which has its slope broken by an obtuse angle, so that the lower slope is steeper than the upper slope. A double sloped roof having two pitches.

GALVANIZE - To coat a metal with zinc by dipping it in molten zinc after cleaning.

GASKETS - pre-formed shapes, such as strips, grommets, etc., of rubber or rubber-like composition, used to fill and seal a joint or opening either alone or in conjunction with a supplemental application of a sealant.

GAUGE - The thickness of sheet metal and wire, etc.

GENERAL CONTRACTOR - A contractor responsible for all facets of construction of a building or renovation.

GFI or GFCI - Ground Fault Circuit Interrupters - Special devices capable of opening a circuit when even a small amount of current is flowing through the grounding system.

GFRC - Glass Fiber Reinforced Concrete; Material used in wall systems that resembles but generally does not perform as well as concrete. Usually a thin cementitious material laminated to plywood or other lightweight backing.

GIRDER - A main beam upon which floor joists rest, usually made of steel or wood.

GLASS - A hard, brittle substance, usually transparent, made by fusing silicates under high temperatures with soda, lime, etc.

GLAZE COAT - In roofing, a light, uniform mopping of bitumen on exposed felts to protect them from the

weather, pending completion of the job.

GLAZING – (n) A generic term used to describe an infill material such as glass, panels, etc. (v) the process of installing an infill material into a prepared opening in windows, door panels, partitions, etc.

GLAZING BEAD – In glazing, a strip surrounding the edge of the glass in a window or door which holds the glass in place.

GLAZING CHANNEL – In glazing, a three-sided, U-shaped sash detail into which a glass product is installed and retained.

GRADE MW - Moderate Weather grade of brick for moderate resistance to freezing used, for example, in planters.

GRADE NW - No Weather brick intended for use as a back-up or interior masonry.

GRADE SW - Severe Weather grade of brick intended for use where high resistance to freezing is desired.

GRANULES - The mineral particles of a graded size which are embedded in the asphalt coating of shingles and roofing.

GRAVEL - Loose fragments of rock used for surfacing built-up roofs, in sizes varying from 1/8" to 1 3/4".

GROUND SYSTEM - The connection of current-carrying neutral wire to the grounding terminal in the main switch which in turn is connected to a water pipe. The neutral wire is called the ground wire.

GROUNDING ROD - Rod used to ground an electrical panel.

GROUT OR GROUTING - A cement mortar mixture commonly used to fill joints and cavities of masonry.

GAUGE BOARD (Spot Board) - Board used to carry grout needed to patch small jobs.

GUN CONSISTENCY – Sealant formulated in a degree of viscosity suitable for application through the nozzle of a caulking gun.

GUNITE - A construction material composed of cement, sand or crushed slag and water mixed together and forced through a cement gun by pneumatic pressure, used in the construction of swimming pools.

GUTTER - Metal trough at the eaves of a roof to carry rain water from the roof to the

Downspout.

GUTTER STRAP - Metal bands used to support the gutter.

GUY WIRE - A strong steel wire or cable strung from an anchor on the roof to any tall slender projection for the purpose of support.

GYP SUM - See Drywall

GYP SUM KEENE CEMENT - Material used to obtain a smooth finish coat of plaster, for use over gypsum plastic base coats only and in areas not subject to moisture. It is the hardest plaster.

H

HARDWARE - Metal accessories such as door knobs, towel bars, toilet paper holders, etc.

HATCH - An opening in a deck; floor or roof. The usual purpose is to provide access from inside the building.

HAWK - A flat wood or metal tool 10 inches to 14 inches square with a handle used by plasterers to carry plaster mortar or mud.

HAZARD INSURANCE - Insurance for a building while it is under construction.

HEADER - Framing members over windows, doors, or other openings.

HEAT STRENGTHENED GLASS - Flat or bent glass that has been heat-treated to a specific surface and/or edge compression range to meet the requirements of ASTM C 1048, kind HS. Heat-strengthened glass is approximately two times as strong as annealed glass of the same thickness when exposed to uniform static pressure loads. Heat-strengthened glass is not considered safety glass and will not completely dice as will fully tempered glass.

HEEL BEAD - Sealant applied at the base of a channel, after setting the lit or panel and before the removable stop is installed, one of its purposes being to prevent leakage past the stop.

HERMETIC SEAL - Vacuum seal (between panes of a double-paned window i.e. insulated glass unit or IGU). Failure of a hermetic seal causes permanent fogging between the panels of the IGU.

HIGH EARLY CEMENT - A Portland cement sold as Type III sets up to its full strength faster than other types.

HIP ROOF - A roof which rises by inclining planes from all four sides of a building.

HOISTWAY - A shaft way for the travel of one or more elevators.

HONEYCOMB - (1) Areas in a foundation wall where the aggregate (gravel) is visible. Honeycombs can be usually be remedied by applying a thin layer of grout or other cement product over the affected area. (2) Method by which concrete is poured and not puddles or vibrated, allowing the edges to have voids or holes after the forms are removed.

HUB - In plumbing, the enlarged end of a pipe which is made to provide a connection into which the end of the joining pipe will fit.

HVAC - Heating Ventilation and Air Conditioning.

HYDROELECTRIC ELEVATOR - An elevator where liquid is pumped under pressure directly into the cylinder by a pump driven by an electric motor without an accumulator between the pump and cylinder.

I

INCOMPATIBILITY - Descriptive of two or more materials which are not suitable to be used together.

INDEMNIFICATION CLAUSE - Provision in a contract in which one party agrees to be financially responsible for specified types of damages, claims, or losses.

INFILTRATION - The process by which air leaks into a building. In either case, heat loss results. To find the infiltration heating load factor (HLF), the formula to account for the extra BTU's needed to heat the infiltrated air is:

$$\text{BTU/HR} = \text{building volume} \times \text{air changes} \times \text{BTU/cu.ft/hr} \times \text{TD} \text{ (TD is temperature difference)}$$

INSIDE DRAIN - In roofing, a drain positioned on a roof at some location other than the perimeter. It drains surface water inside the building through closed pipes to a drainage system.

INSULATING GLASS UNIT - Two or more layers of glass spaced apart and hermetically sealed to form a single-glazed unit with an air space between each layer. (Commonly called IG units.)

INSULATION - (1) Generally, any material which slows down or retards the flow or transfer of heat. Building insulation types are classified according to form as loose fill, flexible, rigid, reflective, and foamed-in-place. All types are rated according to their ability to resist heat flow (R-Value). (2) In electrical contracting, rubber, thermoplastic, or asbestos wire covering. The thickness of insulation varies with wire size and type of

material, application or other code limitations.

INSULATION FASTENERS - Any of several specialized mechanical fasteners designed to hold insulation down to steel or a nail able deck.

INTERIOR GLAZED - Glazing in fills set from the interior of the building.

INTERLAYER - In glazing, any material used to bond two layers of glass and/or plastic together to form a laminate.

INTERPLY - Between two layers of roofing felts that have been laminated together.

IRMA - Insulated (or Inverted) Roof Membrane Assembly. In this system the roof membrane is laid directly on the roof deck, covered with extruded foam insulation and ballasted with stone, minimum of 1000 lbs. per square.

ISMAIL ZAIEE - Owner of Zaiee Estate and writer of this Dictionary.

J

JAMB - The frame in which a door or window sits.

JOINT - The space or opening between two or more adjoining surfaces.

JOIST - The horizontal framing members that support the floors.

K

KELVIN - Thermometer scale on which a unit of measurement equals the Celsius degree.

KICK HOLE - A defect frequently found in perimeter flashings arising from being stepped on or kicked. A small fracture of the base flashing in the area of the cant.

KNIFE CONSISTENCY - Compound formulated in a degree of firmness suitable for application with a putty knife such as used for face glazing and other sealant applications.

KRAFT - A heavy, water resistant paper.

KYNAR COATING - Architectural coating that is UV stable and suitable for exterior use on aluminum and other metal surfaces.

L

LADDER, FIXED - A ladder which is permanently attached to a building.

LAMINATED GLASS - Two or more layers of glass permanently bonded together with one or more inter-layers.

LAP - To extend one material partially over another; the distance so extended.

LEAD - A malleable metal once extensively used for flashings.

LEAN-TO-ROOF - the sloping roof of a building addition having its rafters or supports pitched against and supported by the adjoining wall of a building.

LEVELING ROD - A rod with graduated marks for measuring heights or vertical distances between given points and the line of sight of a leveling instrument. They are longer than a yardstick and are held by a surveyor in a vertical position.

LINTEL - or header - A horizontal piece of wood or steel over an opening such as a window or door. To support the walls immediately above the opening. Lintels can also be steel or stone.

LIQUID-APPLIED MEMBRANE - Generally applied to cast-in-place concrete surfaces in one or more coats to provide fully-adhered waterproof membranes which conform to all contours.

LIQUIDATED DAMAGES - A monetary amount agreed upon by two parties to a contract prior to performance under the contract that specifies what an either party owes the other if that party defaults under the contract.

LITE - Another term for a pane of glass. Sometimes spelled "light" in industry literature but spelled "lite" in this text to avoid confusion with light as in "visible light."

LIVE LOAD - Loads produced by use and occupancy of the building or other structure and do not include construction or environmental loads such as wind load, snow load, ice load, rain load, seismic load, or dead load.

LOT - A parcel of ground with boundaries determined by the county.

LOOSE LAID - In roofing, a membrane "lay loosely", i.e., not adhered, over a roof deck or BURM.

M

MANSARD ROOF - A roof which rises by inclined planes from all four sides of a building. The sloping

roofs on all four sides have two pitches, the lower pitch usually very steep and the upper pitch less steep.

MASON'S HAMMER or BRICKLAYER'S HAMMER - Tool shaped like a chisel to trim brick or stone.

MASTIC - Heavy-consistency compound that may remain adhesive and pliable with age. Is typically a waterproof compound applied to exterior walls and roof surfaces.

MAXIMUM OCCUPANCY LOAD - The maximum number of people permitted in a room and is measured per foot for each width of exit door. The maximum is 50 per foot of exit.

MELT POINT - The temperature at which the solid asphalt becomes a liquid.

MEMBRANE - A generic term relating to a variety of sheet goods used for certain built-up roofing repairs and application.

METAL EDGE - Brake metal or metal extrusions which are secured at the perimeter of the roof to form a weather tight seal.

MIGRATION - Spreading or creeping of a constituent of a compound onto/into adjacent surfaces. See bleeding.

MIL THICKNESS - Measurement used to determine thickness of a coating. 1 mil = .001 inch (1/1000).

MINERAL SPIRITS - A by-product of petroleum, clear in color, a solvent for asphaltic coatings.

MOCK UP TESTING - Controlled air, water and structural performance testing of existing or new glazing systems.

MODULUS - Stress at a given strain. Also tensile strength at a given elongation.

MOLDING - Finish wood such as door and window trim.

MONITOR, SAW-TOOTH - A type of monitor characterized by sharp angled pitches and vertical sections, usually arranged in rows much like teeth of a saw.

MONITOR - A large structure rising above the surrounding roof planes, designed to give light and/or ventilation to the building interior.

MOPPING - In roofing, a layer of hot bitumen mopped between plies of roofing felt. Full mopping is the application of bitumen by mopping in such a manner that the surface being mopped is entirely coated with a reasonably uniform coating. Spot Mopping is the procedure of applying hot bitumen in a random fashion of

small daubs, as compared to full mopping. Sprinkle mopping is a special application of installing insulation to the decks. It is done by dipping a roof mop into hot bitumen and sprinkling the material onto the deck. Strip Mopping is the application of bitumen in parallel bands.

MORTAR TYPES - Type M is suitable for general use and is recommended specifically for masonry below grade and in contact with earth, such as foundations, retaining walls and walks. Type M is the strongest type. Type S is suitable for general use and is recommended where high resistance to lateral forces is required. Type N is suitable for general use in exposed masonry above grade and is recommended specifically for exterior walls subject to severe exposures. Type O is recommended for load-bearing walls of solid units where the compressive stresses do not exceed 100 lbs. per square inch and the masonry wall is not subjected to freezing and thawing in the presence of excessive moisture.

MUD CRACKS - Cracks developing from the normal shrinkage of an emulsion coating when applied too heavily.

MULLION - A horizontal or vertical member that supports and holds such items as panels, glass, sash, or sections of a curtain wall.

MUNTINS - Horizontal or vertical bars that divide the sash frame into smaller layers of glass. Muntins are smaller in dimensions and weight than mullions.

N

NAILER - A piece of lumber secured to non-nail able decks and walls by bolts or other means, which provides a suitable backing onto which roof components may be

Mechanically fastened.

NEAT PLASTER - A base coat plaster which does not contain aggregates and is used where the addition of aggregates on the job is desired.

NEOPRENE - A synthetic rubber having physical properties closely resembling those of natural rubber. It is made by polymerizing chloroprenes, and the latter is produced from acetylene and hydrogen chloride.

NM - A type of ROMEX cable (nonmetallic sheathed cable that contains several conductors). The cable, which is flame-retardant, is limited to use in dry locations only and can not be exposed to excessive moisture.

NMC (Non Metallic Conduit) - A type of ROMEX cable (nonmetallic sheathed cable that contains several conductors). NMC may be used in damp or corrosive locations as well as dry areas.

NON-DESTRUCTIVE - A phrase describing a method of examining the interior of a component

whereby no damage is done to the component itself.

NON-DRYING (Non-Curing) – A sealant that does not set up or cure. See Butyl.

NON-SAG – A sealant formulation having a consistency that will permit application in vertical joints without appreciable sagging or slumping. A performance characteristic which allows the sealant to be installed in a sloped or vertical joint application without appreciable sagging or slumping.

NON-SKINNING – Descriptive of a product that does not form a surface skin.

NON-STAINING – Characteristic of a compound that will not stain a surface.

NOZZLE – The tubular tip of a caulking gun through which the compound is extruded.

NUCLEAR METER – A device used to detect moisture by measuring slowed, deflected neutrons.

O

O.C. – On Center. A measurement term meaning a certain distance between like materials. Studs placed at 16" O.C. will be laid out so that there is 16" from the center of one stud to the center of the next.

OHMMETER – In electrical contracting, a device to measure the resistance across a load. They are never used on a live circuit. It is used to track down broken wires.

OHM'S LAW – States that, in a given electrical circuit, the amount of current in amps is equal to the pressure in volts divided by the resistance in ohms. The formula is:

$$I (\text{Current}) = V \text{ voltage} \text{ or } V = I \times R$$

$$R \text{ resistance or } R = V/I$$

OIL-CANNING – The term describing distortion of thin-gauge metal panels which are fastened in a manner restricting normal thermal movement?

ORGANIC – A term designating any chemical compound which contains carbon and hydrogen.

OVERHANG – That part of the roof structure which extends horizontally beyond the vertical plane of the exterior walls of a building.

OXIDIZE – To combine with oxygen in the air.

P

PARAPET WALL - A low wall around the perimeter of a roof deck.

PARGE COAT - A thin application of plaster for coating a wall.

PARKING STRIP - The area in front of a building between the sidewalk and the street usually landscaped with grass. The parking strip serves as a buffer between the road and pedestrians walking on the sidewalk.

PATTERNED GLASS - One type of rolled glass having a pattern impressed on one or both sides. Used extensively for light control, bath enclosures and decorative glazing. Sometimes call "rolled," "figured," or "obscure" glass.

PAVER STONES - Usually pre-cast concrete slabs used to create a traffic surface.

PENTHOUSE - A relatively small structure built above the plane of the roof.

PERFORMANCE AND PAYMENT BOND - Guaranty by a surety company that if a contractor fails to perform under a contract, the surety company will complete the work.

PERLITE - An aggregate formed by heating and expanding siliceous volcanic glass.

PERMANENT SET - The amount by which a material fails to return to its original dimensions after being deformed by an applied force or load.

PHOTO-OXIDATION - Oxidation caused by rays of the sun.

PITCH - A term frequently used to designate coal tar pitch.

PLAN SUBMITTAL - Submission of construction plans to the city or county in order to obtain a Building Permit.

PLANS - See Blue Prints.

PLAT - A map of a geographical area as recorded by the county.

PLATE LINE - The top horizontal line of a building wall upon which the roof rests.

PLATFORM FRAMING/PLATFORM CONSTRUCTION - The process of constructing a building in one or more consecutively installed platforms. (Usually one story constitutes a platform.)

PLENUM CHAMBER - Chamber or container for moving air under a slight positive pressure to which

one or more ducts are connected.

PLOT PLAN - A bird's eye view showing how a building sits on the building lot, typically showing setbacks (how far the building must sit from the road), easements, rights of way, and drainage.

PLYWOOD - Wooden panels formed by gluing thin sheets of wood together, with the grain of adjacent layers arranged at right angles.

POCKET (CHANNEL) - A three-sided, U-shaped opening in a sash or frame to receive glazing infill. Contrasted to a rabbet, which is a two-sided, L-shaped sections as with face glazed window sash.

POINTING - The process where joints between masonry units, brick, etc., are filled with mortar.

POLISHED WIRED GLASS - Wired glass that has been ground and polished on both surfaces.

POLYMER - A substance consisting of large molecules which have been formed from smaller molecules of similar make-up.

POLYSULFIDE SEALANT - Polysulfide liquid polymer sealant which is mercaptan terminated, long chain aliphatic polymers containing disulfide linkages. They can be converted to rubbers at room temperature without shrinkage upon addition of a curing agent.

POLYURETHANE SEALANT - An organic compound formed by reaction of a glycol with and isocyanate.

POLYVINYL CHLORIDE (PVC) - Polymer formed by polymerization of vinyl chloride monomer. Sometimes called vinyl.

PONDING - A condition where water stands on a roof for prolonged periods due to poor drainage and/or deflection of the deck.

POP OUT - See stucco pop out

POP RIVETS - Fasteners used to join pieces of metal that are installed by either compressed-air-assisted or hand-operated guns. Unique in that they are installed from one side of the work.

POROSITY - The density of substance and its capacity to pass liquids.

PORTLAND CEMENT - A mixture of certain minerals which when mixed with water form a gray colored paste and cure into a very hard mass.

POST - A vertical member of wood, steel, concrete or other material that transfers weight from the top of the post to whatever the post is resting on.

POST & BEAM CONSTRUCTION - Most common type of wall framing, using posts which carry horizontal beams on which joists are supported. It allows for fewer bearing partitions, & less material.

POT LIFE - The time interval following the addition of an accelerator before chemically curing material will become too viscous to apply satisfactorily. See Shelf Life.

POWER - The energy rate, usually measured in watts. Power equals voltage times amps. Or $W = E \times I$. The heavier the flow of amps at a given supply, the higher the rate at which energy is being supplied and used.

PRECAST - Concrete building components which are formed and cured at a factory and then transported to a work site for erection.

PRE-SHIMED TAPE SEALANT - A sealant having a pre-formed shape containing solids or discrete particles that limit its deformation under compression.

PRESSURE REDUCING VALVE - Valve installed in the water service line where it enters the building to reduce the pressure of water in the line to an acceptable pressure used in buildings (40-55 psi desired).

PRESSURE RELIEF VALVE - Valve to relieve excess pressure in water storage tanks.

PRESSURE TREATED LUMBER - Lumber that is treated in such a way that the sealer is forced into the pores of the wood.

PRIMER - A material of relatively thin consistency applied to a surface for the purpose of

Creating a more secure bonding surface and to form a barrier to prevent migration of components.

PRIMING - Sealing of a porous surface so that compounds will not stain, lose elasticity, shrink excessively, etc. because of loss of oil or vehicle into the surround.

PROJECTION - In roofing, any object or equipment which pierces the roof membrane.

PROTECTION BOARD - In roofing, heavy asphalt impregnated boards which are laid over bituminous coatings to protect against mechanical injury.

PURLINS - A horizontal structural member spanning between beams or trusses to support a roof deck. In slope glazing, purloins are the horizontal framing members.

PUSH STICK - In hardware, a tool used when cutting a short board on a table saw.

PVDF - Architectural coating. See Knar Coating.

Q

R

RADIAL SAW - A circular saw which hangs from a horizontal arm or beam and slides back and forth. The arm pivots from side to side to allow for angle cuts and bevels. When sawing finish plywood, the good side should face up as the saw cuts on the down stroke.

RADIATION - Any heated surface loses heat to cooler surrounding space or surfaces through radiation. The earth receives its heat from the sun by radiation. The heat rays are turned into heat as they strike an object which will absorb some or all of the heat transmitted.

RADIATOR - A heating unit which is supplied heat through a hot water system.

RAFTER - A sloping roof member that supports the roof covering which extends from the ridge or the hip of the roof to the eaves. A common rafter is one which runs square with the plate and extends to the ridge. A hip rafter extends from the outside angle of the plate towards the apex of the roof. They are 2" deeper or wider than common rafters. A valley rafter extends from an inside angle of the plates toward the ridge of the house.

RAGGLE BLOCK - A specially designed masonry block having a slot or opening into which the top edge of the roof flashing is inserted and anchored.

RAIL - The top and bottom frame members of a door or window (not the jamb).

RAKE - The angle of slope of a roof rafter, or the inclined portion of a cornice.

RANKIN - Thermometer scale on which unit of measurement equals the Fahrenheit degree.

RE-BAR - Reinforcing bar used to increase the tensile strength of concrete.

REFLECTIVE GLASS - Glass with a metallic coating to reduce solar heat gain.

REGISTER - A fixture through which conditioned air flows. In a gravity heating system, it is located near the baseboard. In an air conditioning system, it is located close to the thermostat.

REGLET - A horizontal slot, formed or cut in a parapet or other masonry wall, into which the top edge of

counter-flashing can be inserted and anchored. In glazing, regret is typically a pocket or keyway extruded into the framing for installing the glazing gaskets.

REINFORCED CONCRETE - A combination of steel and concrete using the best properties of each. The steel consists of rebar or reinforcing bars varying from 3/8 " to 2 1/4 "in diameter and is placed before concrete is poured.

REINFORCED MASONRY - Masonry units, reinforcing steel, grout and/or mortar combined to act together to strengthen the masonry structure.

RELATIVE HEAT GAIN - The amount of heat gain through a glass product taking into consideration the effects of solar heat gain (shading coefficient) and conductive heat gain (U-value).

RESISTANCE- The internal structure of wires even in the best conductors opposes the flow of electric current and converts some current into heat. This internal friction-like effect is called resistance and is measured in ohms. Resistance equals Voltage divided by Amperage.

RETURN - In heating and cooling systems, a vent that returns cold air to be warmed. In a hot air furnace system, it is located near an inside wall.

RIGID METAL CONDUIT - This conduit resembles plumbing pipe, protecting wires from damage.

ROMEX - A nonmetallic sheathed cable consisting of two or more insulated conductors having an outer sheath of moisture resistant, nonmetallic material. The conductor insulation is rubber, neoprene, thermoplastic or a moisture resistant flame retardant fibrous material. There are two types: NM and NMC - described earlier.

ROOF SYSTEM - General term referring to the waterproof covering, roof insulation, vapor barrier, if used and roof deck as an entity.

ROUGH - In hardware, metal fastenings on cabinets which are usually concealed, like staples

ROUGH OPENING - The opening in a wall into which a door or window is to be installed.

ROUGH PLUMBING - All plumbing that should be done before the finish trades (sheetrock, painting, etc), including all waste lines and supply water lines that are in the walls or framing of the building. See also: Plumbing, Sub Rough, and Finish Plumbing.

RPM - Revolutions per Minute.

RUBBER TIRED ROLLER - A roller with rubber tires commonly used for compacting trimmed sub

grade or aggregate base or clay type soils.

RUN - The horizontal distance between the eaves and the ridge of the roof, being half the

Span for a symmetrical gable roof.

R-VALUE - The thermal resistance of a glazing system. The R-value is the reciprocal of the U-value. The higher the R value, the less heat is transmitted throughout the glazing material.

S

SABER SAW - a saw that cuts on the upstroke, good side of wood faces down.

SADDLE - A ridge in the roof deck, whose top divides two sloping parts of the roof so that water will be diverted to the roof drains.

SASH - The window frame, including muntin bars if used, to receive the glazing infill.

SCALE - The relationship between actual measurements on a page of plans or blue prints and the actual measurements of the building represented by the plans or blue prints.

SCRATCHES COAT - The first coat of plaster derives its name from cross-raking which is performed on the wet surface to improve bond with the following brown coat. It is considered a base coat plaster.

SCREEDING - The wood or metal straightedge used to strike off or level newly placed concrete when doing cement work. Screeds can be the leveling device used or the form work used to level or establishes the level of the concrete. Screeds can be hand used or mechanical.

SCRIM - A woven or mat-type fabric that is used as a membrane sandwich between other

Material to provide reinforcement and stretch resistance.

SCUPPER - An outlet in the wall of a building or a parapet wall for drainage of water from a flat roof.

SCUTCH - A bricklayer's cutting tool used for dressing and trimming brick to a special shape. It resembles a small pick

SEALANT - An elastomeric material with adhesive qualities applied between components of a similar or dissimilar nature to provide an effective barrier against the passage of the elements.

SELF-HEALING - A term used to describe to a material which melts with the heat from the sun's rays,

and seals over cracks that were earlier formed from other causes. Some waterproof membranes are self-healing.

SELF-LEVELING - A term used to describe a viscous material that is applied by pouring. In its uncured state, it spreads out evenly.

SELVAGE - The unsurfaced strip along a sheet of roll roofing which forms the under portion at the lap in the application of the roof covering.

SEPARATION - In concrete application, what happens to concrete when it is dropped directly with a flat chute causing the concrete to separate, usually occurring at a 1:2 slope.

SERVICE CONDUCTOR - In electrical contracting, the supply conductors that extend from the street main or from the transformer to the service equipment.

SERVICE DROP - In electrical contracting, the overhead service conductors from the last pole or other aerial support to and including the splices, if any, connecting to the service entrance conductors at the building.

SETTING BLOCKS - Generally rectangular cured extrusions of neoprene, EPDM, silicone, rubber or other suitable material on which the glass product bottom edge is placed to effectively support the weight of the glass.

SFD or Single Family Dwelling - A house built for the purpose of a single family as opposed to multi families such as a duplex or apartment complex.

SHADING COEFFICIENT - The ratio of the solar heat gain through a specific glass product to the solar heat gain through a layer of 1/8" (3mm) clear glass. Glass of 1/8" (3mm) thickness is given a value of 1.0, therefore the shading coefficient of a glass product is calculated as follows:

SOLAR HEAT GAIN OF THE GLASS IN QUESTIONS

S.C. = Solar Heat Gain of 1/8" clear Glass

SHED ROOF - A roof having only one slope or pitch, with only one set of rafters which fall from a higher to a lower wall.

SHEATHING - Plywood, gypsum or wood fiber encasing walls, ceilings, floors and roofs of framed buildings. It is the first layer of outer wall covering nailed to the studs or rafters.

SHEETROCK - Panels made primarily from gypsum installed over the framing to form the interior walls and ceilings. Sheetrock is often called gypsum board.

SHELF LIFE - Used in the glazing and sealant business to refer to the length of time a product may be

stored before beginning to lose its effectiveness. Manufacturers usually state the shelf life and the necessary storage conditions on the package.

SHINGLES - Small units of material which are laid in a series of overlapping rows as a roof covering on pitched roofs.

SHORING - A temporary support erected in a trench or other excavation to support the walls from caving in.

SHORE "A" HARDNESS - Measure of firmness of a compound by means of a Durometer Hardness Gauge. (A hardness range of 20-25 is about the firmness of an art gum eraser. A hardness of about 90 is about the firmness of a rubber heel.)

SIGHT LINE - The line along the perimeter of glazing in fills corresponding to the top edge of stationary and removable stops. The line to which sealants contacting the glazing infill are sometimes finished off.

SILICONE SEALANT - A sealant having as its chemical compound a backbone consisting of alternating silicon-oxygen atoms.

SILL PLATE - The framing member anchored to the foundation wall upon which studs and other framing members will be attached. It is the bottom plate of your exterior walls.

SILL SEALER - A material placed between the top of the foundation wall and the sill plate. Usually a foam strip, the sill sealer helps make a better fit and eliminate water problems.

SILL STEP - The first step coming directly off a building at the door openings.

SINGLE PLY - A descriptive term signifying a roof membrane composed of only one layer of material such as EPDM, Hypalon or PVC.

SINGLE TEE - The name given to a type of precast concrete deck which has one stiffening rib integrally cast into slab.

SKYDOME - A type of skylite exhibiting a characteristic translucent plastic domed top.

SKYLIGHT - A structure on a roof that is designed to admit light and is somewhat above the plane of the roof surface.

SLAB ON GRADE - A type of construction in which footings are needed but little or no foundation wall is poured.

SLAG - A by-product of smelting ore such as iron, lead or copper. Also overburden/dropping from welding

which may burn, melt, or discolor adjacent surfaces.

SLATE - A dark gray stratified stone cut relatively thin and installed on pitched roofs in a Shingle like fashion.

SLOPE - Incline or pitch of roof surface.

SLUMPTEST - Measures the consistency of a concrete mix or its stiffness. If the tests results are high, one likely cause would be too much water. Low slump-not enough water. The test is measured in inches.

SLOPED GLAZING - Any installation of glass that is at a slope of 15 degrees or more from vertical.

SOFFIT - The underside of a part or member of a building extending out from the plane of the building walls.

SOFTENING POINT - The temperature at which a substance changes from a hard material to a softer and more viscous material.

SOLE PLATE - bottom horizontal member of a frame wall.

SPACERS (Shims) - Small blocks of neoprene, EPDM, silicone or other suitable material placed on each side of the glass product to provide glass centering, maintain uniform width of sealant bead and prevent excessive sealant distortion.

SPALLING - The chipping or flaking of concrete, bricks, or other masonry where improper drainage or venting and freeze/thaw cycling exists.

SPAN - The horizontal distance between supporting structures such as beams, trusses or Columns.

SPANDREL - The panels of a wall located between vision areas of windows which conceal structural columns, floors, and shear walls.

SPECIFICATION - Detailed written instructions which, when clear and concise, explain each phase of work to be done.

SPLITTING - The formation of long cracks completely through a membrane. Splits are frequently associated with lack of allowance for expansion stresses. They can also

Be a result of deck deflection or change in deck direction.

SPUD - The removal of gravel or heavy accumulations of bitumen from roof membranes by means of chipping or scraping.

STACK - The vertical pipe of a system of soil, waste or vent piping

STACK VENT - Also called a waste vent or soil vent, it is the extension of a soil or waste stack above the highest horizontal drain connected to the stack.

STANDING SEAM - A type of joint often used on metal roofs.

STATIC LOAD - The total amount of permanent non moving weight that is applied to given surface areas.

STEEL TROWEL - Tool used for non-porous smooth finishes of concrete. It is a flat steel tool used to spread and smooth plaster, mortar or concrete. Pointing trowels are small enough to be used in places where larger trowels will not fit. The pointing trowel has a point. The common trowel has a rectangular blade attached to a handle. For smooth finish, use trowel when concrete begins to stiffen.

STC (Sound Transmission Class) - A single number rating derived from individual transmission losses at specified test frequencies. It is used for interior walls, ceilings and floors.

STL (Sound Transmission Loss) - The reduction of the amount of sound energy passing through a wall, floor, roof, etc. It is related to the specific frequency at which it is measured and it is expressed in decibels. Also called "Transmission Loss."

STILE - The side frame members of a door or window (not the jamb).

STORM DOOR - A panel or sash door placed on the outside of an existing door to provide additional protection from the elements.

STORM WINDOW - A glazed panel or sash placed on the inside or outside of an existing sash or window as additional protection against the elements.

STRAIN - The percentage of elongation or compression of a material or portion of a material caused by an applied force.

STRIKING OFF - The operation of smoothing off excess compound or sealant at sight line when applying same around layers or panels.

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. Used in landscaping to level the ground.

STRUCTURAL SILICONE GLAZING - The use of a silicone sealant for the structural transfer of loads from the glass to its perimeter support system and retention of the glass in the opening.

STUCCO - A type of exterior finish.

STUD - The evenly spaced, vertical framing members of a wall. See also: Wood grades.

SUB CONTRACTOR - A contractor who specializes in a particular trade such as waterproofing.

SUB-FLOOR - Material (such as particleboard) installed before finish flooring materials.

SUB ROUGH - That part of a building's plumbing system that is done before the cement is poured.

SUBSTRATE - A part or substance which lies below and supports another.

T

TAPING - Applying joint tape over embedding compound in the process of joint treatment of drywall.

TEAR OFF - In roofing, a term used to describe the complete removal of the built up roof membrane and insulation down to and exposing the roof deck.

TEXTURE PAINT - One which may be manipulated by brush, trowel or other to give various patterns.

THERMAL MOVEMENT - The measured amount of dimensional change that a material exhibits as it is warmed or cooled.

THERMAL SHOCK - The stress built up by sudden and appreciable changes in temperature.

THERMOPLASTIC MATERIAL - Solid material which is softened by increasing temperatures and hardened by decreasing temperatures.

THREE PHASE - In electrical contracting, a wiring system consisting of 4 wires and used in industrial and commercial applications. This system is suitable for installations requiring large motors. It consists of three hot wires and one ground wire. The voltage in each hot wire is out of phase with the others by $1/3$ of a cycle, as if produced by 3 different generators.

THW - Moisture and heat resistant thermoplastic conductor. It is flame retardant, moisture and heat resistant and can be used in dry or wet locations.

TIE-IN - In roofing, a term used to describe the joining of a new roof with the old.

TILT-UP WALL - Cast concrete units which are preformed which, when cured, are tilted to their vertical position and secured by mechanical fasteners to prior erected

Structural steel. May be pre-cast.

TINTED GLASS - Glass with colorants added to the basic glass batch that give the glass color as well as light and heat-reducing capabilities. The color extends throughout the thickness of the glass.

TITLE 24 - A federal set of laws that mandate the construction industry to conserve energy.

TOE BEAD - Sealant applied at the intersection of the outboard glazing stop and the bottom of the glazing channel; must be sized to also provide a seal to the edge of the glass.

TONGUE AND GROOVE - A type of flooring where the tongue of one board is joined to the groove of another board

TOOLING - The operation of pressing in and striking a sealant in a joint to press the sealant against the sides of a joint and secure good adhesion; the finishing off of the surface of a sealant in a joint so that it is flush with the surface.

TOP MOPPING - The finished mopping of hot bitumen on a built-up roof.

TOP PLATE - Top horizontal member of a frame wall.

TORCHING - Applying direct flame to a membrane for the purpose of melting, heating or adhering.

TRANSIT - A surveyor's instrument used by builders to establish points and elevations both vertically and horizontally. It can be used to line up stakes or to plumb walls or the angle of elevation from a horizontal plane can be measured.

TREMIE - A tube with removable sections and a funnel at the top used in concrete application. The bottom is kept beneath the surface of the concrete and raised as the form is filled and is used to pour concrete underwater.

TRUSS - A major supporting structure usually made of timber.

TUCK POINTING - The re-grouting of defective mortar joints in a masonry or brick wall.

TW - Moisture-resistant thermoplastic conductor that can be used in dry or wet locations and has no outer covering and is not heat-resistant.

TWO-PART SEALANT - A product composed of a base and curing agent or accelerator, necessarily packages in two separate containers which are uniformly mixed just prior to use.

U

ULTRAVIOLET - The invisible rays of the spectrum of light which are at its violet end. Sometimes abbreviated U.V.

UPRIGHTS - Vertical members supporting the sides of a trench.

U-VALUE - A measure of air-to-heat transmission (loss or gain) due to the thermal conductance and the difference in indoor and outdoor temperatures. As the U-value decreases, so does the amount of heat that is transferred through the glazing material. The lower the U-value, the more restrictive the fenestration product is to heat transfer. Reciprocal of R-value.

V

VALVE - A device to stop, start or regulate the flow of liquid or gas through or from piping.

VAPOR - The gaseous form of any substance.

VAPOR RETARDER (BARRIER) - A membrane which is placed between the insulation and the roof deck to retard water vapor in the building from entering the insulation and condensing into liquid water.

VEINING - In roofing, the characteristic lines or "stretch marks" which develop during the aging process of soft bitumen's.

VENT PIPE - A vertical pipe of relatively small dimensions which protrudes through a roof to provide for the ventilation of gasses.

VENTILATOR - Device installed on the roof for the purpose of ventilating the interior of the building.

VENTING - The process of installing roof vents in a roof assembly to relieve vapor

Pressure; the process of water in the insulation course of the roof assembly

Evaporating and exiting via the roof vents.

VENTS STACK - A vertical vent pipe installed for the purpose of providing circulation of air to and from any part of a drainage system.

VENT SYSTEM - In plumbing, a system to provide a flow of air to or from a drainage system or to provide circulation of air within such system to protect traps seals from siphonage and back pressure.

VERMICULITE - An aggregate somewhat similar to perlite that is used as an aggregate in lightweight roof decks and deck fills. It is formed from mica, a hydrous silicate.

VISCOSITY - The internal frictional resistance offered by a fluid to change of shape or to the relative motion or flow of its parts.

VISIBLE LIGHT TRANSMITTANCE - The percentage of visible light (390 to 770) nanometers) within the solar spectrum that is transmitted through glass.

VISUAL MOCK UP - Small scale demonstration of a finished construction product.

VOLTAGE - The driving force behind the flow of electricity somewhat like pressure is in a water pipe.

VOLTMETER - measures the voltage flowing through a circuit. The circuit must be closed to allow the voltage to flow.

W

WALKWAYS - Designated areas for foot traffic.

WATER-CEMENT RATIO - The strength of a concrete mixture depends on the water cement ratio. The water and cement form a paste. If the paste is made with more water, the concrete becomes weaker. Traditionally, concrete mixes have been identified in terms of the ratio of cement to fine aggregate to coarse aggregate. For example, the ratio 1:2:4 refers to a mix which consists of 1 cu. ft. of cement, 2 cu. ft. of sand and 4 cu. ft. of gravel. Cement and water are the two chemically active elements in concrete and when combined, form a paste or glue which coats and surrounds the particles of aggregate and upon hardening binds the entire mass together.

WATERPROOFING - Type of work done by **PROOFROCK WATERPROOFING SYSTEMS**; also the process where a building component is made totally resistant to the passage of water and/or water vapor.

WATER REPELLANT COATING - Transparent coating or sealer applied to the surface of concrete and masonry surfaces to repel water.

WATER VAPOR - Moisture existing as a gas in air.

WATTAGE - The electrical unit of power. **KILOWATTS** is 1000 watts and electric customers are

billed on how many kilowatts of power they have used.

WEEP HOLE - A hole which allows for drainage of entrapped water from masonry or glazing structures.

WEEP SCREED - Tool used to drain moisture from concrete.

WELD - The joining of components together by fusing. In thermoplastics, refers to bonding together of the membrane using heat or solvents.

WET SEAL - Application of an elastomeric sealant between the glass and sash to form a weather tight seal.

WIND UPLIFT - The upward force exerted by wind traveling across a roof.

WIRE SIZE - Conductors for building wiring are available in AWG (American Wire Gauge) sizes ranging from No. 14 to 4/0. The larger the number size, the smaller the diameter. For example #10 is smaller than #8. The larger the diameter of a wire, the lesser the resistance.

WOOD FIBER PLASTER - Consists of calcified gypsum integrally mixed with selected coarse cellulose fibers which provide bulk and greater coverage. It is formulated to produce high-strength base coats for use in highly fire-resistant ceiling assemblies.

WORK LIFE - The time during which a curing sealant (usually two compounds) remains suitable for use after being mixed with a catalyst.

X

XARA - a by company of zai estate which is beautifying the womens ogf pakistan.

Y

Y

Z

ZAI ESTATE AGENCY - A futures pioneer in construction and

estate industry.