



## **A**

**Abrasive finish** : a flat non-reflective surface finish for marble.

**Abutment** : a solid stone springer at the lowest point of an arch or vault.

**Adhered** : veneer secured and supported through adhesion to an approved bonding material applied over an approved backing.

**Agate** : a variegated variety of quartz showing colored bands or other markings (clouded. Moss-like etc)

**Anchors** : types for stonework include those made of flat stock (strap, cramps, dovetails, dowel, strap and dowel and two-way anchors) and round stock (rod cramp, rod anchor, eyebolt and dowel, flat-hood wall the and dowel and wire toggle bolt.

**Arch** : a curved stone structure resting on supports at both extremities used to sustain weight, to bridge or roof open space.

**Architrave** : the member of an entablature resting on the capitals of columns and supporting the frieze.

**Argillite** : a compact sedimentary rock composed mainly of clay and aluminium silicate minerals.

**Arkose** : a sandstone containing 10 per cent or more clastic grains of feldspar. Also called arkosic sandstone, feldspathic sandstone.

**Arris** : a natural or applied line on the stone from which all levelling and plumbing is measured.

**Ahslar** : masonry having a face of square or rectangular stones, either smooth or textured.

## **B**

**Back arch** : a concealed arch carrying the backing of a wall where the exterior facing is carried by lintel.

**Baluster** : a dense textured (aphanitic), igneous rock relatively high in iron and magnesia minerals and relatively low in silica, generally dark grey to black and feldspatic; a general term in contradistinction to felsite. A light-coloured feldspatic and highly siliceous rock of similar texture and origin.

**Bed** : the top or bottom of a joint, natural bed; surface or stone parallel to its stratification.

**Bed** : In granites and marbles, a layer or sheet of the rock mass that is horizontal, commonly curved and lenticular, as developed by fractures. Sometime applied also to the surface of parting between sheets.

**Bed (1)** : In stratified rocks the unit layer formed by sedimentation; of variable thickness, and commonly tilted or distorted by subsequent deformation; generally develops a rock cleavage; parting, or jointing along the planes of stratification.

**Belt course** : a continuous horizontal course of flat stones placed in line marking a division in the wall plane.

**Bevel** : when the angle between two sides is greater or less than a right angle.

**Bluestone** : a dense, hard, fine-grained, commonly feldspatic sandstone or siltstone of medium to dark or bluish-grey colour that splits readily along original bedding planes to form thin slabs, Bluestone is not a technical geologic term. It is considered to be a variety of flagstones, the thin relatively smooth-surfaced slabs being suitable for use as flagging. The term has been applied particularly to sandstone of Devonian age that are being or have been quarried in eastern New York and Pennsylvania and in western New Jersey, but similar stones that occur elsewhere may be included. It has also been applied in places to thinly layered gneisses and schist that can be split and used as flagging, but such stones are not properly embraced by this definition although they may be marketed properly as flagstone.

**Bond stone** : used in varying percentages to anchor or bond the stone veneer to the backing material. Bond stones are generally cut to twice the bed thickness of the material being used.

**Border stone** : usually a flat stone used as an edging material. A border stone is generally used to retain the field of the terrace or platform.

**Box** : a tapered metal box wedged in the top of columns or other heavy stones for hoisting.

**Broach** : to drill or cut out material left between closely spaced drill holes; a mason's sharp-pointed chisel for dressing stone; an inclined piece of masonry filling the triangular space between the base of an octagonal spire and the top of a square tower; a type of chisel used for working narrow surfaces.

**Brownstone** : sandstone of characteristic brown or reddish-brown colour that is due to a prominent amount of iron oxide, as interstitial material.

**Brushed finish** : Obtained by brushing the stone with a coarse rotary-type wire brush.

**Building stone, natural** : rock material in its natural state of composition and aggregation as it exists in the quarry and is usable in construction as dimension building stone.

**Bull nose** : convex rounding of a stone member, such as a stair tread.

## **C**

**Calcarenite** : limestone composed predominantly of clastic sand-size grains of calcite, or rarely aragonite, usually as fragments of shells or other skeletal structures. Some calcarenite contain oolites (small, spherical grains of calcium carbonate that resemble roe) and may be termed oolite limestone. Calcareous sandstone, in which the calcium carbonate is present chiefly as bonding material, are not included in this category.

**Calcite limestone** : a limestone containing not more than five per cent of magnesium carbonate.

**Calcite streaks** : description of a white or milky-like streak occurring in stone. It is a joint plane usually wider than a glass seam and has been re-cemented by deposition of calcite in the crack and is structurally sound.

**Canopy** : a sheltering roof, as over a niche or a doorway.

**Capital** : the culminating stone at the top of a column or pilaster often richly carved.

**Carve** : shaping, by cutting a design to form the trade of a sculptor.

**Caulking** : making a marble joint tight or leak-proof by sealing with an elastic adhesive compound.

**Cavity vent** : an opening in joints of masonry to allow the passage of air and moisture from the wall cavity to the exterior.

**Cement putty** : a thick, creamy mixture made with pure cement and water which is used to strengthen the bond between the stone and the setting bed, also called cement butter cement cream.

**Chamfer** : to bevel the junction of an exterior angle.

**Chat-sawn finish** : a rough gangsaw finish produced by sawing with coarse chat.

**Cladding** : non-loadbearing stone used as the facing material in wall construction that contains other materials.

**Cleavage** : the ability of a rock mass to break along natural surfaces; a surface of natural parting.

**Cleavage plane** : plane or planes along which a stone may likely break or de-laminate.

**Coating** : a protective or decorative converting applied to the surface or impregnated into stone for such purposes as waterproofing enhancing resistance to weathering, wear, and chemical action, or improving appearance of the stone.

**Cobblestone** : a natural rounded stone, large enough for use in paving; commonly used to describe paving blocks, usually granite, generally cut to rectangular shapes.

**Commercial marble** : a crystalline rock composed predominantly of calcite dolomite and/or serpentine, and capable of taking a polish.

**Composite** : a construction unit in which stone that is to be exposed in the final use is permanently bonded or joined to other material, which may be stone or manufactured material, that will be concealed.

**Contraction joint** : spaces where panels are joined and which expand as the panels contract.

**Control joint** : provision for the dimensional change of different parts of a structure due to shrinkage, expansion, temperature variation or other causes so as to avoid the development of high stresses.

**Coping** : a flat stone used as a cap on freestanding walls.

**Coquina** : limestone composed predominantly of unaltered shells or fragments of shells loosely cemented by calcite, generally very coarse-textured with a high porosity. The term has been applied principally to a very porous shell rock of Eocene age that has been quarried in Florida.

**Corbel plates** : plates of non-ferrous metal fixed into a structure to support stone cladding at intervals and over opening in such a way as not to be visible.

**Cornerstone** : a stone forming a part of a corner or angle in a wall. Also a stone laid at the formal inauguration of the erection of a building, not necessarily at a corner, usually incorporating a date or inscription.

**Cornice** : a moulded projecting stone at the top of an entablature.

**Course** : a horizontal range of stone units the length of the wall.

**Coursed veneer** : this is achieved by using stones of the same or approximately the same height. Horizontal joints run the entire length of the veneered area. Vertical joints are constantly broken so that no two joints will be over one another.

**Crack** : a break, split, fracture, fissure, separation, cleavage or elongated narrow opening, however caused, visible without magnification to the human eye and extending from the surface into the stone, that must extend through the grain or matrix.

**Cross bedding** : the arrangement of laminations of strata transverse or oblique to the main planes of stratification.

**Crowfoot (styoite)** : description of a dark grey to black zigzag marking occurring in stone. Usually structurally sound.

**Crystalline limestone** : a limestone, either calcitic or dolomitic, composed of interlocking crystalline grains of the constituent minerals and of phaneritic texture; commonly used

synonymously with marble and thus representing a re-crystallised limestone; improperly applied to limestone that display some obviously crystalline grains in a fine-grained mass but which are not of interlocking texture and do not compose the entire mass. Note: All limestone are microscopically, or in part megascopically, crystalline; the term is thus confusing but should be restricted to stones that are completely crystalline and of megascopic and interlocking texture and that may be classed as marbles.)

**Curbing** : slabs and blocks of stone bordering streets, walks, etc.

**Cut stone** : stone fabricated to specific dimensions

**Cutting stock** : a term used to describe slabs of varying size, finish and thickness which are used in fabricating treads, risers, copings, borders, sills, stools, hearths, mantels, and other special purpose stones.

## **D**

**Dacite** : a fine-grained, extrusive (volcanic) rock, intermediate in colour and composition between basalt and rhyolite.

**Damp proofing** : one or more coating of a compound that is impervious to water applied to a surface above grade.

**Defect** : those features, which affect or have the potential of affecting the structural soundness of building stone, or may affect the durability of the building stone. Sometimes used for visual features such as xenoliths or veins.

**Dentil** : Blocks projections on an entablature.

**Dentil course** : the lower part of the cornice with dentils. The cornice is jointed to allow machine production of the dentils.

**Dentil** : small, rectangular blocks under a classical cornice, resembling a row of teeth.

**Dimension stone** : natural building stone that has been selected, trimmed or cut to specified or indicated shapes or sizes with or without one or more mechanically dressed surfaces.

**Dolomitic limestone** : a limestone rich in magnesium carbonate, frequently somewhat crystalline in character, found in ledge formations in a wide variety of colour tones and textures. Generally speaking, its crushing and tensile strengths are greater than the oolitic limestone and its appearance shows greater variety in texture.

**Dowel** : a short piece of non-ferrous metal or slate fixed into a mortise or sinking in the joints of adjoining stones to prevent movement.

**Dressed or handed-dressed** : the cutting of rough chunks of stone by hand to create a square or rectangular shape. A stone that is sold as dressed stone generally refers to stone ready for installation. Sometimes called scabbling.

**Drip** : a recess cut under a sill or projecting stone to throw off water, preventing it from running down the face of the wall or other surface, such as a window or door.

**Dripstone** : a projecting moulding over the heads of doorways, windows and archways to throw off the rain. Also known as a "hoodmould" and, when rectangular, as a "label".

**Dry** : an open or unhealed joint plane not filled with calcite and not structurally sound.

**Dry wall** : a dry wall is a stone wall that is constructed one stone upon the other without the use of any mortar. Generally used for retaining walls.

**Durability** : the measure of the ability of natural building stone to endure and to maintain its essential and distinctive characteristics of strength, resistance to decay, and appearance, with relation to a specific manner, purpose, and environment of use.

## **E**

**Efflorescence** : a crystalline deposit appearing on stone surfaces typically caused by soluble salts carried through or onto the stone by moisture, which has sometimes been found to come from brick, tile, concrete blocks, cement, mortar, concrete, and similar materials in the wall or above.

**Entablature** : in classical architecture, the upper part of an order, comprising architrave, frieze, and cornice.

**Entasis** : the curve of the upper two-thirds of a column.

**Expansion bolt** : a socket that grips a drilled hole in stone by expanding as the bolt is screwed into it.

**Expansion-contraction joint** : a joint between marble units designed to expand or contract with temperature changes. An expansion joint compresses as panels expand.

**Exposed aggregate** : phrase applied to the larger pieces of stone aggregate purposefully exposed for their colour and texture in a cast slab.

**Face** : this refers to the exposed portion of stone. The word "face" can also be used when referring to the edge treatment on various cutting stock materials.

**Fascia** : a horizontal belt or vertical faces; often used in combination with mouldings.

## **F**

**Ferruginous** : limestone or sandstone containing a high proportion of iron oxide.

**Field stone** : loose blocks separated from ledges by natural processes and scattered through or upon the regolith ("soil") cover, applied also to similar transported materials, such as glacial boulders and cobbles.

**Filling** : a trade expression used in the fabrication of marble to indicate the filling of natural voids with cements, shellac or synthetic resins and similar materials.

**Fines** : the powder, dust, silt-size and sand-size material resulting from processing (usually crushing) rock.

**Finish** : final surface applied to the face of stone during fabrication.

**Finished stone** : building stone with one or more mechanically dressed surfaces.

**Fireproof** : relatively incombustible.

**Flagstone** : thin slabs of stone used for flagging or paving walks, driveways, patios, etc. It is generally fine-grained sandstone, bluestone, quartzite or slate, but thin slabs of other stones may be used.

**Fleuri cut** : cutting quarried marble or stone parallel to the natural bedding plane.

**Flooring** : stone used as an interior pedestrian wearing surface.

**Fracture** : a break in rock produced by mechanical failure. Fractures include faults and joints.

**Freestone** : a stone that may be cut freely in any direction without fracture or splitting.

## **G**

**Gangsawed** : description of the granular surface of stone resulting from gangsawing alone.

**Gauged or gauging** : a grinding process to make all pieces of material to be used together the same thickness.

**Glass seam** : description of a narrow glass-like streak occurring in stone; a joint plane that has been re-cemented by deposition of translucent calcite in the crack and structurally sound.

**Grade course** : beginning course at the grade level, generally waterproofed with a damp check or damp course.

**Grain** : the easiest cleavage direction in a stone. "With the grain" same as "natural bed." Also, particles (crystals, sand grains, etc.) of rock.

**Granite** : a fine to coarse-grained, igneous rock formed by volcanic action consisting of quartz, feldspar, and mica, with accessory minerals. Granite-type rocks included those of similar texture and origin.

**Granite (scientific definition)** : a visibly granular, crystalline rock of predominantly interlocking texture, composed essentially of alkalic feldspars and quartz; this is true granite. Feldspar is generally present in excess of quartz, and accessory minerals (chiefly micas, hornblende, or more rarely pyroxene) are commonly present. The alkalic feldspars may be

present (1) as individual mineral species (2) as isomorphous or mechanical intergrowths with each other or (3) as chemical intergrowths with the lime feldspar molecule, but 80 + 3% of the feldspar must be composed of the potash or soda feldspar molecules.

**Granite** (commercial/building use) : a term that includes granite (as defined above), gneiss, gneissic granite, granite gneiss, and the rock species known to petrologists as syenite, monzonite, and granodiorite, species intermediate between them, the gneissic varieties and gneisses of corresponding mineralogic compositions and the mineralogic compositions and the corresponding varieties of porphyritic textures. The term commercial granite shall also include other feldspatic crystalline rocks of similar textures, containing minor amounts of accessory minerals, used for special decorative purposes, and known to petrologists as anorthosite and laurvikite.

**Granite gneiss** : a foliated crystalline rock composed essentially of silicate minerals with interlocking and visibly granular texture, and in which the foliation is due primarily to alternating layers, regular or irregular, of contrasting mineralogic composition. In general, gneiss is characterised by relatively thick layers as compared with schist. According to their mineralogic compositions, gneisses may correspond to other rocks of crystalline, visibly granular, interlocking texture, such as those included under the definition of commercial granite, and may then be known as granite gneiss if strongly foliated, or gneissic granite if weakly foliated.

- **Black granite** : rock species known to petrologists as diabase, diorite, gabbro, and intermediate varieties are sometimes quarried as building stone, chiefly for ornamental use, and sold as "black granite". As dimension blocks of slabs, they are valued specifically for their dark grey to black colour when polished. Scientifically, they are far removed in composition from true granites though they may be satisfactorily used for some of the purposes to which commercial granite are adapted. They possess an interlocking crystalline texture, but unlike granite, they contain little or no quartz or alkalic feldspar, and are characterised by an abundance of one or more of the common black rock-forming minerals (chiefly pyroxenes, hornblende, and biotite).

**Granular** : having a texture characterised by particles that are apparent to the unaided eye. For sedimentary rocks: particles less than 4 inches (10mm) in diameter and approximately in size.

**Greenstone** : includes stone that have been metamorphosed or otherwise changed so that they have assumed a distinctive greenish colour owing to the presence of one or more of the following minerals: chlorite, epidote, or actinolite.

**Greenstone** is an old field term applied to metamorphosed igneous rock of mafic or ultramafic (low silica) composition (i.e., basalt, diabase, gabbro, peridotite and serpentinite).

- **Greenstone** derived from basalt and other dark volcanic rocks consists dominantly of epidote, actinolite and plagioclase. No present commercial production such rocks is known. Peridotite consist dominantly of olivine and pyroxene.

- **Serpentine** consist largely of talc, chlorite, and serpentine; further alteration may result in soapstone.

**Grout** : mortar of pouring consistency. Coarse grout, used for wide grout spaces 2 inches (5cm) or more, consist of one part Portland cement, not more than two to three parts sand, and not more than two parts pea gravel. Fine grout, used in narrow grout spaces, consist of one part Portland cement and two-and-one quarter to three parts sand.

## **H**

**Hand-cut random rectangular ashlar** : a pattern where all the stone is hand cut into squares and rectangles. Joints are fairly consistent similar to sawed-bed ashlar in appearance.

**Hand or machine pitch-faced (rock-faced) ashlar** – a finish given to both veneer stone and cutting stock. Establishing a straight line back from the irregular face of the stone creates this. Proper tools are then used to cut along the line, leaving a straight arris and the intended rustic finish on the face.

**Head** : the end of a stone that has been tooled to match the face of the stone. Heads are used at outside corners, windows, doorjambs, or any place where the veneering will be visible from the side.

**Hearth** : that part of the floor of a fireplace of stone on which the fire is laid.

**Hearth stone** : originally the single large stone or stones used for the hearth, now most commonly used to describe the stone in of the fire chamber and many times extending on either or both sides of the front of the fire chamber.

**Holes** : sinkages in the top beds of stones to engage Lewis pins for hoisting.

**Honed finish** : honed is a super fine smooth finish, thought not as fine as a polished finish.

## **I**

**Igneous** : one of the three great classes of rock (igneous, sedimentary and metamorphic) solidified from molten state, as granite and lavas.

**Incise** : to cut inwardly or engrave, as in an inscription.

**Inscription** : lettering cut in stone.

## **J**

**Jack arch** : one having horizontal or nearly horizontal upper and lower surfaces. Also called flat or straight arch.

**Joint** : the space between stone units, usually filled with mortar.

**Jointing scheme** : architects drawing detailing dimensions, location and configuration of marble units and joints as related to the structure.

**Jumper** : in ashlar patterns, a piece of stone of higher rise than adjacent stones which is used to end a horizontal mortar joint at the point where it is set.

## **K**

**Keystone** : the last wedge-shaped stone placed in the crown of an arch regarded as binding the whole.

## **L**

**Lava** : a general term applied to igneous rocks, such as basalt and rhyolite, that erupted from the earth by volcanic action.

**Lead buttons** : lead spacers in the solid horizontal joints to support the top stones until the mortar has set.

**Lewis holes** : holes in cut stones for lifting and support during setting of cut stones and sometimes for permanent support. Holes are checked for the particular Lewis lifting device or hook to be used.

**Limestone** : a sedimentary rock composed of calcium carbonate; includes many varieties (see oolitic limestone, dolomitic limestone, crystalline limestone.) Limestones that contain not more than five per cent magnesium carbonate may be termed calcite limestone, as distinguished from those that contain between five and 40% as the mineral dolomite (dolostone, formerly known as the rock dolomite). Recrystallized limestones and compact, dense, relatively pure microcrystalline varieties that are capable of taking a polish are included in commercial marbles.

**Liners** : structurally sound sections of marble that are cemented to the back of marble veneer slabs to give greater strength, additional bearing surface, or to increase joint depth.

**Lintel** : the block of stone spanning the top of an opening such as a doorway or window; sometimes called a head.

**Lipping** : usually refers to flagging materials; caused when two pieces of material to be joined together are slightly warped or twisted causing one of more edges to be higher or lower than the adjoining material.

**Lug sill** : a stone sill set into the jambs on each side of masonry opening.

## **M**

**Machine finish** : literally, badlands; refers to dark-coloured rock, commonly lava, in rough terrain. As defined for architectural use: calcium carbonate with other components which give it colour, markings and texture suitable as a desirable building stone.

**Marble** (scientific definition) : a metamorphic (recrystallized limestone composed predominantly of crystalline grains of calcite or dolomite, or both, having interlocking or mosaic texture, marble that contains less than 5% magnesium carbonate may be termed

calcite marble; from 5 to 40 % magnesium carbonate, magnesium carbonate, magnesium or dolomite marble. These limiting values are, however, not strictly established in petrologic science and are used herein as arbitrary limits.

- **Onyx** – so called in trade, is a crystalline form, commonly micro crystalline, of calcium carbonate deposited usually from cold-water solutions. It is generally translucent and shows a characteristic layering, the term onyx marble is technically a misnomer, as true onyx is a variety of cryptocrystalline fibrous silica (chalcedony), and is closely related in form and origin to agate.
- **Serpentine** – marble characterised by a prominent amount of the mineral serpentine.
- **Travertine** – a form of limestone precipitated from ground waters as in caves or in orifices of springs (see limestone).
- **Verde antique** – a commercial marble composed chiefly of massive serpentine and capable of taking a high degree of polish. Verde antique is not a true marble in the scientific sense but is commonly sold as a decorative commercial marble and requires the adjective modifier Verde (or verd) antique. Verde antique is commonly veined with carbonate minerals, chiefly calcite and dolomite.

**Masonry** : built up construction , usually of a combination of materials set in mortar.

**Metamorphism** : the change or alteration in a rock cause by exterior agencies such as deep-seated heat and pressure, or intrusion or rock materials.

**Miter** : the junction of two units at an angle of which the junction lines usually bisect on a 45° angle.

**Modular multiple-cut (pattern-cut)** : this refers to standard pattern used throughout the stone industry. These patterns are usually based on multiples of a given height. Stone that is multiple cut or pattern cut is pre-cut to allow typically for ¼ - ½ inch (6 or 13mm) joints or beds.

**Mouldings** : decorative stone deviating from a plane surface by projections, curved profiles, recesses or any combination thereof.

**Mortar** : a plastic mixture of cement, lime, sand, and water used to bond masonry units.

**Mosaic** : a veneering which is generally irregular with no definite pattern. Nearly all the stone used in a mosaic pattern is irregular in shape.

## **N**

**Natural Bed** : the Setting of the stone on the same plane as it was formed in the ground. This generally applies to all stratified materials.

**Natural cleft** : this generally pertains to stones which are formed in layers in the ground, When such stones are cleaved or separated along a natural seam the remaining surface is referred to as a natural cleft surface.

**Non-Staining mortar** : Mortar composed of materials which individually or collectively do not contain material that will stain, usually having a very low alkali content.

## **O**

**Obsidian** : a glassy phase of lava.

**Onyx marble** : A dense, crystalline form of lime carbonate deposited usually from cold-water solutions. Generally translucent and showing a characteristic layering due to mode of accumulation.

**Oolitic limestone** : A calcite-cemented calcareous stone formed of shells and shell fragments, practically non-crystalline in character. It is found in massive deposits located almost entirely in Lawrence, Monroe, and Owen Counties, IN, and Alabama, Kansas, and Texas. This limestone is characteristically freestone, without cleavage planes, possessing a remarkable uniformity of composition, texture and structure. It possesses a high internal elasticity, adapting itself without damage to extreme temperature changes.

**Opalized** : The introduction into a rock of siliceous material in the form of opal, hydrous silicate.

**Out of wind** : The be out of wind is to have the arris of the stone not in parallel or perpendicular lines. Stone that is out of wind has an irregular or rustic appearance.

## **P**

**Palletised** : A system of stacking stone on wooden pallets. Stone, which comes palletised, is easily moved and transported by modern handling equipment. Palletised stone generally arrives at the job site in better condition than UN-palletised material.

**Panel** : A finished stone unit used on walls.

**Parapet wall** : That part of any wall entirely above the roofline.

**Parging** : Damp-proofing by placing a coat of ½ inch (13mm) setting mortar to the back of stones or the face of the back-up material.

**Parquetry** : An inlay of stone floors in stones or the face of back-up material.

**Paving** : Stone used as an exterior-wearing surface, as in patios, walkways, driveways, etc. (see flooring).

**Perforated wall** : One that contains a considerable number of relatively small openings, often called pierced wall or screen wall.

**Perrons** : Slabs of stone set on other stones serving as steps and arches in gardens.

**Phenocryst** : In igneous rocks, the relatively large and conspicuous crystals in a finer-grained matrix or ground mass.

**Pilaster** : An engaged pier of shallow depth. In classical architecture, it follows the height and width of related columns, with similar base and cap.

**Pitched stone** : Stone having arris clearly defined; face, however, is roughly cut with pitching chisel used along the line that becomes the arris.

**Plinths** : The lower square part of the base of a column. A square base or a lower block, as of a pedestal, The base block at the juncture or baseboard and trim around an opening.

**Plucked finish** : Obtained by rough-planing the surface of stone, breaking or plucking out small particles to give rough texture.

**Pointing** : The final filling and finishing of mortar joints that have been raked out.

**Polished finish** : The finest and smoothest finish available in stone characterised by a high lustre (gloss) and strong reflection of incident light, generally only possible on hard, dense materials.

**Porphyry** : An igneous rock in which relatively large and conspicuous crystal (Phenocryst) are set in a matrix of finer crystals.

**Pressure relieving joint** : An open horizontal joint below the supporting angle or hanger located at approximately every floor line and not over 15 feet (4.6m) apart horizontally and every 20 to 30 feet (6 to 9m) vertically to prevent the weight from being transmitted to the masonry below, These joints are to be caulked with a resilient non-staining material to prevent moisture penetration.

**Processing** : The work involved in transforming building stone from quarry blocks to cut or finished stone. This includes primary sawing into slabs, It may also include both hand and mechanical techniques such as sawing, drilling, grinding, honing, polishing and carving.

**Projections** : This refers to the pulling out of stones in a wall to give an effect of ruggedness. The amount each stone is pulled out can vary between ½ and 1-½ inches (1.3 to 3.8 cm). Stones are either pulled out at the same degree at both ends or sometimes one end is pulled out, leaving the other end flush with the majority of the veneer.

**Pumice** : An exceptionally cellular, glassy lava resembling a solid froth.

## **Q**

**Quarry** : The location of an operation where a natural deposit of stone is removed from the ground.

**Quartz** : A silicon dioxide mineral that occurs in colourless and transparent or coloured hexagonal crystals and also in crystalline masses. One of the most common minerals, the chief constituent of sandstone.

**Quartzite** : A compact granular rock composed of quartz crystals, usually so firmly cemented as to make the mass homogenous. The stone is generally quarried in stratified

layers, the surfaces of which are unusually smooth. Its crushing and tensile strengths are extremely high; the colour range is wide.

**Quartzitic sandstone** : A sandstone with a high concentration of quartz grains and siliceous cement.

**Quirt** : A groove separating a bed or other moulding from the adjoining numbers.

**Quoins** : Stone at the corner of a wall emphasised by size, projection, and rustication or by a different finish.

## **R**

**Range** : A course of any thickness that is continued across the entire face. All range courses need not be of the same thickness.

**Recess** : a sinkages in a wall plane.

**Reglet** : a narrow, flat moulding of rectangular profile.

**Relief or relieve** : Ornament in relief. The ornament or figure can be slightly, half, or greatly projected.

**Relieving arch** : one built over a lintel, flat arch or smaller arch to divert loads, thus relieving the lower member for excessive loading. Also known as discharging or safety arch.

**Return** : the right angle turn of a moulding.

**Return head** : stone facing with the finish appearing on both the face and the edge of the same stone, as on the corner of a building.

**Reveal** : the depth of stone between its outer face and a window or door set in an opening.

**Ribbon** : narrow bands of rock differing to various degrees in chemical composition and colour from the main body of the slate or stone; in other words, bands.

**Rift** : the most pronounced (see "grain") direction of splitting or cleavage of stone. Rift and grain may be obscure, as in some granites, but are important in both quarrying and processing.

**Rip rap** : irregularly shaped stones used for facing bridge abutments and fills; stones thrown together without order to form a foundation or sustaining walls.

**Rise** : the heights of tones, generally used in reference to veneer stone.

**Rock** : an integral part of the earth's crust composed of an aggregate of grains of one or more minerals. (Stone is the commercial term applied to quarry products.)

**Rock (pitch) face** : similar to split face, except that the face of the stone is pitched to a given line and plane producing a bold appearance rather than the comparatively straight face obtained in split face.

**Rodding** : reinforcement of a structurally unsound marble by cementing reinforcing rods into grooves or channels cut into the back of slab.

**Roman Arch** : semi-circular arch.

**Rose window** : a circular stone window fitted with carved tracery.

**Rough sawn** : a marble surface finish accomplished by the gangsawing process.

**Rubbed finish** : mechanically rubbed for smoother finish.

**Rubble** : a product term applied to dimension stone used for building purposes, chiefly walls and foundations, and consisting of irregularly shaped pieces, partly trimmed or squared, generally with one split or finished face, and selected and specified with a size range.

**Rustication** : chamfers or square moldings round the face edges of individual stones to create shadows and to give an appearance of greater weight to the lower part of the building. When only the horizontal joints are sunk, the device is known as banded rustication.

## **S**

**Saddle** : a flat strip of stone projecting above the floor between the jambs of the door; a threshold.

**Sandblasted** : a matte-texture marble surface finish with no gloss, accomplished by exposing the surface to a steady flow of sand under pressure.

**Sand-sewn finish** : the surface left as the stone comes from the gangsaw; moderately smooth, granular surface varying with the texture and grade of the stone.

**Sandstone** : a sedimentary rock consisting usually of quartz, cemented with silica, iron oxide or calcium carbonate, Sandstone is durable, has a very high crushing and tensile strength and a wide range of colours and textures. Varieties of sandstone are commonly designated by the kind and prominence of interstitial and bonding material, as siliceous sandstone (bonding material primarily silica), calcareous sandstone (calcium carbonate prominent as bonding material or as accessory grains or both), sandstone (clay minerals prominent as interstitial or bonding materials, or as thin laminar ferruginous sandstone (iron oxide or hydroxide minerals (hematite, limonite, et al) as interstitial or as bonding materials in sufficient amount to impart appreciable colour of stone); brownstone (ferruginous sandstone of dark brown or reddish brown colour), arkose, arkosic sandstone, or feldspathic sandstone (a sandstone that contains an abundance of grains of feldspar), conglomerate a sandstone composed in large part of rounded pebbles, also called puddingstone).

The term "brownstone" was applied originally to certain Tertiary sandstone of the Connecticut Valley in Massachusetts (Longmeadow sandstone), Connecticut (Portland sandstone), and to similarly appearing reddish-brown sandstone quarried in and near Hummelstown, PA. Thus

the term originally had geographic significance, but such geographic limitation is undesirable.

**Sawed edge** : a clean-cut edge generally achieved by cutting with a diamond blade, gangsaw or wire saw.

**Sawed face** : a finish obtained from the process used in producing building stone; varies in texture from smooth to rough and coincident with the type of materials used in sawing; characterised as diamond sawn, sand sawn, chat sawn and shot sawn.

**Scale** : thin lamina or paper-like sheets of rock, often loose and interrupting and otherwise smooth surface on the stone.

**Schist** : a loose term applying to foliated metamorphic (recrystallized) rock characterised by thin foliae that are composed predominantly of minerals of thin platy or prismatic habits and whose long dimensions are oriented in approximately parallel positions along the planes of foliation, because of this foliated structure, schists split readily along these planes and so possess a pronounced rock cleavage. The more common schists are composed of the micas and other mica-like minerals (such as chlorite) and generally contain subordinate quartz and/or feldspar of comparatively fine-grained texture; all graduations exist between schist and gneiss (coarse foliated feldspathic rocks).

**Scoria** : irregular masses of lava resembling clinker or slag; may be cellular (vesticular), dark-coloured and heavy.

**Scotia** : a concave molding.

**Sculpture** : the work of a sculptor in three-dimensional form by cutting from a solid block of stone.

**Semi-rubbed** : a finish achieved by rubbing (by hand or machine) the rough or high spots off the surface to be used, leaving a certain amount of the natural surface along with the smoothed areas.

**Serpentine** : a hydrous magnesium silicate of igneous origin, generally a very dark green colour with markings of white, light green or black. One of the hardest varieties of natural building stone.

**Setting space** : a term used to indicate the distance from the finished face of the marble to the face of the back-up wall.

**Shaped stone** : cut stone which has been carved, ground or otherwise processed.

**Shear** : a type of stress; a body is in shear when it is subjected to a pair of equal forces which are opposite in direction and which act along parallel planes.

**Shot-sawn** : description of a finish obtained by used steel shot in the gangsawing process to produce random markings for a rough surface texture.

**Sill** : a flat stone used under windows. Doors, and other masonry openings.

**Silstone** : a fine-grained non-carbonate clastic rock composed of at least 67% of detrital grains of quartz and silicate minerals of silt size. Silstones are rarely marketed as such but commonly are considered as fine-grained sandstones. This class of sediments is texturally transitional between sandstones and shales (mudstones). Many bluestones and siliceous flagstones fall within this category. The term is included in these definitions chiefly to explain the relationship of some siliceous flagstones to the sandstone category.

**Slab** : A lengthwise cut of a large quarry block of stone produced by sawing or splitting in the first milling or quarrying operation. A slab has two parallel surfaces.

**Slate** : A very fine grained metamorphic rock derived from sedimentary rock shale. Characterized by an excellent parallel cleavage entirely independent of original bedding, by which cleavage the rock may be split easily into relatively thin slabs.

Essential mineral constituents of slates are usually members of the mica group, commonly sericite, muscovite, and paragonite; of the clay group, chiefly illite and kaolinite; and of the chlorite group. Common accessory minerals are iron oxides, calcite, quartz, and feldspar. Other minerals may be present also as minor accessories. Most slates are derived from shales. Others are derived from fine-grained igneous rock, chiefly volcanic tuffs, but these are rare and of little commercial importance.

**Slip sill** : A stone sill set between jambs (see lug sill)

**Smooth finish** : description of the finish produced by planer machines plus the removal of objectionable tool marks, also known as "smooth planer finish" and "smooth machine finish". Snapped edge, quarry cut or broken edge – a natural breaking of a stone either by hand or machine. The break should be at tight angles to the top and bottom surfaces.

**Soapstone** : a massive variety of talc with a soapy or greasy feel used for hearths, washtubs, tables tops, carved ornaments, chemical laboratory counter, etc., and known for its stain-proof qualities.

**Soffit** : the finished, exposed underside of a lintel, arch or portico.

**Sound stone** : Stone which is free of cracks, fissures, or other physical defects.

**Spall** : a stone fragment that has split or broken off.

**Spalls** : sizes may vary from chip-size to one and two-man stones. Spalls are primarily used for taking up large voids in rough rubble or mosaic patterns.

**Spandrel wall** : that part of a curtain wall above the top of a window in one story and below the sill of the window in the story above.

**Splay** : a bevelled or slanted surface.

**Splice** : a thin strip of material, such as wood or metal, inserted into the edges of two stones pieces or stone tiles to make a butt joint between them.

**Split** : division of a rock by cleavage.

**Split face stone** : stone on which the face has been broken to an approximate plane.

**Splitstone finish** : obtained by sawing to accurate heights then breaking by machine to required bed widths. (Normal bed widths are 3 ½ inches (90 mm)).

**Spot or spotting** : an adhesive contact, usually of plaster or Paris, applied between the back of marble veneer and the face of the back-up wall to plumb or secure standing marble.

**Stacked bond** : stone that is cut to one dimension and installed with unbroken vertical and horizontal joints running the entire length and height of the veneered area.

**Start** : a small fissure.

**Statue** : a sculpture of a human or animal figure.

**Sticking** : an expression used in the marble finishing trade to describe the process of cementing together of broken slabs or pieces of marble.

**Stone** : sometimes synonymous with rock, but more properly applied to individual blocks, masses or fragments taken from their original formation or considered for commercial use.

**Stool** : a flat stone, generally polished, used as an interior sill.

**Stratification** : a structure produced by deposition of sediments in beds or layers (strata), laminae, lenses, wedges, and other essentially tabular units.

**Strip rubble** : generally speaking, strip rubble comes from a ledge quarry, the beds of the stone, while uniformly straight, are of the natural cleft as the stone is removed from the ledge, and then split by machine to approximately 4-inch (100mm) widths.

**Strips** : long pieces of stone, usually low height ashlar courses, where length to height ratio is at maximum for the material used.

**Styrolite** : a longitudinally streaked, columnar structure occurring in some marbles and of the same material as the marble in which it occurs.

**Surround** : an enframingent.

## **T**

**Tablet** : A small, flat slab or surface of stone, especially one bearing or intended to bear an inscription, carving or the like.

**Template** : a pattern for repetitive marking or fabricating operation.

**Terrazzo** : a type of concrete in which chips or pieces of stone, usually marble, are mixed with cement and are ground to a flat surface, exposing the chips, which take a high polish.

**Thin marble** : a fabricated marble unit of w inches (50 mm) or less in thickness.

**Tile** : a thin modular stone unit.

**Tolerance** : dimensional allowance made for the inability of men and machines to fabricate a product of exact dimensions.

**Throat** : the name sometimes given to the small groove under the windowsill or dripstone intended to deflect rainwater from the wall face.

**Tooled finish** : customarily has four, six, or eight parallel, concave grooves to the inch.

**Tracery** : ornamentation of panels, circular windows, window heads, etc.

**Translucence** : the light-emitting quality of certain marble varieties containing a crystal structure capable of transmitting light.

**Travertine limestone** : a variety of limestone that has a partly crystalline or microcrystalline texture and porous or cellular layered structure, the cells being usually concentrated along certain layers and commonly displaying small stalactitic forms.

**Travertine marble** : a variety of limestone regarded as a product of chemical precipitation from hot springs. Travertine is cellular with the cells usually concentrated in thin layers that display a stalactitic structure. Some that take a polish are sold as marble and may be classified as travertine marble under the class of commercial marble.

**Tread** : a flat stone used as the top-walking surface on steps.

**Trim** : stone used as decorative items only, such as sill, coping, enframements, etc., with the facing of another material.

**Trimmer arch** : a stone arch, usually a low-rise arch, used for supporting a fireplace hearth.

**Tuff** : cemented volcanic ash, many varieties included.

## U

**Undercut** : cut so as to present an overhanging part.

## V

**Vein cut** : cutting quarried marble or stone perpendicular to the natural bedding plane.

**Veining** : coloured markings in limestone, marble, alabaster, etc.

**Veneer** : a non-load bearing facing of stone attached to a backing for the purpose of ornamentation, protection or insulation. Veneer shall support no vertical load other than its own weight and possibly the vertical dead load of veneer above.

**Veneer stone** : a non-loadbearing facing of stone attached to a backing for the purpose of ornamentation, protection or insulation. Veneer shall support no vertical load other than its own weight and possibly the vertical dead load of veneer above.

**Venting** : a method used to allow air and moisture to escape to the outside from the wall cavity (see cavity vent).

**Verde antique** : a marble composed chiefly of massive serpentine and capable of being polished. It is commonly crossed by veinlets of other minerals, chiefly carbonates of calcium and magnesium.

## W

**Wall plate** : a horizontal member anchored to a masonry wall to which other structural elements may be attached. Also called "head plate". Usually steel, 3/16-inch (5mm) in diameter and formed in a "Z" shape or a rectangle.

**Wall tie** : a boulder or metal piece which connects wythes of masonry to each other or to other materials.

**Wall tie cavity** : a rigid corrosion-resistant metal tie which bonds two wythes of a cavity wall. It is filling of natural void with colour-blended materials.

**Walls** : one of the sides of a room or building connecting floor and ceiling or foundation and roof:

**Walls bearing** : a wall supporting a vertical load in addition to its own weight.

- Cavity a wall in which the inner and outer wythes are separated by an air space but tied together with metal ties.
- Composite – a wall in which the facing and backing are of different materials and bonded together with bond stones to exert a common reaction under load.
- Veneer or face – a wall in which a thin facing and the backing are of different materials but not so bonded as to exert a common reaction under load.
- Wind (wined) – a twisting warp from cutting slabs in the gangsaws.

**Warped walls** : generally a condition experienced only in flagging or flagstone materials; very common with flagstone materials that are taken from the ground and used in their natural state. To eliminate warping in stones, it would be necessary to further finish the material by methods such as machining, sand rubbing, honing or polishing.

**Wash** : a sloped area or the area water will run over.

**Water bar** : typically a strip in a reglet in windowsill and stone below to prevent water passage.

**Water table** : a projection of lowest masonry on the outside of the wall slightly above the ground. Often a damp course is placed at the level of the water table to prevent upward penetration of ground water.

**Waxing** : an expression used in the marble finishing trade to indicate the filling of natural voids with colour-blended materials.

**Wear** : the removal of material or impairment of surface finishing through friction or impact use.

**Weathering** : natural alteration by either chemical or mechanical processes due to the action of constituents of the atmosphere, surface waters, soil and other ground waters, or to temperature changes; the inclined top surface of a stone such as a coping, cornice, or windowsill.

**Wedging** : splitting of stone by driving wedges into planes of weakness.

**Wire saw** : method of cutting stone by passing a twisted, multi-strand wire over the stone and immersing the wire in a slurry of abrasive material.

