Stone Vocabulary

COURTESY OF BSi

A

ABACUS - The uppermost component of a classical column, most often a plain square slab but sometimes embellished.

ABRASIVE FINISH – a flat non-reflective surface finish for marble.

ABUTMENT – a solid stone "springer" at the lowest point of an arch or vault.

ACROPOLIS - Elevated symbolic center of a Greek city-state, bringing together its most important sacred and civic buildings in one urban space, invariably on a high plateau. The most famous is the Acropolis in Athens, which is centered around the Parthenon, the great white marble temple of Athena Parthenaos, the city-state's namesake deity.

ADHERED – veneer secured and supported through adhesion to an approved bonding material applied over an approved backing.

AEDICULE - A canopied niche framed by colonettes, resembling a temple and intended as a shrine or votive offering; a doorway or window flanked by a pair of columns and topped by a pediment.

AGATE - A variegated type of quartz showing colored bands or other markings (clouded, moss-like, etc.).

AGGREGATE - The sand, gravel or stone which is mixed with cement and water to make concrete.

AMPHITHEATER - A circular or elliptical arena enclosed by rising tiers of stone seats around a central open area used by the Romans for circuses and gladiatorial contests. Ancient Greek amphitheaters were typically semi-circular and set into the hillside.

ANCHOR - Metal rod, wire, or strap that secures stone or other masonry to structural framework, backup wall, or other elements, or holds stone units together. Types for stone work include:
FLAT STOCK: strap, cramps, dovetail and dowel, strap and dowel, and 2-way anchors.
CORRUGATED: corrugated wall ties and dovetail anchors.
ROUND STOCK: rod cramp, rod anchor, eye bolt and dowel, flathook wall tie and dowel, dowel and wire toggle bolts.

APEX STONE - Uppermost stone in a gable, pediment, pyramid, vault or dome.

ARCH - A curved construction spanned over an opening and supported at its sides or ends. Usually made from cut stone voussoirs, or interlocking wedge-shaped blocks, that carry downward thrusts out to side walls or lateral abutments.
ARCHITRAVE - Originally a simple, flat, structural lintel spanning between two columns and resting directly on their capitals; the lowest component of a classical entablature. In current usage, the term refers to any molded door or window frame.

ARGILLITE - A compact sedimentary rock composed mainly of clay and aluminum silicate materials.

ARKOSE – a sandstone containing 10% or more clastic grains of feldspar. Also called arkosic sandstone, feldspathic sandstone.

ARRIS - A natural or applied line on a stone from which all leveling and plumbing is measured; an edge at the intersection of two planes; the ridge between adjoining flutes on a classical column.

ASHLAR - Building stone that has been smooth cut, or dressed, into squared or rectangular blocks.

B

BACK ARCH - A concealed arch carrying the backing of a wall where the exterior facing is carried by a lintel.

BALUSTER - One of a series of miniature columns or short uprights used to support a hand rail or coping, as in a balustrade.

BALUSTRADE - A complete railing system consisting of a top handrail supported on balusters (which sometimes rest on a bottom rail).

BANKER - Bench of timber or stone on which stone is shaped.

BASALT - A dense textured (aphanitic) igneous rock relatively high in iron and magnesia minerals and relatively low in silica, generally dark gray to black, and feldspathic. A general term in contradistinction to felsite, a light-colored feldspathic and highly siliceous rock of similar texture and origin.

BAY - Buildings are often divided into repetitive spatial elements, or bays, defined by the space between two adjacent columns or other vertical supports.

BED - (1) In granites or marbles, a layer or sheet of the rock mass that is horizontal, commonly curved and lenticular, as developed by fractures. Sometimes applied also to the surface of parting between sheets.

(2) 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.

(3) The top or bottom of a joint, or natural bed/surface of stone parallel to its stratification.

BELT COURSE - A continuous horizontal course of flat stones marking a division in the wall plane.

BEVEL - When the angle between two sides is greater or less than a right angle.

BLUESTONE - A hard sandstone of characteristic blue, gray and buff colors quarried in the states of New York and Pennsylvania.

BOND STONE - Used in varying percentages to anchor or bond a stone veneer to a 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; generally used to retain the field of a terrace or platform.

BOSS - A carved stone positioned at the apex of a ribbed vault.

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. Also, a mason's sharp pointed chisel for dressing stone.

BROWNSTONE - A sandstone of characteristic brown or reddish-brown color that results from a high amount of iron oxide as interstitial material.

BRUSHED FINISH - Textured surface obtained by brushing a 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, wall cap or pool coping.

BUTTER - *See* **CEMENT PUTTY**

BUTTERING - Placing mortar on stone with a trowel before setting into place.

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 calcarenites contain oolites (small, spherical grains of calcium carbonate that resemble roe) and may be termed oolite limestone. Calcareous sandstones, 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 5 percent of magnesium carbonate.

CALCITE STREAKS - White or milk-like streaks occurring in stone. The streak is a joint plane usually wider than a glass seam; it has been recemented by deposition of calcite in the crack and is structurally sound.

CANOPY - A sheltering roof, as over a niche or doorway.

CANTILEVER - A projecting element, such as a beam, supported at a single point or along a single line by a wall or column, stabilized by a counter-balancing downward force around the point of fulcrum.

CARYATID - A draped female human figure used as a sculptural column or pier, often flanking a doorway, or used as a decorative detail, especially on fireplaces.

CAPITAL - The head or cap of a column.

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 – a vent or opening in the joints between stones to provide even atmospheric pressure and humidity between the cavity and outside air; to prevent condensation and the migration of water into the structure.

CEMENT PUTTY, also **CREAM** or **BUTTER** - A thick creamy mixture made with pure cement and water, which is used to strengthen the bond between a stone and a setting bed.

CHAMFER - To bevel the junction of an exterior angle.

CHAT SAWN FINISH - A rough gang saw finish produced by sawing with coarse chat.

CLADDING - The lightweight outer skin of a building that does not carry any weight nor support the building, but which protects it from weather elements.

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 delaminate.

COATING – a protective or decorative covering 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.

CLERESTORY - The upper part of a wall pierced by windows to bring light into the center of a building, as in the nave of a church.

COBBLESTONE - A natural rounded stone, large enough for use in paving. Commonly used to describe paving blocks, usually granite, which are generally cut to rectangular shapes.

COLUMN - Freestanding or self-supporting structural element carrying forces mainly in compression, whether stone, steel or brick.

COMMERCIAL MARBLE - A crystalline rock composed predominantly of one or more of the following materials: calcite, dolomite 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 manufactured material, that will be concealed.

CONGLOMERATE – gravel that has been cemented together with silica, iron oxide or

calcium carbonate.

CONTRACTION JOINTS – spaces where panels are joined and which expand as the panels contract.

CONTROL JOINT – provided so that the movement of different parts of the structure due to shrinkage, expansion, temperature changes or other causes do not transfer loads across the joint.

COPING - A flat stone used as a cap on a freestanding wall, usually to protect the wall from weather.

COPING – a flat stone used as a cap on freestanding walls.

COQUINA – a limestone composed predominantly of unaltered shells or fragments of shells loosely cemented by calcite. Coquina is generally very coarse-textured and has a high porosity. The term has been applied principally to a very porous shell rock of Eocence 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 openings in such a way as not to be visible.

CORNERSTONE - A stone forming part of a corner or angle in a wall. Also a dedicatory stone laid at the formal inauguration of a building's construction, prominently located but not necessarily at the corner, and usually bearing the date of erection and often an inscription.

CORNICE - A molded projecting stone at the top of an entablature or at the meeting of a roof and wall.

CORTILE - The term for an internal courtyard, usually open to the air, surrounded by arcades to blur the distinction between interior and exterior.

COURSE - A horizontal range of stone units running the length of a wall.

COURSED VENEER - A wall treatment 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.

CREAM - *See* **CEMENT PUTTY**

CROSS-BEDDING - The arrangement of laminations of strata transverse or oblique to the main planes of stratification.

CROWFOOT (styolite) – description of a dark gray 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 recrystallized limestone; improperly applied to limestones 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 limestones 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 - All stone cut or machined to given sizes, dimension or shape, and produced in accordance with working or shop drawings which have been developed from an architect's structural drawings.

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 color and composition between basalt and rhyolite.

DAMPPROOFING - One or more coatings 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 - Small blocks or tooth-like projections on an entablature.

DENTIL COURSE - The lower part of a cornice where dentils normally appear. The cornice is jointed to allow machine production of the dentils.

DIMENSION STONE - Stone pre-cut and shaped to dimensions of specified sizes.

DOLOMITIC LIMESTONE - A limestone rich in magnesium carbonate, frequently somewhat crystalline in character. It is found in ledge formations in a wide variety of color tones and textures. Generally speaking, its crushing and tensile strengths are greater than the oolitic limestones, and its appearance shows greater variety in texture.

DOWEL - A cylindrical metal pin used in aligning and strengthening joints of adjacent stones.

DRESSED or HAND DRESSED - The cutting of rough chunks of stone by hand to create a square or rectangular shape. A stone which is sold as dressed stone generally refers to stone ready for installation.

DRIP - A recess cut under a spill or projecting stone to throw off water, preventing it from running down the face of a wall or other surface, such as windows or doors.

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 stone wall that is constructed one stone upon another, without the use

of any mortar; generally used for retaining walls.

DURABILITY – the measure of the ability of natural 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 - An elaborate beam carried by columns or located at the top of a wall; consists of a lower architrave, middle frieze and upper cornice.

ENTASIS - The intentional convex curve of the upper two-thirds of a column, introduced to counteract the optical illusion of concavity produced by straight columns.

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 in a wall designed to allow the expansion and contraction of the wall due to temperature change. An expansion joint compresses as panels expand, a contraction joint expands as panels contract. exposed aggregate - phrase applied to the larger pieces of stone aggregate purposefully exposed for their color and texture in a cast slab.

EXPOSED AGGREGATE - The larger pieces of stone purposefully exposed for their color and texture in a cast slab.

F

FACE - The exposed portion of a stone; also refers to the edge treatment on various cutting stock materials.

FACED - *See* **VENEER**

FASCIA - A flat, relatively narrow horizontal belt in an architrave or used in combination with moldings.

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 – filling the natural voids and veins in a stone with material (cement, shellac, or synthetic resins and similar materials often mixed with stone fines).

FINES - The powder, dust, silt-size, and sand-size material resulting from processing

(usually crushing) rock.

FINISHES - Surface treatments, commonly available as:
Smooth - machine finished by saw, grinder or planer
Honed - dull sheen, without reflections
Polished - mirror gloss with sharp reflections
Machine Tooled - 4-cut, 6-cut, chiseled, axed, pointed, etc.
Chat Sawn - irregular and uneven markings
Split Face - concave-convex
Rock Face - convex
Thermal - plane surface with flame finish applied by mechanically controlled means to create surface coarseness
Special finishes of many kinds are available to meet design requirements.

FIREPROOF – relatively incombustible.

FLAGSTONE - Thin slabs of stone used for flagging or paving walks, driveways, patios, etc.; generally fine-grained sandstone, bluestone, quartzite or slate although 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.

FOLIATED – the layered, banded structure of rock.

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.

FRIEZE - A horizontal belt course sometimes decorated with sculptural relief, occurring directly under a cornice.

G

GANG SAWN - The granular surface of stone resulting from gang sawing alone.

GAUGED OR GAUGING - A grinding process that results in the uniform thickness of all pieces of material to be used together.

GLASS SEAM - A narrow glass-like streak occurring in stone; a joint plane that has been recemented by deposition of transluscent calcite in a crack and which is structurally sound.

GRADE COURSE - The beginning course at grade level, generally waterproofed with a damp check or damp course.

GRAIN - The easiest cleavage direction in a stone. "With the grain" is the same as "natural bed." Also, the composition and texture of particles, crystals, sand, or rock.

GRANITE - A fine to coarse-grained, igneous rock formed by volcanic action and consisting of quartz, feldspar, mica, and accessory minerals. Granite-type rocks include

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 corresponding varieties of porphyritic textures. The term commercial granite shall also include other feldspathic 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 a gneiss is characterized by relatively thick layers as compared with a 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 or slabs, they are valued specifically for their dark grey to black color when polished. Scientifically, they are far removed in composition from true granites though they may be satisfactory used for some of the purposes to which commercial granites, are adapted. They possess an interlocking crystalline texture, but unlike granites, they contain little or no quartz or alkalic feldspar, and are characterized by an abundance of one or more of the common black rock-forming minerals (chiefly pyroxenes, hornblende, and biotite).

GRANULAR – having a texture characterized by particles that are apparent to the unaided eye. For sedimentary rocks; particles less than 4 inches (10 mm) in diameter and approximately equal in size.

GREENSTONE - Stones that have been metamorphosed or otherwise so altered that they have assumed a distinctive greenish color owing to the presence of one or more of the following minerals: chlorite, epidote, or actinolite.

GROUT - Mortar of pouring consistency.
coarse grout – used for wide grout spaces 2″ or more, consists of one part Portland cement, two-and-a-quarter to three parts sand, and one to two parts pea gravel.
fine grout – used in narrow grout spaces, consists of one part Portland cement and two-

and-a-quarter to three parts sand.

H

HAND CUT RANDOM RECTANGULAR ASHLAR - A pattern where all the stone is hand cut into squares and rectangles, and where all the joints are fairly consistent. Similar to sawed-bed ashlar in appearance.

HAND DRESSED - *See* **DRESSED HAND or MACHINE PITCH FACED also known as ROCK FACED ASHLAR** - A finish given to both veneer stone and cutting stock, created by establishing a straight line back from the irregular face of the stone. 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 which has been tooled to match the face of the stone. Heads are used at outside corners, windows, door jambs or any place where the veneering will be visible from the side.

HEARTH - The floor of a stone fireplace on which the fire is laid.

HEARTH STONE - Originally the large single stone or stones used for the floor of a fireplace; now most commonly used to describe the stone in front of the fire chamber and in many cases 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 - A super fine smooth finish.

HYDRATE– a mineral formed by the combination of water and some other elements or compounds.

HYDROTHERMAL– of or relating to hot magnetic emanations that are rich in water.

HYDROUS– containing chemically combined water.

I

IGNEOUS - One of the three main classifications of rock (igneous, sedimentary and metamorphic), solidified from molten state, as granite or lava.
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 a flat or straight arch.

JOINT - The space between stone units, usually filled with mortar. Types include:

a. Flush
b. Rake
c. Cove
d. Weathered
e. Bead
f. Stripped
g. V
h. Grapevine
i. Weeping

JOINTING SCHEME – a detailed architectural drawing showing the dimensions, locations and configurations of stone units and joints on the structure.
JUMPER - In ashlar patterns, a piece of stone of higher rise than adjacent stones, used to end a horizontal mortar joint at the point where it is set.

K

KEYSTONE - The last wedge-shaped stone, or voussoir, placed in the crown of an arch.

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 solid horizontal joints to support the top stones until the mortar has set.

LEWIS BOLT - A tapered head wedged in a tapered recess in stone for hanging soffit stones.

LEWIS HOLES - Holes in cut stones for lifting and support during the 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).

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 - A stone beam or horizontal member spanning the top of an opening, such as a doorway or window, and supporting the wall above it.

LIPPAGE - A condition when one edge of a stone is higher than the adjacent edge.

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

LOMPOC STONE -

LUG SILL - A stone sill set into the jambs on each side of a masonry opening.

M

MACHINE FINISH - Standard surface treatment produced by mechanized planers.

MACHINE PITCH FACED - *See* **HAND PITCH FACED**

MALPAIS – literally, badland; refers to dark colored rock, commonly lava, in rough terrain. As defined for architectural use; calcium carbonate with other components which give it color, markings, and texture suitable as a desirable building stone.

MARBLE – a metamorphic limestone in a more or less crystalline state capable of taking a high polish. Occurs in a wide range of colors and variations. Marble that contains less than five percent magnesium carbonate may be termed calcite marble; from 5 to 40 percent magnesium carbonate, magnesian or dolomitic marble; and more than 40 percent 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 microcrystalline, 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.
serpetine – marble characterized 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 group).
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 adjectival modifier verde (or verd) antique. Verde antique is commonly veined with carbonate minerals, chiefly calcite and dolomite.

MASONRY - Built up construction, usually a combination of materials set in mortar.

METAMORPHISM - The change or alteration in a rock caused by exterior agencies, such as deep-seated heat and pressure, or intrusion of rock materials.

MITER - The junction of two units at an angle, in which the junction line usually bisects at 45-degrees.

MODULAR or MULTIPLE CUT (also PATTERN CUT) - Standard patterns used throughout the stone industry, usually based on multiples of a given height. Stone that is multiple cut or pattern cut is pre-cut to allow typically for 1/4" or 1/2" joints or beds.

MOLDING - Decorative stone used to introduce variety in profile and contour, 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 pattern formed by inlaying tesserae, or small pieces of stone, tile or other material into a cement, plaster or mortar matrix.

MULTIPLE CUT - *See* **MODULAR CUT**

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.

NICKED BIT FINISH – obtained by planing the stone with a planer tool in which irregular nicks have been made in the cutting edge.

NON-STAINING MORTAR - Mortar composed of materials that individually or collectively do not contain material which will stain; usually has a very low alkali content.

O

OBSIDIAN - A hard, dark-colored glassy phase of lava.

OGEE - A stone profile with a reverse curved edge: concave above, convex below.

ONYX MARBLE - A dense, crystalline form of lime carbonate deposited usually from cold-water solutions. Generally translucent and shows 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, Indiana and in Alabama, Kansas and Texas. This limestone is characteristically a 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, a hydrous silicate.

OUT OF WIND - To have the arris or edge of an external angle of a stone not in parallel or perpendicular lines. Stone which is out of wind has an irregular or rustic appearance.

P

PALLETIZED - A system of stacking stone on wooden pallets. Stone which comes palletized is easily moved and transported by modern handling equipment. Palletized stone generally arrives at the job site in better condition than unpalletized material.

PANEL– a finished stone unit used on walls.

PARAPET WALL - That part of an exterior wall that is entirely above the roof line.

PARGING - Damp-proofing by placing a 1/2" coat of setting mortar on the back of stones, or the face of the back-up material. Also, elaborate decorative plasterwork or ornamental facing for plaster walls.

PARQUETRY - A flat inlay of stone floors in closely fitted geometrical or other patterns, often including two or more colors or materials.

PATTERN CUT - *See* **MODULAR CUT PERFORATED WALL** - One which contains a large number of relatively small openings; often called a pierced wall or screen wall.

PAVING – stone used as an exterior wearing surface, as in patios, walkways, driveways, etc. (see flooring).

PERRONS - Slabs of stone set on other stones to serve as outdoor steps, and leading to a terrace, platform, gate or doorway.

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 capital.

PITCHED STONE - Stone having arris or a clearly defined outer edge but a face roughly cut with a pitching chisel used along the line which becomes the arris.

PLINTHS - The square or rectangular base of a column; a base or pedestal, frequently inscribed, to support a statue or other isolated object; the base block at the juncture of 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 - The finest and smoothest finish available in stone characterized by a gloss or reflective property. Generally only possible on hard, dense materials.

PORPHYRY - An igneous rock in which relatively large and conspicuous crystals (phenocrysts) are set in a matrix of finer crystals.

PRESSURE RELIEVING JOINT - An open horizontal joint below the supporting angle or hangar located at approximately every floor line and not over 15 feet apart, horizontally, and every 20-30 feet vertically, to prevent 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 - The pulling out of stones in a wall to give an effect of ruggedness. The amount each stone is pulled out can vary between 1/2" and 1 1/2". Stones are either pulled out at the same degree at both ends or sometimes one end is pulled out and the other end left flush with the wall plane.

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 colorless and transparent or colored 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 homogeneous. The stone is generally quarried in stratified layers, the surfaces of which are unusually smooth. Its crushing and tensile strengths are extremely high. The color range is wide.

QUARTZITIC SANDSTONE – a sandstone with a high concentration of quartz grains and siliceous cement

QUIRT - A groove separating a bead or other molding from the adjoining members.

QUOINS - Stones at the external corner or edge of a wall emphasized by size, projection, rustication, or by a different finish.

R

RANGE – a course of any thickness that is continued across the entire face. All range course need not be of the same thickness

RECESS - A sinkage in a wall plane.

REGLET - A narrow flat molding of rectangular profile often used to cover a joint between two elements.

RELIEF - Carved ornament projecting above s cutaway background plane. The ornament or figure can be slightly raised (bas-relief or low-relief), half projection (mezzo-relief), high- (or alto-) relief.

RELIEVING ARCH - One built over a lintel, flat arch, or smaller arch to divert loads,

thus relieving the lower member from excessive loading. Also known as a discharging or safety arch.

RETURN - Continuation of a molding in a different direction, usually at a right angle.

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; the thickness of a wall.

RIBBON – narrow bands of rock differing to various degrees in chemical composition and color from the main body of the slate or stone; in other words, bands.

RIFT - The most pronounced direction of splitting or cleavage of a stone (see grain). Rift and grain may be obscure, as in some granites, but are important in both quarrying and processing stone.

RIPRAP - Irregular broken and randomly sized pieces of rock used for facing bridge abutments and fills; stone thrown together without order to form a foundation, breakwater or sustaining wall.

RISE - Refers to the heights of stone, generally in veneer; the vertical dimension between two successive steps.

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 inclined to a given line and plane, producing a bold appearance rather than the comparatively straight face obtained in split face; stones laid up in a masonry wall with natural faces as received from the quarry, or dressed to resemble natural stone. *See* HAND PITCH FACE.

RODDING - Reinforcement of a structurally unsound marble by cementing reinforcing rods into grooves or channels cut into the back of the 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 dimensional 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 within a size range.

RUSTICATION – chamfers or square sinkings around the face edges of individual stones to create shadows and to give an appearance of greater weight to the lower part of a building. When only the horizontal joints are sunk, the device is known as banded rustication.

RUSTIFICATION – recessing the margin of cut stone so that when placed together a channel is formed at each joint.

S

SADDLE - A flat strip of stone projecting above the floor between the jambs of a door; threshold.

SANDBLASTED – a dull non-glossy finish applied to stone; usually achieved by blasting air blended with sand across the surface.

SAND SAWN FINISH - Stone surface left as it comes from a gang saw; moderately smooth, granular surface varying with the texture and grade of 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 colors and textures. Varieties of sandstone are commonly designated by the kind and prominence of interstitial and bonding materials, as *siliceous sandstone* (bonding material primarily silica), *calcareous sandstone* (calcium carbonate prominent as bonding material or as accessory grains or both), *argillaceous sandstone* (clay minerals prominent as interstitial or bonding materials, or as thin laminac), *ferruginous sandstone* (iron oxide or hydroxide minerals, or as thin laminac), *ferruginous sandstone* (iron oxide or hydroxide minerals {hematic, limonite, et al} as interstitial or as bonding materials in sufficient amount to impart appreciable color to the stone): brownstone (ferruginous sandstone of dark brown or reddish brown color), 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 Trassic sandstones 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, gang saw or wire saw.

SAWED FACE - A finish obtained from the particular process employed to produce building stone. Varies in texture from smooth to rough and is coincident with the type of materials used in sawing; characterized as diamond sawn, sand sawn, chat sawn or shot sawn.

SCALE - Thin lamina or paper-like sheets of rock, often loose, and interrupting an otherwise smooth surface of stone.

SCHIST - A foliated metamorphic rock (recrystallized) characterized 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 gradations exist between schist

and gneiss (coarsely foliated feldspathic rocks).

SCORIA - Irregular masses of lava resembling clinker of slag; may be cellular (vesicular) dark-colored and heavy.

SCOTIA - A deep concave molding, or gorge, especially at the base of a column.

SCULPTURE – statuary cut from stone by a sculptor using hand tools and polishing materials.

SEDIMENTARY – rock formed chiefly of quartz, kaolite, calcite and dolomite.

SEMI-RUBBED - A finish achieved by rubbing (manually or by machine) the rough or high spots off a stone's exposed surface, leaving a certain amount of the natural surface along with the smoothed areas.

SERPENTINE - A hydrous magnesium silicate material of igneous origin, generally a very dark green color with markings of white, light green or black. One of the hardest varieties of natural building stone.

SETTING SPACE - The distance from the finished face of a stone to the face of a 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 in opposite directions and which act along parallel planes.

SHOT SAWN - Finish obtained by using chilled steel shot in the gang sawing process to produce random markings for a rough surface texture.

SHOT-SAWN FINISH – a rough gangsaw finish produced by sawing with chilled steel shots

SILL - A flat stone used under windows, doors and other masonry openings.

SILTSTONE – a fine-grained non-carbonate clastic rock composed of at least 67 per cent of detrital grains of quartz and silicate minerals of silt size. Siltstones 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 approximately 5'x 8' in size.

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.

SLIP SILL - A stone window or door sill set between the jambs (*See* LUG SILL).

SMOOTH FINISH - The surface texture produced by planer machines plus the removal of objectionable tool marks; also known as smooth planar finish or smooth machine finish.

SNAPPED EDGE, QUARRY CUT or BROKEN EDGE - Generally refers to a natural breaking of a stone either by hand or machine. The break should be at right angles to the

top and bottom surface.

SOAPSTONE - A massive variety of talc with a soapy or greasy feel, used for hearths, washtubs, table tops, carved ornaments, chemical laboratories, etc., known for its stain proof qualities.

SOFFIT - The finished 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 the face of a stone, either by the force of a blow or by weathering. 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 - A curtain wall panel filling the space between the top of a window in one story and the sill of the window on the story above.

SPLAY - A beveled or slanted surface.

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

SPLIT - Division of a rock by cleavage.

SPLIT FACE (SAWED BED) - Usually sawed on the stone bed and split by hand or machine so that the face of the stone exhibits the natural quarry texture.

SPLITSTONE FINISH - Obtained by sawing to accurate heights, then breaking by machine to required bed widths. (Normal bed widths are 3 1/2".)

SPOT OR SPOTTING - An adhesive contact, usually plaster of Paris, applied between the back of marble veneer and the face of a back-up wall to plum 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 a 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 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 approximate 4" widths.

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

STYOLITE - A longitudinally streaked, columnar structure occurring in some marbles, and of the same material as the marble in which it occurs.

SURROUND - An enframement.

TABLET - A small flat slab or surface of stone especially one bearing or intended to bear an inscription.

TEMPLATE - A pattern for repetitive marking or for a fabrication 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 after setting, exposing the chips which take a high polish.

TEXTURE - Three dimensional surface enrichment independent of color.

THERMALLED – textural enhancement created by flaming the stone surface with intense heat.

THIN STONE – stone slabs generally of two inches or less in thickness.

THIN MARBLE – a fabricated marble unit of 2 inches (50 mm) thick.

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 of deflect rain water from the wall face.

TOOLED FINISHED – customarily are four, six or eight parallel, concave grooves to the inch

TRACERY - Curvilinear mullions or openwork on windows, window heads, stone panels, etc.

TRANSLUCENCE – permitting light to pass through with little diffusing. Certain marble varieties are translucent.

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 stalactic 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 a step.

TRIGLYPH - A projecting rectangular block used in series in a classical Doric frieze, distinguished by three vertical bands separated by shallow V-shaped grooves. Triglyphs alternate with plain or sculpted panels (metopes).

TRIM - Stone used as decorative items only, such as sills, coping, enframements, etc., with the facing of another material.

TRIMMER ARCH - A stone arch, usually almost flat, used for supporting a fireplace hearth.

TUFF - Cemented volcanic ash; many varieties included.

U

UNDERCUT- Cut so as to present an overhanging part.

V

VAULT - An arched roof supported on its edges and reinforced, when necessary, by ribs.

VEIN CUT – cutting quarried marble or stone perpendicular to the natural bedding plane.

VEININGS – colored markings in limestone, marble, alabaster, etc.

VENEER STONE - Any stone used as a decorative facing material which is not meant to be load bearing.

VENTING – creating an outlet in a wall for air and moisture to pass through. (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.

VOUSSOIR - Wedge-shaped stone components of a masonry arch, carefully formed to support each other when in position.

VUG - A cavity in rock; sometimes lined or filled with either amorphous or crystalline material; common in calcereous rocks such as marble or limestone.

W

WALL PLATE - A horizontal member anchored to a masonry wall to which other structural elements may be attached; also called head plate.

WALLS - one of the sides of a room or building connection floor and ceiling or foundation and roof.
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 united by metal ties. (*Wythe* – the inner or outer part of a cavity wall.)
Composite - A wall in which the facing and backing are of different materials but which

are united together with bond stones to exert a common reaction under load.
Veneer or Faced - A wall in which a thin facing and a backing are of different materials, but not so bonded as to exert a common reaction under load.

WALL TIE - A bonder 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 usually steel, 3/16" in diameter, and formed in a "Z" shape or a rectangle.

WARPED - 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 such stones, it would be necessary to further finish the material, whether by machining, sand rubbing, honing, or polishing.

WASH - A sloped area or the area water will run over.

WATER BAR - Typically a strip in the bottom of a door sill serving as a baffle to the entrance of water.

WATER TABLE - A projection of lower 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 color blended material.

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 window sill

WEDGING - Splitting of stone by driving wedges into planes of weakness.

WEEP HOLES - Openings placed in mortar joints of facing material at the level of flashing to permit the escape of moisture.

WIND - (Wined) - A twisting warp from cutting slabs in the gang saws.

WIRE SAW - A method of cutting stone by passing a twisted, multi-strand wire across the stone, and immersing the wire in a slurry of abrasive material.

WYTHE - The inner or outer part of a cavity wall.