



GLOSSARY

of Stair Terminology

A

Adjacent - A term used to describe two surfaces which are directly next to or touching each other (Architectural Woodwork Institute, AWI®)

Aesthetic - The appearance and feel of those surfaces that will be exposed or semi-exposed following installation (Architectural Woodwork Institute, AWI®)

Angled Stairway - A *stairway* of successive *flights* that are at an angle other than 180° to each other with a *landing* between them

Apron - A horizontal trim member that extends vertically below a horizontal surface to support the projected *edge* of a table or countertop typically at an *open* area or to support a window stool or *landing nosing*, See *FACIA*

B

Balanced Steps (Dancing Steps) - *Winders* that do not radiate from a common center but are distributed uniformly through equal segments of the *walk line*

Balcony - An elevated level area of floor or *landing* with a *balustrade* visible from below

Baluster - A vertical member used as in-fill to limit the size of openings within a *balustrade* and/or provide support to the top of a *balustrade* or *guard* system by transferring a portion of the load applied to the *balustrade* to the structure of a *stair* or floor system

Baluster, Pin Top - A *baluster* with a round top that is fitted into holes drilled in the bottom of the *rail*

Baluster, Square Top - A *baluster* with a square top end

Balusters, Raked - Two or more *balusters* on a *step* with details in *profile* that are oriented to follow the *rake* or inclination of the *stair*

Balusters, Stepped - Two or more *balusters* on a *step* with details in *profile* that are oriented parallel in height to the horizontal surface of the *tread*

Baluster, Twist (Twist, Newel) - 1. A square metal *baluster (newel)* that is twisted to give the appearance of a spiral along its axis of length, 2. A *baluster (newel)* with a convex bead that twists in a spiral along its axis of length to appear as a rope, 3. A *baluster (newel)* with a concave *flute* that twists in a spiral along its axis of length

Balustrade - A system of *rails*, *newels*, *balusters*, panels, screen or other ornamental *components* used to separate two areas. *Balustrades* used to minimize falls from elevated walking surfaces and the sides of *stairs* are also *guards*



Banister - 1. A simple *post-to-post balustrade* typically with small diameter, square or rectangular section *balusters* used to provide a *handrail* and minimize falls from the side of *stairs*, 2. A corruption of the terms *baluster/balustrade*

Block - The solid piece of wood or *face laminated pieces/blocks* of wood from which sections of curved *rail* or other *curved stair* or *balustrade components* are cut or shaped

Blocking - Wood *blocks* or other elements attached to the building structure to provide for the transfer of loads and/or the secure fastening of objects at points between structural elements such as studs or joists where voids in the structure do not permit direct fastening to the structure

Bracket - 1. A triangular structural support element used to transfer loads from one element to another by changing the direction of the applied load, 2. A support used to attach a *handrail* to a wall, 3. An element connecting the *tread* and *riser* usually applied to the *face stringer* as a decoration, 4. An element attached to a *stringer* to support a *tread*

Bullnose - 1. A half circular shape applied to or machined on the *edge* of a *component*, 2. A type of *starting step* with half circular end(s) in plan view projecting beyond the width of the *stairs* above

Buttress (Curb) - A *closed stringer* system on the *open* side of a *stair* built up in thickness, sometimes with a core wall or *blocking*, with a finished opposing exposed side, and a *cap* to receive the *balusters*

C

Cable (Wire Rope) - A rope of wire or fiber used in *cable railing* systems usually made of stainless steel or galvanized material

Cable Railing - A *guard* or *balustrade* with *cable* in-fill

Cap - 1. A moulded object or board used to finish the top of an object such as a wall, or *closed stringer*, 2. That part of a *rail fitting* that is attached to the top end of a *newel* or *newel cap*, 3. The applied top of a box *newel*, 4. A *false end tread*

Cap, Newel - See *CAP* and also see OPENING, QUARTER TURN, TANDEM below

Cap, Opening - 1. A horizontal *rail fitting* at the start of a level *balustrade* system at the top of a *newel*, See *CAP*, 2. A horizontal *rail fitting* used as a *component* of a starting *easement* at the top of a starting *newel*

Cap, Quarter Turn - A horizontal *rail fitting* used to connect two *rails* at an angle of 90-degrees at the top of a *newel*

Cap, Tandem - A horizontal *rail fitting* used to connect two *rails* at an angle of 180-degrees at the top of a *newel*

Carriage - A system of rough *stringers* attached to the building structure providing for the support and or attachment of the *treads*, *risers* and *face stringers* of a *stair* and often the ceiling or *soffit* below



Cathedral (Grain) - A series of stacked and inverted "U" or "V" shaped patterns, most noticeable in species which exhibit a high amount of contrast between springwood and summerwood, common in plain sawn/sliced

Channel Glazing - A method of glazing which uses a 'U' shaped channel to hold the glass panels in place

Closed - Typically referring to condition of enclosure such as walls at the side of a *stair* or that portion of the side of a *step* that is enclosed by a *stringer* extending above the *treads*

Compatible - Consistent or similar in appearance to other *components* within an architectural woodwork assembly, See *COMPATIBLE FOR COLOR AND GRAIN*, *COMPATIBLE FOR COLOR*, *COMPATIBLE SPECIES* (Architectural Woodwork Institute, AWI®)

Compatible for Color - Used to describe a material which is of similar color, hue, and tone to the *adjacent components*. Though color *compatible* does not imply an exact match, the differentiations between color *compatible* materials are *inconspicuous* (Architectural Woodwork Institute, AWI®)

Compatible for Color and Grain - Members shall be selected so that:

- Lighter-than-average color members will not be *adjacent* to darker-than-average color members and there will be no sharp contrast in color between the *adjacent* members, and
- The grain of *adjacent* members shall not vary widely or be dissimilar in grain, character, and figure (Architectural Woodwork Institute, AWI®)

Compatible Species - Different species which are able to exist in a harmonious combination of color and grain (Architectural Woodwork Institute, AWI®)

Component - An individual piece of solid stock or plywood that forms an item of woodwork (Architectural Woodwork Institute, AWI®)

Concealed Surfaces - Surfaces that are neither visible nor accessible to the building occupants and/or general public under normal circumstances (Architectural Woodwork Institute, AWI®)

Conspicuous - Detectable; readily visible with the naked eye when observed under normal lighting conditions. May have further restrictions involving distance related to *aesthetic* grade levels defined in the Architectural Woodwork Institute Standards (Architectural Woodwork Institute, AWI®)

Contract Document - The contract documents consist of the conditions of the contract (general, supplementary, and other conditions), drawings, specifications, addenda, other documents issued after execution of the agreement, all of which form the contract. The contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral (Architectural Woodwork Institute, AWI®)

Contractor - See *GENERAL CONTRACTOR*

Cove - A supporting *moulding profile* with a concave quarter round radius or arc on the *face*, See *SCOTIA*

Crown, End Grain - The arching of growth rings viewed from the end of solid *lumber*. When gluing multiple boards, crown direction is alternated



Crown, Face Grain - The peak of the arching pattern viewed on the *face* of natural or manufactured products, See *CATHEDRAL*

Curb - A shoe *rail* mounted directly on the floor or *blocking* attached to the floor with a *cap* to provide for the termination of the *balusters* above the adjoining walking surface

Curtail Step - See *VOLUTE STEP*

D

E

Easing - 1. An arc that is *tangent* to two straight intersecting lines providing a smooth rounding instead of an angular intersection, 2. An *easement* in a *rail* or stringer, i.e., *up easing, over easing*, 3. Sanding or shaping a radius on the corner of a board to yield an "eased edge"

Easement - A *rail fitting* that provides a vertically curved *easing* between two intersecting *rails* or a *rail* and *cap* as in a starting *easement*

Edge - Any surface of a board or panel other than its *face* and back

Edge Glued - Boards or *staves* glued together at the *edges* to increase width, typically glued with alternating *end grain crown*

Expansion Joint - A space or joint between two members of a fabrication, installation, or product that permits movement between two members due to shrinking and swelling without incurring structural damage (Architectural Woodwork Institute, AWI®)

F

False End Tread or Riser (False End Caps) - Decorative elements resembling the end of a *tread* or *riser* applied to the surface at the end of a structural *sub-tread* or *riser* with the remaining exposed *sub-tread/riser* to have a floor covering applied such as carpet

Face - 1. The higher grade side of any panel in which the outer plies are of different *veneer* grades, 2. Either side of a panel in which there is no difference in *veneer* grade of the outer plies, 3. The side of a *component* to be exposed or visible in the finished product

Face Mould - A template used in *handrailing* to describe the curved sides and ends of a wreath on the *block* to be carved

Fascia - 1. A board or panel applied as a vertical or near vertical surface, at or near the ceiling, 2. At *stairs*, a *component* applied as the vertical surface below a *landing nosing*, often with a *moulding*

Ferrule - A sleeve or ring that is compressed or *swaged* onto *cab*le

Fillet - A thin strip or *moulding* that fills the exposed *plow* or *groove* between *balusters* in a *rail*, *bottom rail*, *shoe rail*, *sub-rail* or *cap*



Finial - An ornamental element used at the top end of a *newel post*

Fitting, Rail - A *component* or combination of *components* that are *profiled* to match *rail* patterns and used to connect *rails* in a continuous fashion at horizontal changes in direction, vertical transitions, or for ornamentation

Fitting, Quarter Turn - A *rail fitting* that turns 90 degrees, See *LEVEL QUARTER TURN* and *CAP, QUARTER TURN*

Flier (Flyer) - A rectangular *tread*

Flight - An uninterrupted series of *fliers* or *winders* or any combination thereof from one *landing* to the next

Flitch - One log sliced into *veneer* leaves, kept in order, separated into bundles (Architectural Woodwork Institute, AWI®)

Floor to Floor Height - See *RISE, TOTAL*

Flute - One of a series of parallel *grooves* referred to as fluting used as decorative details in vertical surfaces of such elements as columns, *mouldings*, *balusters*, *newels*, or furniture legs

G

Gait Line - A line that follows the angle of the *stair* connecting the *nosings* of the *treads* also called *nosings* line

Gasket - A seal that fills the space between 2 or more adjoining surfaces, generally to prevent leakage from or into joined objects

General Contractor - A general contractor, responsible for executing the contract for a building project and coordinating the work between the subcontractors as well as the chain of communications between the owner, design professionals, and subcontractors (Architectural Woodwork Institute, AWI®)

Glass, Annealed - A process designed to eliminate or limit the internal stresses of the cooling of glass. Under normal conditions, the surface of glass will cool more rapidly than the center causing internal stresses which may cause the glass sheet to crack, shatter, or even explode. By submitting the glass to controlled cooling in a special oven known as a "lehr", the glass is allowed to cool to a temperature known as the "annealing point". When the glass reaches this point, the temperature is stabilized for a specific length of time, to allow stresses in the glass to relax

Glass, Decorative - Glass that is frosted, colored, textured, or stained

Glass, Float - A process for the production of high-quality sheet glass whereby a ribbon of molten glass is fed across a bath of heated liquid, usually molten tin, in a carefully controlled atmosphere. This method gives the sheet uniform thickness and very flat surfaces

Glass, Laminated (Compound) - Consists of 2 or more sheets of glass with one or more viscous plastic layers between the glass panes. When this glass breaks, the pieces remain attached to the internal plastic layer and the glass remains transparent



Glass, Low Iron - The amount of iron is reduced to make the glass more transparent with *edges* that are clear or light blue

Glass, Tempered (Toughened) - A type of glass processed by controlled thermal or chemical treatments to increase its strength compared to normal glass. Tempering puts the outer surface into compression and the interior into tension. This treatment causes the glass, when broken, to crumble into small granular chunks instead of splintering into jagged shards

Glass Clamps - Used to connect *glass panels* to a *post*, structure or inline to another panel

Glass Edge Treatments

Bevel: Glass that has its *edges* cut to a specific angle and size in order to produce a specific elegant look. A bevel *edge* can range in size depending on the angle of the bevel and thickness of the glass

Polish: Glass that's *edges* are ground smooth, finished with a shiny or gloss polish resulting in a sleek appearance

Profiled: A glass *edge* having a more complex radius or multi angled shaped. This edging is more decorative than a simple beveled *edge*, e.g., ogee *profile*

Glass Panel (Pane or Sheet) - A flat or curved piece of glass

Glazing Compound - Used in wet glazing/anchoring methods of bedding, and setting the *edges* of *glass panels* in a frame and often to provide a seal between the exterior and interior sides

Glue Blocks - *Blocks* of wood attached to the underside of a *stair* at the joints between the *risers*, *treads*, and stringers to strengthen the joint and minimize movement that causes squeaks

Going - The horizontal distance between two successive *nosings* on a *stair*, See *RUN (UNIT RUN)* or *TREAD DEPTH*

Gooseneck - A combination of *easing(s)*, *rail* segments and/or *caps* that provide for the continuous transition of a *rake rail* to a level *rail* at the top of a *flight* or from *rake rail* through a level turn to a *rake rail* at a turn in the *stairway*

Grain, End - The grain as seen on a cut made at a right angle to the direction of the fibers (grain), such as on a cross section of a tree, typically the surface at the end of a length of *lumber* (Architectural Woodwork Institute, AWI®)

Groove - A partial depth cut with two opposing sides, when machined in grained material the cut is parallel with the grain (Architectural Woodwork Institute, AWI®)

Guard - A *component* or system of *components* such as *rails*, *newels*, *balusters*, panels or other ornamentals used to minimize falls from elevated walking surfaces and the sides of *stairs*



H

Hand (Stairs) - 1. The direction a *stair* or *handrail* turns in ascent, left or right, 2. The side of the *stair* as viewed in ascent, left or right, 3. The identification of a *component* for its intended use as referenced by the side of the *stair* in ascent, e.g. right *hand returned tread* to be used on a right *hand open stair*

Handrail - A sloped or horizontal *rail* intended for grasping by the hand as an assist for guidance, support, pulling, or arresting a fall

Handrailing - The craft of designing and constructing wreathed *handrails* for *geometrical stairs*

Hanger Bolt - A bolt that has coarse lag thread on one end instead of a head with finer machine thread on the opposite end to accept a nut

Header - 1. A floor-framing member at the *edge* of a floor opening that “heads off” the floor joists running up to a *well opening*, 2. The joist(s) at the *edge* of a floor opening, 3. The joists at the *edge* of a *landing* supporting the end of a *flight*

Headroom - 1. The clear vertical space allowed for the user of a *stairway* to prevent striking their head, 2. The vertical distance from the plane of the *nosings* of a *flight*, extended to the floor beyond the first *riser*, to any obstruction above the walking surface of the *stair* generally a minimum of 80 inches throughout the *stairway* including the *landings*

Horse - 1. The triangular point or “sawtooth” portion of a cut string or *carriage* to which the *tread* and *riser* are attached, 2. A rough string

I

Inconspicuous - Not readily visible without careful inspection at a distance of 610 mm [24”] for PREMIUM GRADE, 1219 mm [48”] for CUSTOM GRADE, and 1829 mm [72”] for ECONOMY GRADE (Architectural Woodwork Institute, AWI®)

Infill - A term used in the ICC structural requirements to describe that portion of a *guard* system below the top *rail*

Installer - A person or organization that regularly engages in the practice of installing architectural woodwork (Architectural Woodwork Institute, AWI®)

Intermediate Rail - 1. A horizontal *component* that connects two stiles between the top and bottom *rails*, 2. A horizontal or sloped *component* of a *balustrade* that is located between the top *rail* and the bottom of the *balustrade*

J

JACK - See *HORSE*



K

Kerfing - A wood bending technique using a series of uniform, shallow cross cuts on the back of a board that do not penetrate the *face* allowing the back surface to compress to a smaller radius increasing the flexibility without reducing the thickness

Kite - A *winder* in a 90-degree corner that is shaped like a *kite* in plan view

Knee Wall - 1. A *spandrel* wall that extends above the *gait line* to form the core of a *buttress* or *curb* at the *open* side of a *stair*, 2. The *spandrel* wall supporting an *open* string

Knuckle - Decorative metal element(s) into which a metal *baluster* is inserted or band(s) that encircles the *baluster* used as an ornament in the middle portion of a *baluster*

L

Lamb's Tongue - An ornamental cyma curved *rail* termination often with carved details

Landing - 1. The walking surface at the top and bottom of a *flight* at a floor level to provide clear approach to the *stair* or to the floor level from the *stair*, 2. An intermediate level *platform* between *flights* used to change direction of the *stair* and/or provide a resting place typically with dimensions approximating the width of the *flights* served

Landing, Half Space - An intermediate *landing* at a *stairway* turn of 180 degrees

Landing, Quarter Space - An intermediate *landing* at a *stairway* turn of 90 degrees

Landing Nosing - A *moulding* used to finish the floor or *landing edge* at a level *balustrade*

Landing Tread - 1. The top *tread* in a *flight* supported by the top *riser* that is attached in alignment with the floor-surface with the same *nosing projection* as the *treads* in the *flight* below, 2. The *moulding* used as *landing tread* and *landing nosing*

Landing Tread, Bending - Thin, flexible, longitudinal-sections of a *landing tread profile* that are moulded individually such that bending and laminating the sections together will provide a curved *landing tread* of the composite *profile*

Lamination - A process to produce a product by assembling multiple layers or *plys* of materials using heat, pressure, welding, or gluing

Level Quarter Turn - A *rail fitting* that turns 90 degrees in the level or horizontal plane

Leaf - An individual piece of wood *veneer* from a bundle, *fitch*, or *boule* (Architectural Woodwork Institute, AWI®)

Lumber - Pieces of wood thicker than 6.4 mm [.252"] no further manufactured than by sawing, planing, crosscutting to length, and perhaps *edge* machining (Architectural Woodwork Institute, AWI®)



M

Manufacturer - A person or organization that regularly engages in the practice of manufacturing, prefinishing, and/or installing architectural woodwork (Architectural Woodwork Institute, AWI®)

Manufacturer/Supplier - Producer or supplier of architectural woodwork *components* (Architectural Woodwork Institute, AWI®)

Mechanical Fastener - The generic term for securing devices that are used in the fabrication and/or installation of architectural woodwork such as dowels, dowel screws, splines, biscuit splines, nails, screws, bolts, pins, etc. (Architectural Woodwork Institute, AWI®)

Metamerism - An apparent change in wood color caused by human perception when cells are exposed to differing angles of light a phenomenon causing an apparent change in color caused by varying lighting conditions (Architectural Woodwork Institute, AWI®)

Mineral Streak - An olive to greenish-black or brown discoloration of undetermined cause in hardwoods. (Architectural Woodwork Institute, AWI®)

Miter Joint - The joining of two members at an angle that bisects the angle of junction (Architectural Woodwork Institute, AWI®)

Miter, Lock Joint - A *miter joint* employing a *tongue* and *groove* to further strengthen it (Architectural Woodwork Institute, AWI®)

Miter, Shoulder Joint - Any type of *miter joint* that presents a shoulder, such as a *lock miter* or a splined miter (Architectural Woodwork Institute, AWI®)

Modulus of Elasticity (MOE) - A measure of stiffness; a physical parameter that reflects the mechanical behavior of any material in response to induced stress due to loading

Modulus of Rupture (MOR) - The maximum load-carrying capacity of a member under bending load. Modulus of rupture is an accepted criterion of strength (Architectural Woodwork Institute, AWI®)

Moisture Content - The weight of water in wood expressed as a percentage of the moisture free wood's weight

Moulding* - A decorative strip of material, usually having a curved or *profiled face* or *edge*, though it may also be square. Some common *mouldings* used are listed below

*Spelled differently from "mold" - a multicellular fungus.

Moulding Profile (Rail Profile) - The shape as described by a section perpendicular to the length of the *moulding* (Architectural Woodwork Institute, AWI®)

Moulding, Base Cap - A *moulding* applied to the top *edge* of a base *moulding* to add *aesthetic* affect or increase height (Architectural Woodwork Institute, AWI®)

Moulding, Base or Baseboard - *Mouldings* used to trim the intersection of a wall or cabinet and the floor (Architectural Woodwork Institute, AWI®)



Moulding, Base Shoe - 1. A *moulding*, used at the joint between base and floor and where the starting *riser* meets the floor, 2. A base made of wood or aluminum, sometimes recessed in the floor, used to secure the bottom of a *glass panel* (Architectural Woodwork Institute, AWI®)

Moulding, Bead Moulding - A narrow, half-round *moulding* that is continuous or divided into bead-like segments (Architectural Woodwork Institute, AWI®)

Moulding, Cove - A supporting *moulding profile* with a concave quarter round radius or arc on the face, See SCOTIA (Architectural Woodwork Institute, AWI®)

Moulding, Handrail - A sloped or horizontal *rail* intended for grasping by the hand as an assist for; guidance, support, pulling, or arresting a fall (Architectural Woodwork Institute, AWI®)

N

Newel (Newel Post) - 1. A vertical element or *post* used to connect *balustrade components* to the structure of a *stair* or floor system, 2. A vertical *post* to which *carriages*, *stringers* and *balustrades* can be attached at junctions and angular turns in the *stairway* to provide the main support for the *stairs* and *balustrades*

Newel, Box - A *newel*, usually square in section, often made as a “box” with a hollow center, from boards joined at the corners

Newel, Half - A *newel* cut in half longitudinally used against a wall to provide for the termination of a *balustrade*

Newel, Intermediate Landing - A *newel* located at a *landing* or *platform* between *flights* in a *stairway* or at a turn of *winders*

Newel, Landing - A *newel* located at a *landing* or *balcony*

Newel, Pin Top - An *over-the-post newel* that has a dowel pin turned on the top to fit into a hole in the bottom of a *newel cap*

Newel, Rake - A *newel* tapered at the top to attach to the bottom of a *rail* for additional support in the middle of a longer *rake rail*

Newel, Starting - The first *newel* used at the bottom or beginning of a *stairway*

Newel, Twist - See BALUSTER, TWIST

Newel Bolt - A long, large, diameter *hanger bolt* used to top mount a *newel* to the floor system

Newel Drop - An ornamental element used at the bottom end of a *newel*

Newel Plate - A metal plate, drilled to accept fasteners near the center for attachment to the bottom of a *newel*, and also drilled at the perimeter for top mounting a *newel* to the floor, typically the exposed fasteners are concealed by carpet or wood *moulding*

Nominal - The stated dimension by which a product is known and sold in the market, differs from the actual dimension and is subject to variation



Nosing - 1. The leading *edge* of a *tread* or *landing*, 2. A rounded convex *edge*

Nosing Line - See GAIT LINE

Nosing Projection or Overhang - The horizontal distance measured from the leading *edge* of the *tread* to the trailing *edge* of the *tread* below.

O

Open - A *stair* that is absent of an enclosing wall and the *components* thereof, or the absence of a *component* such as the *riser* in an *open riser stair*

Open Riser Stair - A *stair* without *risers* such that the space between the *treads* is *open*

Over Easing - Typically used to describe an *easing* in a *rail* with the center of its arc below the top of the *rail*

Over-the-Post - A *balustrade* system that uses fittings to provide a continuous *handrail* over the top of the *newel posts*

P

Performance Based - Refers to the lack of dictated or specifically required technical processes in lieu of a concept that allows innovation as long as the required outcomes are achieved

Picket - The vertical element in a fence, See *BALUSTERS*

Pitch - 1. An accumulation of resin that occurs in separations in the wood or in the wood cells themselves, 2. The slope or angle of a *stair* in reference to the horizontal plane, See *RAKE*

Pitch Block - A *block* of wood cut to a right triangle with the *rise* and *run* dimensions of a *stair* and used as an angle gauge in stairbuilding and *handrailing*

Plank - 1. A board, usually between 38.1 to 88.9 mm [1.500" to 3.500"] thick and 152 mm [6"] or more wide, laid with its wide dimension horizontal and used as a bearing surface, 2. In *veneer* matching, the assembly of dissimilar (in color, grain or width) leaves of the same species to resemble an *edge glued* panel made from *lumber* (Architectural Woodwork Institute, AWI®)

Plate - The bottom, flat part of a *rail* assembly attached directly to the floor or top of a *knee wall*, *buttress* or *curb* typically into which the *balusters* or other *infill* terminates, See *CAP and RAIL*, *SHOE*

Platform - 1. An intermediate *landing* in a *stairway*, 2. The extension of the floor *landing*, which is often used as the top, *tread* of a *spiral stairway*

Plinth - The base of a *baluster* or *newel*



Plow (Plough) - A rectangular *groove* or slot with three surfaces, cut parallel to the grain of a wood member, See *GROOVE*

Plowed rail - A *rail*, which has had the bottom, *grooved* or *plowed* to accommodate insertion of a square *baluster* and *fillet*

Plug, Button - A machined piece of wood used to conceal a counterbored hole with a truncated dome of *end grain* that projects above the surrounding surface

Plug, Flush - A machined piece of wood used to conceal a counterbored hole, installed to be flush

Plumb - Vertical, perpendicular to level

Ply - One individual layer of *veneer* or core material which can be adhered together to form a panel. Grain direction may be altered between layers

Post - See *NEWEL*

Post-to-Post - A *balustrade* system with *rails* that are interrupted by intersections with the side of the *newels*

Preassembled Stairs - *Stair components* that are assembled in a controlled environment for jobsite installation as modular *components* of a *stairway*

Profile - A shape cut into the *face*, *edge* or end of a *component*. *Profiles* can be illustrated by a section view perpendicular to the shape (Architectural Woodwork Institute, AWI®)

Q

R

Rail - 1. A horizontal *component* of a stile and *rail* door assembly or *face* frame. Also refers to the horizontal *components* of the core assembly of a wood flush door or panel, 2. A horizontal *component* of a *balustrade* also referred to as *railing* in a *balustrade*

Rail, Bending - Longitudinal sections of a *profile* that are moulded individually such that bending and laminating the sections together will provide a *profiled curved rail*

Rail, Blocked - A curved *rail* that is cut and shaped from *blocks* or segments that are joined end to end

Rail, Bottom - See *RAIL, SHOE*

Rail, Level - A horizontal *balustrade* assembly

Rail, Rake - A sloped *rail* or *balustrade* assembly



Rail, Shoe - 1. A *rail* that is used to receive the bottom end of *balusters* when they are not connected directly to the *treads*, 2. A *cap* on the top of a *closed stringer*, *buttress* or *curb* that is *plowed* to receive the bottom square end of *balusters*

Rail, Sub - The lower portion of a *rail* member that is an aggregate of more than one horizontal element, often ploughed on the bottom to receive square top *balusters* and *fillet*

Rail, Toe - See *RAIL*, *SHOE*

Rail Bolt - A *hanger bolt* used to join *rail* ends to fittings, *newels* or walls

Rail Fitting - See *FITTING*, *RAIL*

Rail Profile (Moulding Profile) - The shape as described by a section perpendicular to the length of a *rail* or *moulding*

Rail System - See *BALUSTRADE*

Rake - 1. Used to describe the particular angle of an object i.e., the slope or *pitch* of a *stair* 2. Used to describe an object as being inclined i.e., *rake rail*

Reeding - A series of parallel beads used as decorative detail in vertical surfaces of such elements as *balusters* or *newels*

Returned End - 1. The end of a *moulding profile* that has been mitered to extend the *profile* across the end and conceal the *end grain*, 2. The end of a *handrail* that is *returned* to a wall, *post* or floor to eliminate an *open* end that might catch the clothing of users or the objects they carry, 3. A *handrail fitting* with the *moulding profile* shaped on the *end grain* and used as a termination on the *open* end of a *rail*

Return - Continuation in a different direction of *moulding* or projections, usually at right angles
(Architectural Woodwork Institute, AWI®)

Return Nosing - See *TREAD RETURN*

Rise (Unit Rise) - The vertical distance between the leading edges of *adjacent treads*. Referred to in building codes as *riser* height

Rise, Total - The vertical distance of a *stairway* from finish-floor to finish-floor

Riser - The vertical *component* of a *step* in the space between the *treads*

Riser, Bowed - A *riser* that is curved in plan view

Riser, Mitered - A *riser* crosscut on the end at an angle to the *face* to join the complimentary vertical *riser* cut of a mitered cut string

Riser, Open - Absence of a *riser* such that the space between *adjacent treads* or *landings* is *open*

Riser, Starting - See *STARTING STEP*



Rosette - 1. A decorative and anchoring wall plate used at the termination of a *rail* into a wall, 2. A decorative *component* used at the intersection of window casing and casing at the top of a door

Rough Cut - Irregularly-shaped areas of generally uneven corrugation on the surface of *veneer*, differing from the surrounding smooth *veneer* and occurring as the *veneer* is cut by the lathe or slicer (Architectural Woodwork Institute, AWI®)

Run (Unit Run) - The horizontal distance between two successive *nosings* on a *stair*, See *GOING* and *TREAD DEPTH*

Run, Total - The total horizontal distance of a *flight* of *stairs* from the top nosing of the flight to the bottom nosing of the flight

S

Scotia - A *cove moulding* with elliptical concavity

Scroll - The *terminal* end of a *volute*

Scroll Step - A type of *starting step*, See *VOLUTE STEP*

Setting Blocks - Cushions used between the *edges* of glass panes or panel and the frames to allow for expansion and prevent the glass from cracking

Shoe, Base and Rake - Base shoe is a decorative element used to conceal the termination of the *baluster* at level/horizontal surfaces, *rake shoe* is a decorative element used to conceal the termination of the *baluster* at *raked/sloped* surfaces

Shoe Moulding - 1. A *moulding*, used at the joint between base and floor and where the starting *riser* meets the floor, 2. A base made of wood or aluminum, sometimes recessed in the floor, used to secure the bottom of a *glass panel*

Shop Drawings - Drawings prepared by the *manufacturer/supplier* or *installer*, serving as the primary visual communication submitted for review, comment and approval. Shop drawings may include illustrations, diagrams, schedules, material selections, product data, samples, methods of construction, joinery and attachment, finishes, and technical suggestions (Architectural Woodwork Institute, AWI®)

Skirt Board - A non-structural component used to trim the sides of *stairs* to which the *treads* and *risers* are fitted

Soffit - The visible ceiling attached to the bottom of a *stair* between the opposite *stringers* and/or opposing wall(s)

Spandrel - The triangular element in a *staircase* between the *stringer* and the baseboard, 2) The triangular space between the side of an arch, the horizontal drawn from the level of its apex and the vertical of its springing (See Dictionary of Architecture and Landscape Architecture by John Fleming, Hugh Honour, and Nikolaus Pevsner)

Sphere Rule - Refers to the building code that limits openings in *guards* to the size of a certain sphere that shall not pass through the *guard*



Spindles - Symmetrical turnings often used in chair backs and spreaders between chair legs, See *BALUSTERS*

Stair - 1. A *step* or change in elevation of one *riser* height. 2. A change of elevation consisting of one or more *risers*. (International Code Council, ICC®) **

Stairs - 1. A series of *steps*. 2. A change of elevation consisting of one or more *risers*. (International Code Council, ICC®)**

**The International Code Council, ICC® requires both singular and plural forms to have the same meaning

Stair, Box - 1. *Stairs with closed stringers* on each side that “box in” the *treads* and *risers*, 2. A prefabricated straight *flight of stairs with closed stringers*.

Stair, Circular - A *curved stairway* that is circular in plan view

Stair, Curved - A *stair* with some portion having an arc in plan view that is a radius, a combination of radii or an ellipse

Stair, Dextral - A *stair* that turns to the right during ascent

Stair, Dogleg - A *stair* with two *flights* separated by a half *landing*, and having no *stairwell*, (in elevation the angles of the *flights* form a dogleg shape)

Stair, Freestanding (Floating) - A *stair* that is unsupported by walls and attached only to the floor systems at the top and bottom of the *stair*

Stair, Geometrical - A *stair* of complex geometry in which the strings and *rails* are continuous from start to end with curved and straight segments of the *stairway* connected by wreaths, typically without *newels*, except the starting *newel*

Stair, Helical - A *stair* that ascends with identical *winders* within the space that can be defined between two cylinders of concentric circular plans, See *SPIRAL STAIR*

Stair, Open - A *stair* that is *open* on one or both sides that has no wall separating the *stair* from the adjoining space

Stair, Open Well - A *stair* having a *stairwell*

Stair, Partial Open - A *stair* that has an *open* side that becomes *closed* by a wall part way up the *flight*

Stair, Scissor - Two interlocking *stairways* providing two separate paths of egress located within one *stairwell* enclosure

Stair, Sinistral - A *stair* that turns to the left in ascent



Stair, Slant Riser (Z Stair*) - A *stair* in which the *risers* are slanted under the *tread* above to minimize catching the toe of footwear at the *nosing projection* and/or provide for application of a runner in one continuous integral section *The slanted/sloped *riser* and horizontal *tread* results in a 'Z' profile.

Stair, Spiral* - A *stairway* having a *closed* circular form in plan view with uniform *winders* radiating from a minimum-diameter circle with or without a center supporting *newel* or column,** See *HELICAL STAIR*

*A geometric spiral diminishes to a point. The term is used here to describe the common visual perspective of the *stairway* not the geometric form.

** *Spiral Stairs* have different definitions in the International Building Code, IBC® and the International Residential Code, IRC®. The IBC® requires a minimum diameter supporting column to which the *treads* are attached.

Stair Gradient - The ratio between the *rise* and *run* of a *stair* used to relate the steepness in use, typically considered to be between 20 and 42-degrees when expressed as angle. Differing from ladders, which are steeper, and ramps, which are less steep

Stairbuilder - A person with skills specific to the craft of designing and constructing *stairways* and *balustrades*

Staircase - That part of the building set apart for the *stairs* and *balustrade* generally including the *well opening* and *adjacent walls*

Stairway - One or more *flights* of *stairs*, with the necessary *landings* and *platforms* connecting them, to form a continuous and uninterrupted passage from one level to another. (International Code Council, ICC®)

Stairway, 'L'- Shaped - A *stairway* with two *flights* joined by a quarter space *landing* that is shaped in plan view like the letter 'L'

Stairway, 'U' - Shaped - A *stairway* with *flights* joined by one or more *landings* that is shaped in plan view like the letter 'U'

Stairwell - The inner clear opening formed by; turning *flights* within a *well opening* or between a *flight* and the *edge* of the *well opening*

Stairwork - Work specific to the craft of designing and constructing *stairways* and *balustrades*

Standoff - A *component* or part to an assembly that functions to offset one part of the assembly from another

Starting Easing - A *rail fitting* comprised of an up *easing* and opening *cap* used at the bottom of a *stairway* attached to a starting *newel*

Starting Fitting - A *rail fitting* comprised of an up *easing* or wreath with a *cap*, *turnout*, or *volute/scroll* used at the bottom or beginning of a *stair* attached to a starting *newel*

Starting Step - 1. The first *tread* and *riser* at the bottom of the *stair*, 2. A *tread* with curved end that is used at the start of the *stairway* at the bottom



Starting Step, Bullnose - A *tread* with half round end(s) in plan view projecting beyond the *face* string of the *stair*

Starting Step, Quarter Turn - A *starting step* that has quarter circle rounded end(s) at the leading *edge*

Stave - One of several boards *edge glued* to form a wider board or panel (Architectural Woodwork Institute, AWI®)

Stave Core - A core constructed of glued wood *blocks* (Architectural Woodwork Institute, AWI®)

Step - 1. A change in elevation of one *riser* height to a floor or *landing* without a *tread*, 2. A unit segment of a *stair*, consisting of a *riser* and the *tread* above

Stile and Rail Construction - A woodworking technique often used in the making of doors, wainscot, wall surfacing, underside of stairs, ceilings, and other decorative features for cabinets and furniture; generally consists of a center surface or panel such as wood, glass, or drywall two vertical members known as stiles, and two horizontal members known as rails. When assembled, the members create a framed panel (Architectural Woodwork Institute, AWI®)

Stringer (String) - The supporting inclined elements to which the *treads* are attached that serve to transfer both live and dead loads of the *stair* to the building structure

Stringer, Closed - A *stringer* that encloses the ends of the *treads* and *risers* typically with the top *edge* following the angle of the *stair* above the line of the *nosings*

Stringer, Curb - A *closed stringer* system on the *open* side of a *stair* built up in thickness, sometimes with a core wall or *blocking*, with a finished opposing exposed side, and a *cap* to receive the *balusters*, See *BUTTRESS*

Stringer, Cut - A *stringer* that is cut or notched on the upper *edge* for support and attachment of the *treads*

Stringer, Face - The exposed *stringer* on the *open* side of *stairs*. Called a *skirt board* or *fascia* when not supporting the *treads* and *risers*

Stringer, Housed - A *closed stringer* that “houses” the ends of the *treads* and *risers* projecting into routed recesses in the *stringer*

Stringer, Mitered Cut - A *cut stringer* with the *riser* cuts mitered to join a *riser* with a complimentary miter on the end to be joined

Stringer, Mortised - A *closed stringer* that has been machined so that the ends of the *treads* and *risers* project into routed recesses

Stringer, Open - A *face stringer* that is cut or notched on the upper *edge* for support and attachment of the *treads* such that the *profile* of the *steps* can be seen from the side

Stringer, Rough - A *cut stringer* to which the *treads* and *risers* are attached that is concealed and attached to the structure typically in the rough framing phase



Stringer, Routed - See *STRINGER, MORTISED*

Stringer, Wall - A *stringer* that is applied to the wall on the *closed* side of a *stair*

Stringer Margin (Stringer Reveal) - 1. The distance from the *gait line* to the top edge of a *closed stringer*, 2. The width from the bottom of a cut string to the depth of the cut notch

Structural Composite Lumber (SCP) - A man-made composite that utilizes stranded wood fibers from a variety of tree species, providing an alternative to dimension *lumber*. The material is engineered for strength and stability. While not really “*lumber*”, it is marketed as a *lumber* substitute to be used in place of *stave lumber* core materials (Architectural Woodwork Institute, AWI®)

Sub-Tread - A concealed rough *tread* used to support the visible finish *tread*

Suction Cups - A tool with vacuum actuated cups with heavy duty handles that allows for convenient grasp, maneuver, and release of heavy *glass panels*

Swage - 1. To compress or crimp a *ferrule* to *cab*le, 2. A tool used for swaging

Swaging Stud - A stud with attached *ferrule* to swag on the end of a *cab*le. The end may be threaded to attach to a *terminal* or *turnbuckle*

Swaging Tool - A tool used for swaging (compressing) a *ferrule* on to *cab*le

T

Tangent - A line that touches a curve at a single point

Tangent Point - 1. The point on a curve at which a *tangent* line touches, 2. The point on the curve of an *easement* at which perpendicular cut to the *tangent* line at the *rake* angle that will provide a matching cross section to a square cut on the intersecting *rake moulding* of the same *profile* and a smooth transition or *easing* at the intersection

Tangent System of Handrailing - A plane geometry method of determining the *face* moulds for the construction of wreathed *handrails* utilizing *tangents* to develop the intersection of the planes that include all the points along the centerline of the *handrail*.

Terminal - 1. Hardware used at the ends of *cab*le, sometimes also incorporating a tensioning device, 2. A fitting used to terminate a *rail*

Tight - Set together so that there is no opening between members (Architectural Woodwork Institute, AWI®)

Tongue - A projection on the *edge* or end of a wood part that is inserted into the *groove* or *plow* of a similar size to form a joint (Architectural Woodwork Institute, AWI®)

Tongue and Groove Joint - A joint formed by the insertion of the “*tongue*” of one wood part into the “*groove*” of the other (Architectural Woodwork Institute, AWI®)

Tread - The horizontal walking surface of a *stair*



Tread, Bowed - A *tread* that is curved in plan view at the *nosing edge*

Tread Depth - The horizontal distance between two successive *nosings* on a *stair*, See *GOING* or *RUN (UNIT RUN)*

Tread, Engineered - A *tread* that is composed of a core material with balanced *veneers* applied to both *faces* to stabilize the product from warp and cup

Tread, Hybrid - A *tread* made with finish quality material finger joined on the end(s) where exposed and a lower grade material where it will be concealed, by floor covering

Tread, Mitered Returned - A *tread* used on *open stringer stairs* with a *return nosing* applied to the end(s) to project over the open *face* string(s) matching the projection of the *tread nosing* at the *riser*.

Tread Return - A *moulding* matching the *nosing moulding profile* of the *tread nosing* that is shoulder mitered to the *tread nosing* at the end of a *tread* to eliminate exposed *end grain* and provide a continuation of the *nosing profile* and projection identical to the *tread nosing*.

Turnbuckle - Hardware used to, couple or tension *cab*le; utilizing sleeves, swivels, and/or internal screws

Turnout - A starting *rail fitting* or *starting step* that turns 90 degrees to the starting *newel* offset beyond the width of the *stair* above

U

Up Easing - Used to describe an *easing* in a *rail* with the center of its arc above the top of the *rail*

V

Veneer - A thin layer of wood, sliced from a log or *flitch*. Thickness may vary from, but not exceed, 0.3 mm [.012"] to 6.4 mm [.252"] thick. (Architectural Woodwork Institute, AWI®)

Volute - A starting *rail fitting* that is designed as a spiral in plan view by connecting a series of 90-degree arcs diminishing in radius by a constant value or proportion. Typically, a volute consists of some portion that is flat in the horizontal plane, called a *scroll*, connected to a wreath or *easing* portion that makes the transition to the connection with the *rake rail*.

Volute, Vertical - A starting *rail fitting* that is designed as a spiral in elevation by connecting a series of 90-degree arcs diminishing in radius by a constant value or proportion.

Volute, Lateral - A metal railing termination that is a horizontal *scroll*, See *VOLUTE*

Volute Step (Scroll Step) - A type of *bullnose starting step* with a *nosing* designed concentric to the plan view of the *volute* or *scroll* through at least 180-degrees. Since the spiral of the *nosing* must be "curtailed" to maintain the integrity of the *step* these are sometimes called *Curtail Steps*.



W

Walk Line - 1. The most common path of travel used in the design of *winders* determined by the distance from the *handrail* to the closest foot when the *handrail* is used in travel on a *stairway*, 2. A point at which *winders* are regulated for depth by building codes, measured 12 inches from the side of the *stair* where the *treads* are narrower, on that portion within the usable width, at the surface of the *tread*

Wall Rail - A *handrail* mounted to a wall.

Wash - The slight horizontal sloping of *treads* such that the leading *edge* is lowest to allow water to run off and to minimize wear at the *nosing edge*

Wedge - A piece of material tapering in thickness from end to end used to align or secure *components*

Well Hole or Well Opening - The opening in a floor through which a *stairway* ascends

Well Matched for Color and Grain - Members that make up the *components* of an assembly and *components* of an *adjacent* assembly are: Similar and nearly uniform in color, and have similar grain, figure, and character. *Adjacent* members must be of the same grain type whether flat grain (plain sliced), vertical grain (quarter cut), rift grain, or mixed grain. (Architectural Woodwork Institute, AWI®)

Winder - A *tread* with nonparallel *edges*.

Winding Stair - A *stair* that turns with *winders*

Work Surface - A flat surface, typically horizontal, for supporting objects used in working; a surface for working on

Wreath - 1. A *handrail* that has a curve in plan view and elevation referred to as double curvature or a compound curve, 2. A *handrail* or string transition that twists between a *rake* and level or two *rakes* at a curve in the plan view of the *stair(s)* or *handrail*

X - Y - Z

