

CHAPTER 2

DEFINITIONS

SECTION 201 GENERAL

201.1 General. For the purpose of this standard, the terms listed in this chapter have the indicated meaning.

201.2 Undefined terms. The meaning of terms not specifically defined in this document or in referenced standards shall have ordinarily accepted meanings such as the context implies.

201.3 Interchangeability. Words, terms and phrases used in the singular include the plural and the plural include the singular.

SECTION 202 DEFINED TERMS

ASPECT RATIO, BUILDING. The ratio of maximum building plan dimension to minimum building plan dimension.

ASPECT RATIO, SHEAR WALL. The ratio of the wall height-to-length (h:l) of a shear wall. The shear wall height is the maximum clear height from the top of the foundation or floor diaphragm to the diaphragm attachment at the top of the shear wall.

BOTTOM PLATE, LOG (STARTER LOG). The first log course in a log wall resting on the subfloor.

BUCK (ROUGH BUCK). A component of a system used to form an opening in a log wall.

CANTILEVER. The unsupported portion of a bending member that extends beyond a support.

CEILING JOIST, LOG. A horizontal structural framing member which supports ceiling or attic loads.

CHECK(ING). A radial crack in the log that occurs as the wood is seasoning; separation of wood cells along the grain as a result of uneven shrinkage (differential tension and compression stresses in the wood structure); a natural and unpredictable result of the seasoning process that generally does not affect the structural integrity of the log.

CONTINUOUS LOAD PATH. The interconnection of framing elements of the lateral and vertical force resisting systems, which transfers lateral and vertical forces to the foundation.

CONTINUOUS SPAN. The span of a structural member between three or more supports.

COPE (COVE, LONG GROOVE, LATERAL GROOVE). The longitudinal groove cut on a log that transfers loads from one log to the next by creating bearing surfaces on either side of the cope and has little or no flat bearing surfaces.

COUNTERFLASHING. A flashing which, when applied over the regular flashing, allows for settling of the structure and slippage at the flashing connection, while still maintaining a weatherproof seal.

COURSE OF LOGS (ROUND, LAYER). One complete layer of logs in the structure's shape; raising the height of the walls by one round of logs.

DIAPHRAGM. A horizontal or sloped system acting to transmit lateral forces to the vertical resisting elements.

DIAPHRAGM CHORD. A diaphragm boundary element perpendicular to the applied lateral load that is assumed to be placed in tension or compression due to the diaphragm moment in a manner similar to the flanges of a beam. When the term "diaphragm" is used, it shall include horizontal bracing systems.

FLOOR JOIST, LOG. A horizontal structural framing member which supports floor loads.

GRADE PLANE. A reference plane representing the average of finished ground level adjoining the building at exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line or, where the lot line is more than 6 feet (1829 mm) from the building, between the building and a point 6 feet (1829mm) from the building.

GRAIN (DIRECTION). The direction of the long axis of the dominant longitudinal cells or fibers in a log.

GREEN (LOGS). Logs that have not undergone drying to a moisture content below the fiber saturation point.

HEADER, LOG. The structural member that spans over the top of an opening.

HIP BEAM, LOG. A beam spanning from the ridge to the outside roof corner that supports the jack rafters or purlins, forming a sloping roof line.

HOLD DOWN. A device used to provide overturning restraint by resisting uplift.

JACK RAFTER, LOG. A rafter that spans from a hip or valley beam to a wall plate or ridge, respectively.

KERF. A saw cut made along the length of a log.

LOG. Wood member that has been stress graded and grade marked or grade certified using rules of an accredited inspections agency in accordance with ASTM D 3957, ASTM D 3737, or ASTM D 245 and is incorporated into a structure.

LOG STRUCTURE. A type of construction whose primary structural elements are formed by a system of logs.

LOG WALL. An assembly of individual structural logs for use as an exterior or interior load bearing wall, shear wall, or non-load bearing wall.

MEAN ROOF HEIGHT. The distance from grade plane to the average roof elevation.

MOISTURE CONTENT. The weight of water in the cell walls and cavities of wood, expressed as a percentage of oven-dry weight.

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PURLIN, LOG. Horizontal roof beams, typically located between the top plate log and the ridge used to provide mid-span support for the roof superstructure and roofing diaphragm.

RAFTER, LOG. A structural member of a roof diaphragm that spans from the ridge to a purlin or eave.

RAFTER OVERHANG (EAVE). The horizontal projection of a rafter measured from the outside face of the wall to the outside edge of the rafter.

RAFTER TIE, LOG. A structural framing member located in the lower half of the roof frame that connects the rafters together to resist outward thrust of the rafter log.

RIDGE. The horizontal line formed by the joining of the top edges of two sloping roof surfaces.

RIDGE BEAM, LOG. A structural horizontal log that supports the roof diaphragm at the peak and transfers roof loads to supports.

SETBACK. The offset distance of a wall on a floor system, measured from the support towards mid-span of the floor system.

SETTLING. The reduction in height of a log wall due to any or all of the actions of compaction, shrinkage, or slumping of individual logs.

SHEAR WALL. A vertical structural unit composed of one or more shear wall segments in one plane.

SHEAR WALL SEGMENT. The vertical section of a shear wall without openings that forms a structural unit composed of framing members, and perimeter members which act as a deep, thin vertical cantilever beam designed to resist lateral forces parallel to the plane of the wall, and which meets the aspect ratio limits.

SILL LOG. A horizontal log anchored to the foundation.

SINGLE SPAN. The span made by a structural member between two supports.

SLUMPING. The lateral spreading of the cope resulting in reduction of the log wall height.

SPAN. The distance between face of supports, plus $1/2$ the required bearing length at each end.

TOP PLATE, LOG. The top log in a wall, beam, outrigger, etc., that supports the lower end of the roofs diaphragm.

VALLEY BEAM, LOG. A beam spanning from the ridge to an inside roof corner, that supports the jack rafters, forming a concave roof line.

WINDOW SILL, LOG. A log in a wall immediately below a window opening.

E, E' = E' Modulus of elasticity, modulus of elasticity after all applicable adjustment factors have been applied.

F_b, F'_b = Allowable bending stress, allowable bending stress after all applicable adjustment factors have been applied.

$F_{c||}, F'_{c||}$ = Allowable compressive stress parallel to grain, allowable compressive stress parallel to grain after all applicable adjustment factors have been applied.

$F_{c\perp}, F'_{c\perp}$ = Allowable compressive stress perpendicular to grain, allowable compressive stress perpendicular to grain after all applicable adjustment factors have been applied.

F_t, F'_t = Allowable tensile stress, allowable tensile stress after all applicable adjustment factors have been applied.

F_v, F'_v = Allowable parallel to grain shear stress, allowable parallel to grain shear stress after all applicable adjustment factors have been applied.

G = Specific gravity.

H_L = Log stack height.

HC = Heat capacity.

I = Moment of inertia.

L = Floor diaphragm dimension perpendicular to the lateral load.

M_r = Allowable moment.

MC = Moisture content as a percentage.

MC_D = Design moisture content.

MC_{FSP} = Moisture content at fiber saturation point.

MC_S = Service moisture content.

P = Allowable compressive axial force.

Q = Statical moment of an area about the neutral axis.

S = Section modulus.

S_R = Radial shrinkage.

S_T = Tangential shrinkage.

T = Allowable tensile axial force; diaphragm chord force.

U = Coefficient of Transmission.

b = Width of section.

v = Required unit shear capacity of the floor or roof diaphragm.

V_r = Allowable beam shear.

W_L = Log thickness for calculation purposes.

Δc = Settling due to compaction.

Δs = Settling due to shrinkage.

Δ_{SL} = Settling due to slumping.

Δt = Total settling.

SECTION 203 SYMBOLS

A = Bearing area; cross-sectional area.

B_{LP} = Initial bearing area.

B_r = Required bearing area.