

Shiplap in Balloon Framing

Shiplap shall be defined as: wooden sheathing in which ¾” boards are rabbeted so that the edges of each board lap over the edges of adjacent boards to make a flush joint. Shiplap is a necessary structural component for bearing walls in balloon framed construction.

Shiplap in balloon framed structures is necessary to:

1. Transfer loads from above door and window openings to adjacent structural members. 2006 IBC 2304.3.2
2. Stabilize studs against racking when the walls carry vertical loads. 2006 IBC 2304.6
3. Provide a nominal ability to transfer lateral forces from the roof or floor deck to the sill. 2006 IBC 2304.6

When shiplap is removed, the original significant architectural features are inherently subject to damage. Without a load-transfer diaphragm, (shiplap) buildings rack and twist, destroying exterior elements. Once exposed, structural framing must meet current code standards. Extensive modifications are required to re-frame the structure. A great deal of the original frame must be cut away and removed in order to install additional studs, window headers, and other structural elements. All of the exterior features (siding, windows, trim, and cornice) of these buildings are nailed directly to the original wood frame.

Platform framing superseded balloon framing and is the standard wooden framing method today. The name comes from each floor level being framed as a separate unit or platform.