

## Wood Structural Panel Size and Spacing

Wood is a biological material and, as such, will expand or contract when subjected to changes in temperature and relative humidity. At time of manufacturing wood structural panels are fairly dry (i.e., around 2 to 6 percent moisture content). They can be expected to expand slightly as they become equilibrated to their in-place environment (usually at a moisture content of between 8 and 16 percent). Due to a more humid environment, panels used in the southern United States may expand more than a similar panel used in the northern United States or Canada. Table 12-1 of the USDA's Wood Handbook (1999 edition) lists the average monthly equilibrium moisture content of wood exposed to outdoor atmosphere for various locations throughout the United States. These values can be used as a guide for your particular location.

Spacing of wood-based panels during installation to allow for possible expansion caused by moisture gain has been a recommendation of the panel industry for more than two decades. Minimum panel spacing recommendation helps to minimize the chance of buckling and other problems associated with panel expansion. It is traditionally recommended that panels be spaced as shown in the diagram (see Figure 1), unless specific recommendations or requirements are included by the manufacturer. If panel edge clips are required for roof sheathing applications, they may also serve to maintain the recommended spacing.

Grade stamps on panels often contain the note "Sized For Spacing," meaning that panels are cut by the manufacturer to be less than nominal dimensions. This allows the panel to be installed with spacing at the ends and edges yet maintain adequate bearing on the supports. Panels are allowed to be manufactured a maximum of 1/16 inch short in both length and width for plywood manufactured to U.S. Department of Commerce (DOC) Voluntary Product Standard PS 1, *Structural Plywood* and 1/8 inch short for plywood and OSB manufactured to DOC PS 2, *Performance Standard for Wood-Based Structural-Use Panels*.

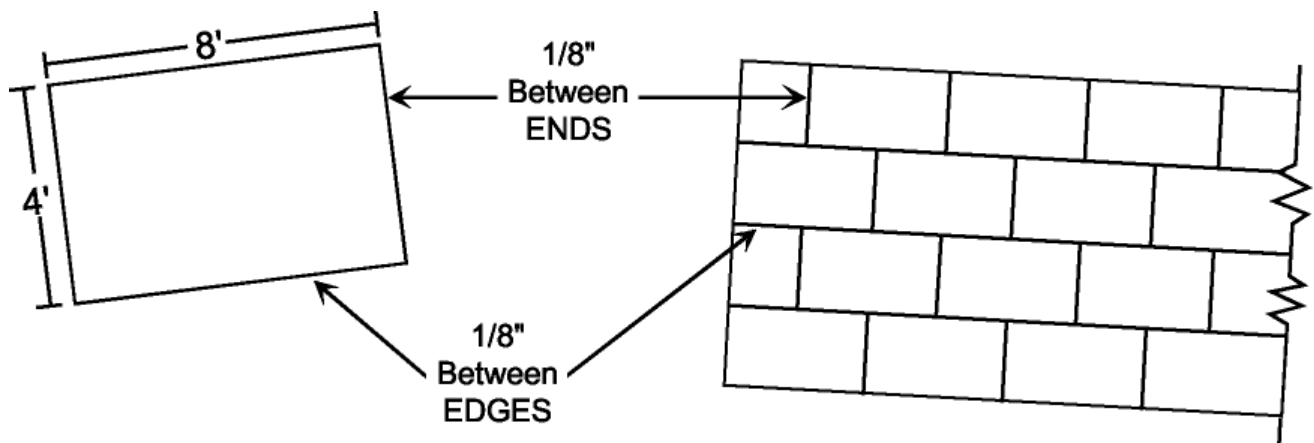


Figure 1