

Temporary Expansion Joints for Large Buildings - Roofs

During construction of buildings with large and continuous roof decks utilizing wood structural panels, roof sheathing panels may be subject to accumulated deck expansion when exposed to elevated moisture or humidity. Panel expansion may accumulate through the roof framing and sheathing. Field experience often reveals the presence of accumulated expansion in roof decks, even though proper spacing gaps have been provided at panel edges and ends, and panel movement has been restrained by fasteners and framing.

It is recommended that building designers and/or contractors incorporate a temporary expansion joint in the roofs of a large building to avoid panel ridging, buckling and out-of-plumb displacements when the roof plan dimensions exceed 80 feet. An expansion joint for a large wood structural panel roof deck may be provided by sheathing 80-foot sections and temporarily omitting a roof sheathing panel in each sheathing course at 80-foot section intervals (Figure 1).

After the installation of 80-foot sections is completed, install the cut-to-size “filler” panel at the omitted panel areas for the temporary expansion joint (Detail “A”, Figure 2). Installed roof deck panels should be covered with roofing underlayment as soon as possible for protection against moisture exposure.

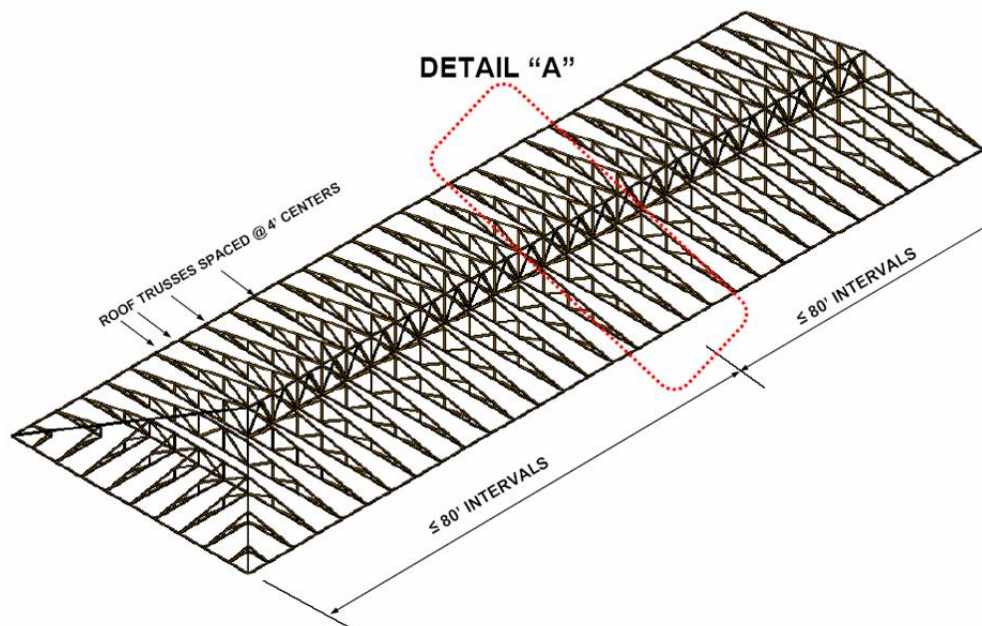


Figure 1. Location of temporary roof expansion joints for light-framed wood and steel structures, when the roof plan dimension (length or width) exceeds 80 feet in one direction.

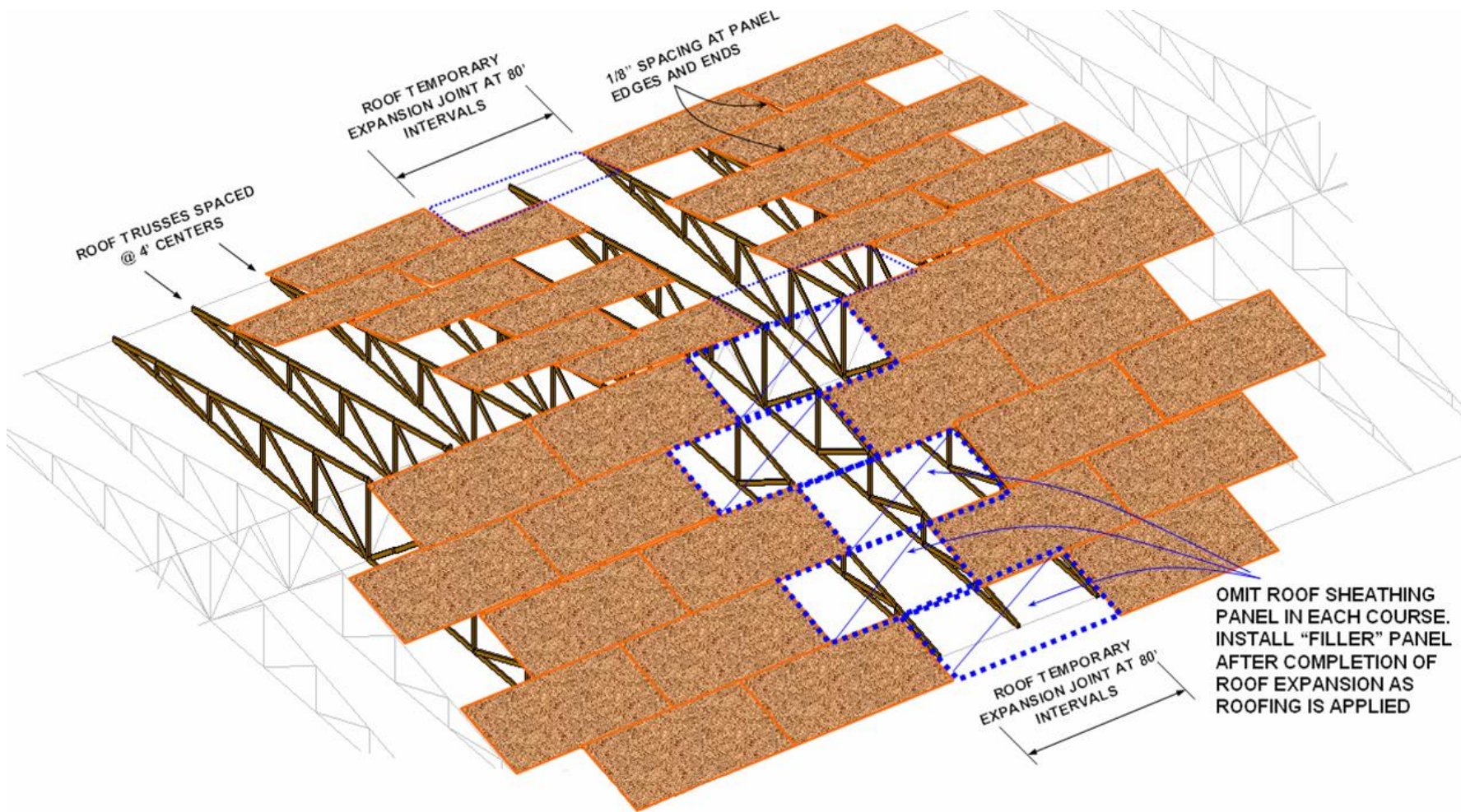


Figure 2 (Detail "A"). Suggested construction detail for temporary roof expansion joint.