

PANEL EDGE SUPPORT FOR NARROW-WIDTH ROOF SHEATHING

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The roof sheathing recommendations of *APA – The Engineered Wood Association* assume a 24-inch minimum panel width. When panels less than 24 inches in width (narrow-width panels) occur in roof construction, additional edge support is recommended.

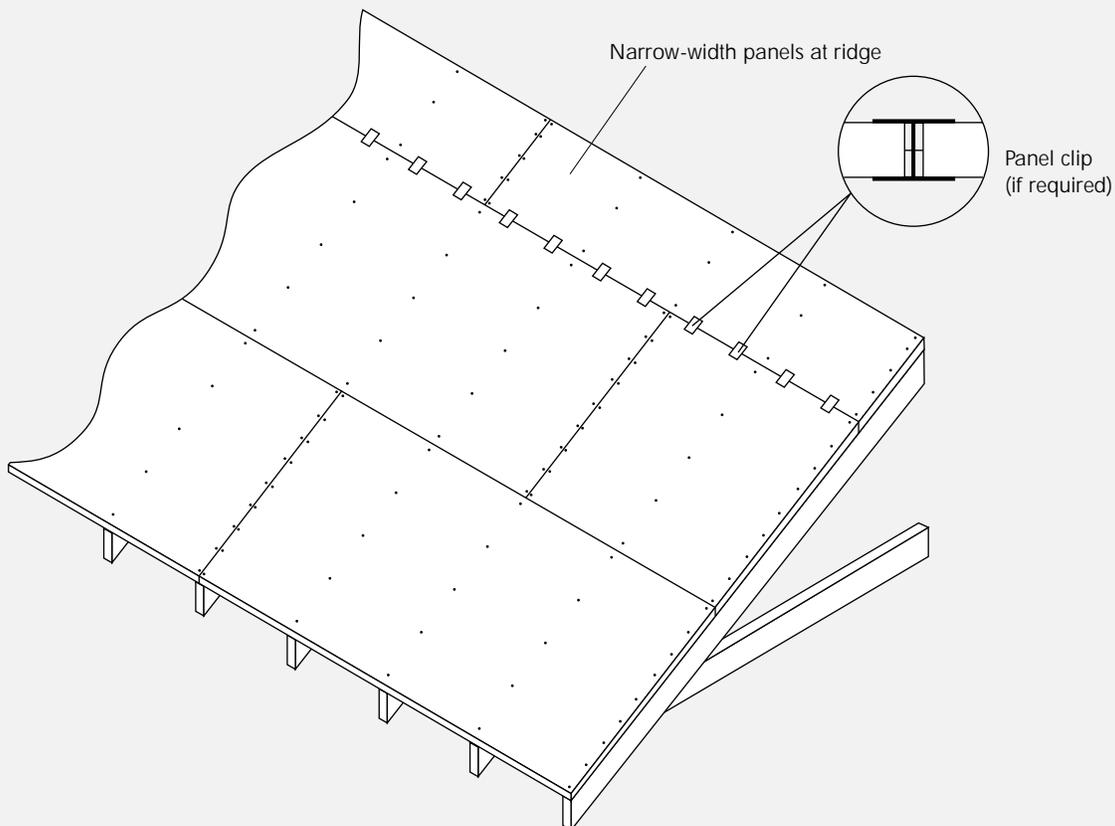
It is not uncommon for a building's geometry to necessitate the use of less-than-full-width panels at roof ridges or valleys (see Figure 1). While adjustments for uniform load are available (see APA's *Plywood Design Specification and Technical Note N375*) for structural-use panels of widths less than 24 inches, it is recognized that uniform load capacity

does not necessarily control the performance of roof sheathing panels.

An APA test program was initiated to investigate the performance of 24-inch and narrower roof sheathing panels. The results are the basis for the edge support recommendations discussed in this technical note.

FIGURE 1

NARROW-WIDTH PANELS



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Recommendations

Panels 24 inches or wider should be used wherever possible. The following recommendations apply whenever narrow-width panels are necessary. They are based upon the use of APA trademarked Rated Sheathing panels over two or more spans (three or more supports) with the long panel dimension or strength axis across supports.

- For panel widths greater than 16 inches but less than 24 inches, use panel edge clips or lumber blocking at unsupported edges. The edge support is to be placed at the joint between the narrow-width panel and an adjacent full-width panel. Unless otherwise required by the building code, the support may be omitted at the edge adjacent to a ridge or valley when the opposite edge of the narrow-width panel is thus supported. When used, two panel edge clips, equally spaced, should be placed between each pair of supports. As an alternative, two-by-four blocking may be used flatwise or edgewise and should be adequately attached to roof framing.
- For panel widths greater than 12 inches but less than or equal to 16 inches, only lumber blocking as described above is recommended.

- For panel widths of 12 inches or less, lumber blocking applied to **both** narrow-width panel edges is recommended, regardless of adjacent ridge or valley.

Attach narrow-width panels to framing and blocking in accordance with APA fastening recommendations for roof sheathing. When panel edge clips are required, use the correct size (e.g., use 15/32-inch clips with 15/32-inch panels, 1/2-inch clips with 1/2-inch panels, etc.). Avoid the use of narrow-width panels with large knots, knotholes or other surface voids. The use of narrow-width panels with handling damage should also be avoided.

Test Program

Recommendations are based on a test program conducted by APA. Over 300 specimens of various widths, thicknesses and Span Ratings were tested for stiffness and under concentrated static and impact loads as required for roof sheathing in accordance with APA's PRP-108, Performance Standards and Policies for Structural-Use Panels. The concentrated static and impact loads were applied at an unsupported edge (the side opposite the panel clips, when used) to insure conservative test results.

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