



Performance Exam Mockup Design for Metal Panel Roof Systems and Metal Shingle Systems

Mockups for the ProCertified Metal Panel Roof Systems and Metal Shingle Systems performance exams must resemble the characteristics of most steep-slope roofs. These characteristics are essential to ensure standard testing conditions get achieved and the performance exams are administered uniformly according to NRCA published standards. All metal panel roof systems and metal shingle systems mockups must include the following elements:

1. A wood deck capable of supporting two times the intended total load. Deck material must be one of the following:
 - A. A minimum of four-ply, of a nominal thickness of $\frac{1}{2}$ -inch-thick (actual thickness of 15/32 -inch thick) plywood installed over supports spaced no more than 16 inches on-center
 - B. A minimum four-ply of a nominal thickness of $\frac{3}{8}$ -inch-thick (actual thickness of 19/32 -inch-thick) plywood installed over supports spaced no more than 24 inches on-center
2. A 6:12¹ slope modular measures 48 inches long at its upper edge, a 69-inch rafter length, 65 inches deep at its base, 25 inches tall and sloping to a 6 $\frac{1}{2}$ - inch fascia
3. An 8:12 slope modular section measures 96 inches long at its upper edge; a 32-inch rafter length, 27 inches deep at its base, 25 inches tall and sloped towards a 12 $\frac{3}{4}$ -inch fascia. An elevation change of 6 $\frac{1}{4}$ -inch exists between the roof decks of the 6:12 and 8:12 sloped modular sections.
4. A total field area of approximately 39 square feet
5. One 32-inch-long sidewall at the shorter (left) gable edge extending 10 inches above the roof deck (10-inch-tall sidewall)
6. One 96-inch-long headwall at the upslope edge of the left modular section, extending 10 inches above the roof deck (10-inch-tall headwall)
7. One 70-inch-long valley with its upslope end terminating into the headwall

¹ The 6:12 sloped roof section is one of two 6:12 sloped roof sections used in the clay and concrete tile performance exam mock-up. If you already have this mockup, you can use one of these 6:12 sections, build the 8:12 sloped section for the metal panel roof systems and metal shingle systems mockup and combine them.



NRCA also recommends that a separation sheet, such as rosin building paper, be affixed on steep-slope mockup wood decks for performance assignments requiring self-adhering underlayment and easier material removal after exam completion. The diagram of the mockup platform for metal panel roof systems represents a concept design. It is designed for maximum compactness, portability, and ease of storage while meeting the characteristic requirements listed in this document. The construction of the mockup is required using the indicated dimensions and slope. NRCA does not provide engineered drawings for the construction of any mockup. The determination of mockup strength, weight capacities, and durability are the responsibilities of those constructing mockups. The graphic below is not a scaled drawing. It is published to convey the dimensions and general appearance of the work platform.

