Dressing Up a Truss Roof

Rafter tails and gable overhangs transform an otherwise plain-looking exterior

by Jesse Christensen

While it's usually cheaper to build a roof with trusses, architectural details are easier to add if you stick-frame. We frame roofs both ways, depending on the job; and we occasionally use a third, hybrid approach: trusses for part of the roof and stick-framing for the rest.

That's how we framed the roof on the house shown on these pages. For the most part it's a straightforward roof, easily stacked with trusses — but some of its details convinced us that the hybrid approach would work best.

To begin with, the architect's plan showed several small decorative gables perpendicular to the main roof, which we stick-framed using California valleys. There's nothing unusual about that, but the plan also showed 4-foot overhangs at every gable, with barge rafters supported on purlins that appear to extend from inside the roof structure. In addition, there was to be a pair of oversized triangular gable vents under each roof peak.

Normally on a straight truss roof, we would simply use gable-end trusses. But the combination of the large louvered vents and the large overhang forced us to stick-frame the gable walls.

The plans also called for 3-foot-wide open eaves with 3x6 exposed rafter tails every 2 feet. To accommodate the tails, we ordered snub-end

Figure 1. To make it easier to add the architect-designed 4-foot gable overhangs and 3-foot rafter tails along the eaves, the author stick-framed the gable walls and used snub-end trusses for the main roof.

trusses, which end flush with the top plate (**see Figure 1**). Because the trusses were laid out on 24-inch centers, this would allow us to sister the extended rafter tails onto the truss top chords. In places where the truss spacing differed, we would attach the tails to blocking.

Gable Overhangs

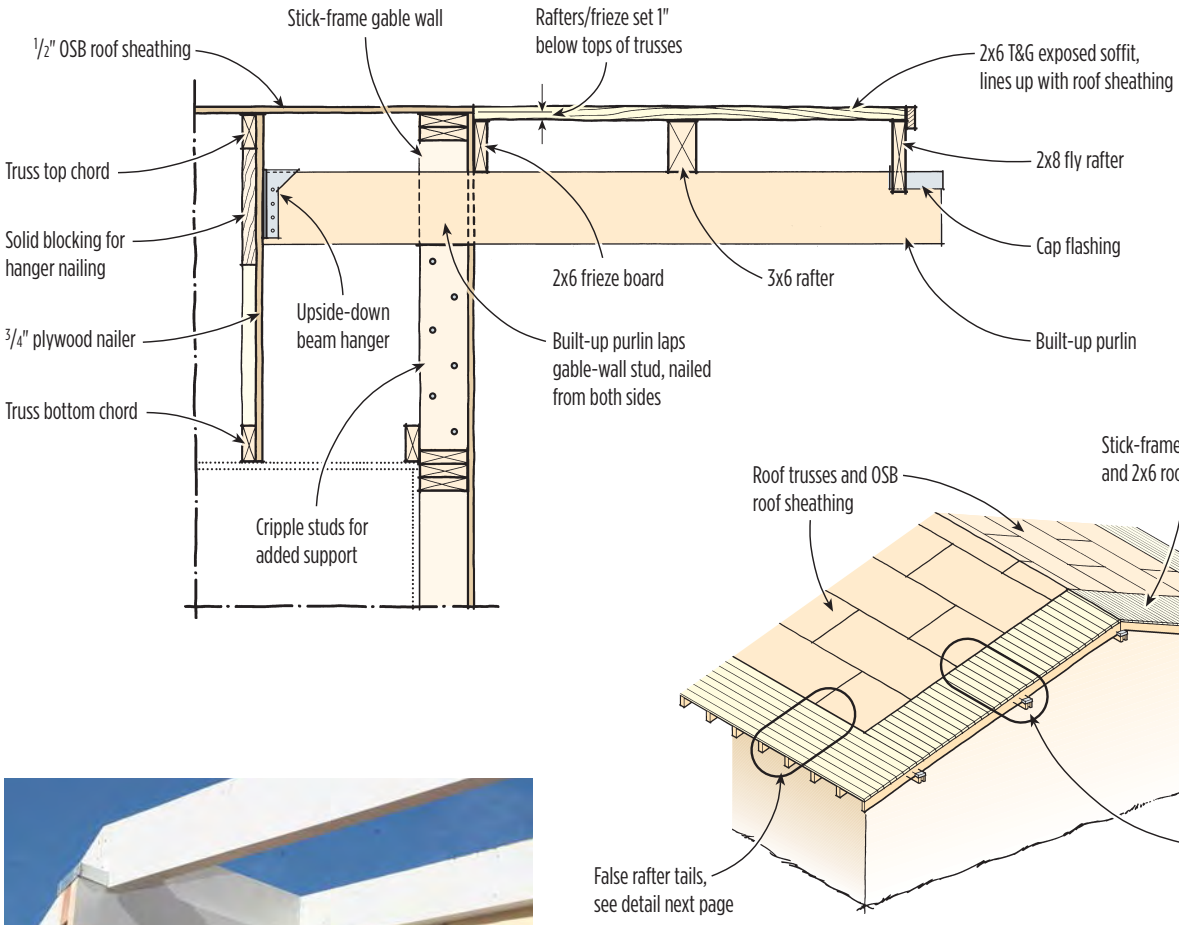
If we'd used gable trusses, we probably would have had to cut through chords or web members to fit the louvered vents and the purlins. Rather than try to special-order a gable truss that would work, we decided it was simpler just to stick-frame the gable walls.

To support the 4-foot gable overhang, we ran the purlin members back to the first truss and attached their ends to solid blocking (**Figure 2, page 3**). For extra strength we added an upside-down beam hanger to resist the upward rotation.

Where each purlin passed through the gable wall, we nailed it to a stud positioned for that purpose. The purlins were built up from three 2-by members — a 2x6 sandwiched between two 2x8s — which permitted us to lap the stud where the purlin pierced the wall and to nail from both sides. We also put cripples beneath each side, for additional support.

On the outside of each gable, we

Gable Overhang Detail



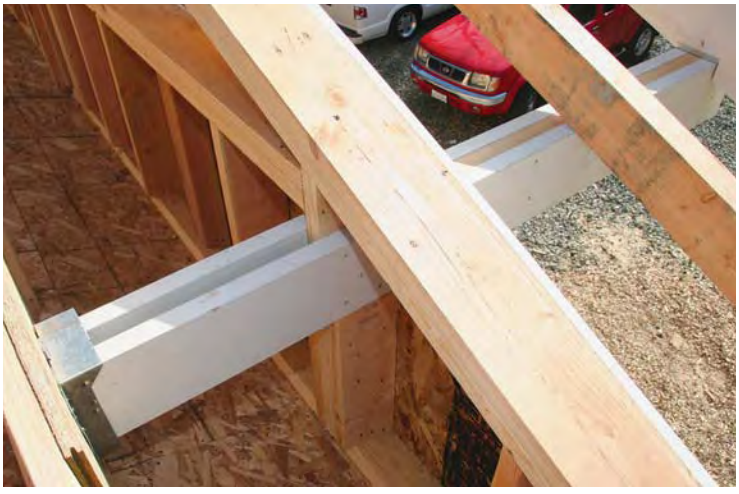


Figure 2. Triple 2-by members passing through the stick-framed gable walls form the 4-foot support purlins for the deep overhangs. An upside-down beam hanger secured to solid framing on the inside (above) helps resist rotation forces, and a cap flashing protects the exposed horizontal surface at the top end of each purlin.

Eaves Overhang Detail

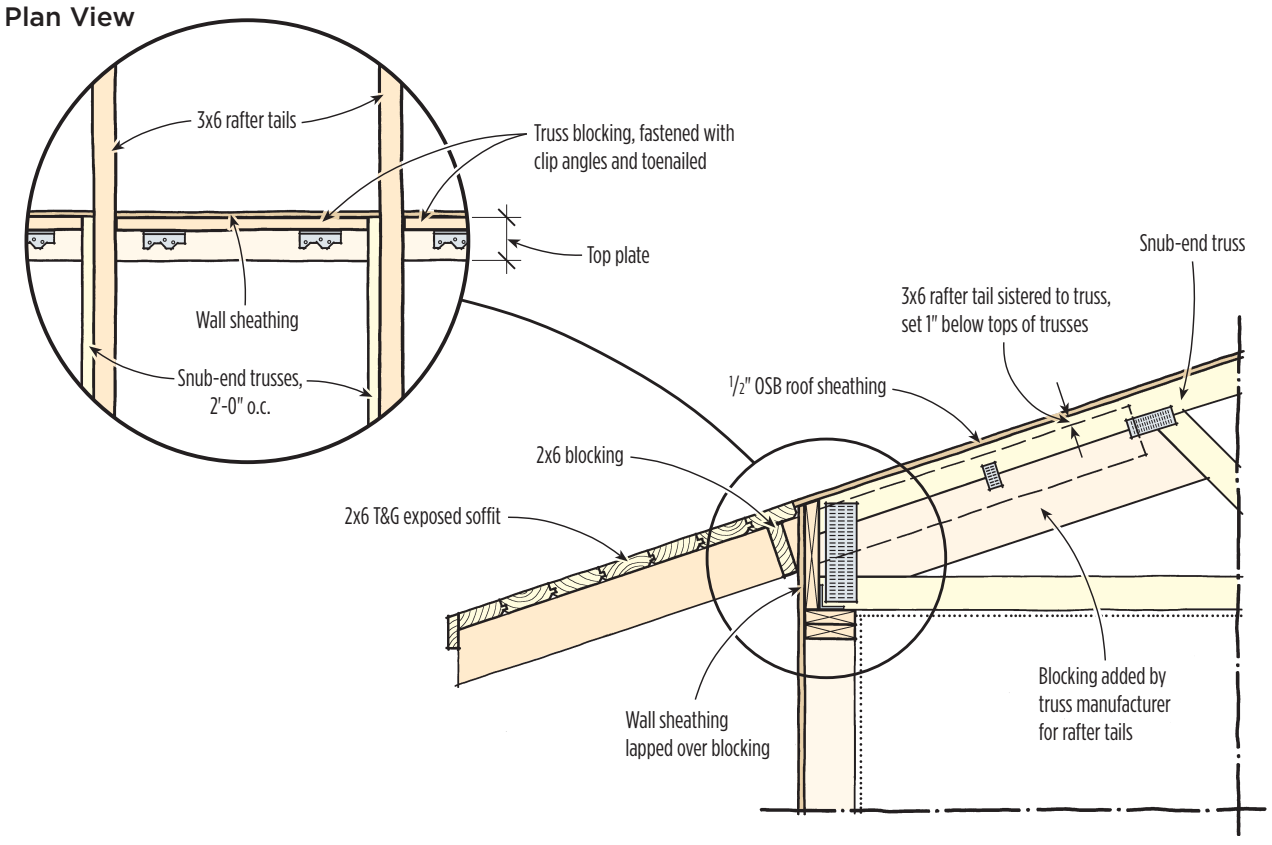


Figure 3. Three-by-six false rafter tails nailed to the top chords of the snub-end trusses penetrate the wall sheathing to create the appearance of an open-eaves stick-framed roof. They're positioned 1 inch below the top of the trusses so that the 2x6 roof planking to be installed over the eaves will be flush with the 1/2-inch OSB on the rest of the roof.

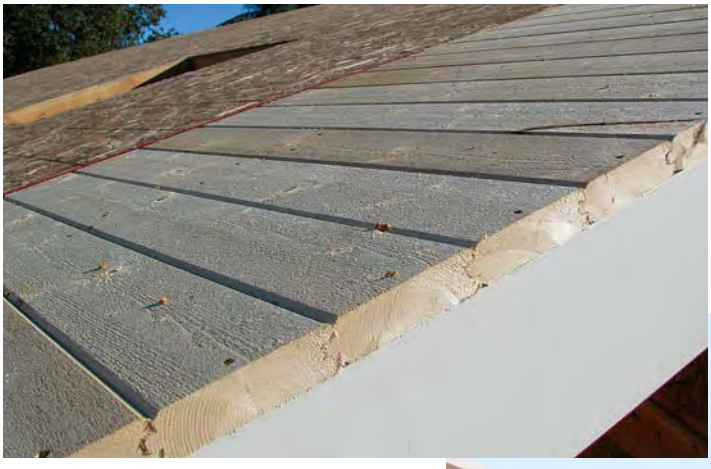


Figure 4. Two-by-six beveled-edge T&G pine completes the stick-framed look. At bottom, the completed house before painting.

installed a frieze board against the wall, as well as a 3x6 rafter — supported by the purlins — in the middle of the overhang and a 2x8 fly rafter at the outer edge.

Rafter Tails

We cut the false rafter tails about twice as long as their 3-foot projection and nailed them to the side of the truss top chords (**Figure 3, page 4**). We positioned them 1 inch below the upper edge of the top chord so that the 2x6 T&G knotty pine spec'd for the open soffit (thick enough that no roofing nails would stick through it) would be flush with the 1/2-inch radiant-barrier OSB on the rest of the roof.

After the tails were in place we installed the truss blocking along the top plates, then lapped the wall sheathing up over it.

T&G Soffit

At this point we were ready to finish sheathing the main part of the roof with OSB and install the 2x6 beveled-edge T&G at the eaves and gable overhangs (**Figure 4**). Like the rafter tails, the fly rafters had been positioned an inch below the tops of the trusses so that the exposed soffit would be flush with the main roof sheathing.

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