



## Case Study Tiny Houses Pack a Big Value

### PROJECT SPECS

**MBCI Products:** Slimline and PBD

**Location:** Fresno, CA

**Color:** Charcoal

**General Contractor:** California Tiny House

### WHY MBCI?

MBCI provides customers quality metal products, superior service and competitive pricing. From a single manufacturing facility in 1976 to now the largest metal roof and wall panels' supplier in the nation, MBCI has grown tremendously with its customers' needs in mind. MBCI manufactures more than 90 different metal panel profiles, as well as performs meticulous testing and offers complete engineering and design capabilities, allowing MBCI to be capable and committed to supporting both the design and contractor communities from project conception through project completion.

The California Tiny House company is a father-son partnership that was founded to provide small, affordable homes. To keep these custom-built, wood frame houses affordable, and versatile, they are factory-constructed, and built on wheels, ranging in size from 200-350 sq. ft. To make a house that is functional, comfortable, code-compliant, aesthetically pleasing, and able to withstand the rigors of highway travel, California Tiny House must build both strong and smart. Not surprisingly, they use MBCI metal roofs to fulfill that mission.

### PROBLEM

The challenge that contractor Pat Mosley and his son Nick took on when they founded California Tiny House in 2014 was to create a very small house design that could be easily customized, and would measure up to the demands of both the building code and the open road. They saw an opportunity in the need for more affordable houses: for people with limited funds, for those who could afford a piece of land but were not ready to build a full-sized house on it, for a guest house or 'mother-in-law' unit that could be parked in the back yard, or for a low-cost vacation home.

The solution was to build a mobile home that has the type of materials, construction, and aesthetics you would find in a permanent structure. The Mosleys are part of the larger Tiny House movement, which recently received major validation in the form of a new standard for houses under 400 sq. ft. adopted by the International Code Council (ICC). It will become an appendix to the next published version of the International Residential Code (IRC), and likely be adopted by local jurisdictions starting in 2018.

"It's pretty much a very sturdy custom home that happens to be on a trailer instead of a foundation," explains Nick Mosley, who partners with his father, company founder Pat Mosley. "Our products differ from a conventional house in that they have to withstand hurricane force winds every time they go down the freeway. Other than that, there are very few differences."

The tiny houses have trailer sizes from 18 - 28 feet - but every house so far has been custom, so a larger trailer is also possible. The houses are wood-frame construction, insulated, and finished like a conventional house on both the interior and exterior.

Mosley's description of withstanding hurricane force winds is no exaggeration, either. Traveling down the highway at 65 MPH and driving into a 20 MPH wind is the equivalent wind-load of a house standing still in a hurricane.

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### SOLUTION

When dealing with high winds, the roof is very often found to be one of the most vulnerable elements of the building envelope. For this demanding application, the Mosleys choose MBCI Slimline standing seam metal roofing panels. Installing 29-gauge steel panels over plywood sheeting, they have found the roofs to be very durable and reliable.

“Metal roofing is a standard for the industry,” Nick Mosley points out. “It holds up better to high winds. You can do asphalt composition roofs, but you have to cover them anytime you’re in transit to avoid losing shingles when cruising down the highway. Steel roofs last a lot longer. They’re virtually indestructible. MBCI’s Slimline panels are very light. Once you lock them together, they’re locked in place. [The roof system] basically clamps itself together.”

On some of the tiny houses, they also use MBCI PBD wall panels as architectural accents, complementing the look of the roof.

“We used roof panels from a different company on the first house we built,” he recalls, “but MBCI’s product proved better. The way it goes together, it’s very user-friendly. They precut everything for us; their finish is really nice. When you find something you like, you stick with it.”

“California Tiny House orders trims specially fit to their specific needs,” says MBCI Regional Manager Jeff Stopper. “We actually manufacture the trims to match their drawings, and give them a custom fit. It’s a variant of our standard trims, with changes in length to fit the tiny houses. They can order it to fit perfectly for whatever project they’re working on.”

So far, California Tiny House has built 10 houses, with 15 more on the waiting list. A simple shell can cost as little as \$25,000. A fully fitted-out house could run \$50,000 - \$120,000.

“It depends on what size you want and how crazy you want to go,” says Mosley with a chuckle. “We could build one for \$250,000 with heated roof and heated floor, full automation...the works.”

In the future, California Tiny House is introducing a line of standard, non-custom models that will be even more affordable

