


MOLLY LOOMIS

PHOTOGRAPHY BY BETSY MORRISON

Small, Secondhand & Spectacular

An Idaho couple's salvage savvy gives this snug straw bale home its character.



The house's main ceiling is made from corrugated metal taken from a recycling center in Montana.

Most homeowners would take offense if someone compared their house to a dump. Meghan and Aaron Powers consider that a compliment. After all, 90 percent of their 836-square-foot, passive-solar straw bale home is made from materials salvaged from local landfills and demolition sites—and the result is anything but dumpy.

When the couple met in 2003, Aaron was already planning to build a straw bale house on a 5-acre lot in Victor, Idaho, on the western side of Grand Teton National Park. Meghan, an architect who specializes in green design, contributed ideas between

climbing and skiing dates in the nearby mountains. They were fully collaborating on the shared vision of what would become their new home by the time they married in the summer of 2006.

Using green building materials was an obvious priority, but Meghan and Aaron knew that minimizing their use of materials was even more fundamental to lessening the environmental impacts of building their home. "It hit us that the biggest way we could practice green building was first by reducing—figuring out how small a space we could realistically live in—and then finding as many ways to reuse materials as possible," Meghan says.



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Thinking small

Determined to avoid a construction loan, the Powerses kept their building footprint as small as possible. Unsure of just how small they could go, Meghan and Aaron laid their entire floor plan out on the concrete slab of a friend's basement, fine tuning it until they were confident they had a design that would comfortably accommodate them and their two large dogs even during the region's long cold winters.

"People build big homes because that's what the real estate agents say they need for resale value," Meghan says. "But there is no reason not to build on a smaller scale when you think of the number of spaces you don't use. Or you can double your rooms' uses."

Two of Aaron's most inventive double uses of space include a sunken dining room table with built-in seating that hides beneath removable planks in the living room floor and a circular shower with a removable floor grate that covers a deep sunken bathtub. The shower's exterior wall, a glowing column of gorgeous redwood, also functions as the home's centerpiece—a space-saving trick that eliminates the need for additional walls separating the bathroom from the main living area.

The couple also focused on giving function to areas typically relegated as dead space. Long shelves high up in the walls store books, picture albums and canned goods. Low ceilings in enclosed areas such as closets and the utility room



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A CHAT WITH THE HOMEOWNERS

What books are on your nightstands?

MEGHAN: In Defense of Food by Michael Pollan and Barbara Kingsolver's Animal, Vegetable, Miracle.

AARON: The Places in Between by Rory Stewart and Flying the Mountains: A Training Manual for Flying Single-Engine Aircraft by Fletcher Anderson.

Netflix or the local video store?

MEGHAN: Local. And we pay every penny because we're always getting late fees.

What's the house's best hiding spot for clutter?

MEGHAN: There's no hiding spot! That's one of the catches of having a small house.

What sorts of leftovers are in the fridge right now?

AARON: We almost always have burrito makings.

What's your favorite way to pass a snowy day inside?

MEGHAN: Baking bread.

AARON: Surfing heavy machinery websites.

Do you have any tips for living in small spaces?

MEGHAN: Having a lot of outdoor living areas like our outdoor kitchen and garden really helps.

What was the most challenging aspect of building the house?

MEGHAN: Because everything is reclaimed, you can't say, 'I want this size window.' You have to work backwards sometimes.

What part of the house are you most happy with?

MEGHAN: The way the passive solar performs. After two years we hadn't used our radiant floor heating once, so this winter we drained it.

What was the lowest moment of the design and building process?

AARON: The tarps leaked, and three-quarters to 80 percent of the straw was gone. "Quit" was going through our heads. But we called around and managed to find someone who still had some hay.



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TIPS FOR RECLAIMING BUILDING MATERIALS

- Start close to home. Let family, friends and neighbors know what you're looking for. Some may have things you need languishing in basements and garages.
- Contact local contractors, builders, architects, lumberyards and even realtors about any future teardowns in your area.
- Check with your dump about scavenging regulations. Some dumps allow it; others don't.
- Make sure to emphasize that you understand you are fully responsible for yourself while scavenging and won't hold anyone liable.
- Check out salvage stores such as Habitat for Humanity's ReStores. If you find useful materials you can't use, ReStores may trade you for something you need.
- Often stores are stuck with misordered doors and windows. Check in with suppliers for potential large savings.
- Visit personally with contractors to assure them you won't become a liability.
- Come prepared with a truck and/or trailer for hauling and appropriate work clothing including work gloves and thick-soled shoes.

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allow the main ceiling to soar high above, creating the illusion of more space in the small house.

“Folks don’t get to see architecture on this scale very often,” Meghan says, recounting her most recent visitors: four ladies from the Catholic Church who stopped by for a tour after hearing about the house through word of mouth. “It’s great for folks to get to visit, experience what a house this size can feel like, and see that we’re normal people.”

Trash into treasure

The second step in the Powers’ eco-friendly approach was to reuse as many materials as possible. And as luck would have it, just as they wrapped up their design plans, they caught wind of a large residence being torn down in neighboring Jackson Hole, Wyoming. Aaron and Meghan salvaged as much as they could from the house including all appliances, a large bathroom countertop they reconfigured into their bathroom floor, windows, doors and a garage door. Then they started in on the local dumps. “About the

only place we didn’t look for stuff was the dead animal pit,” Meghan says.

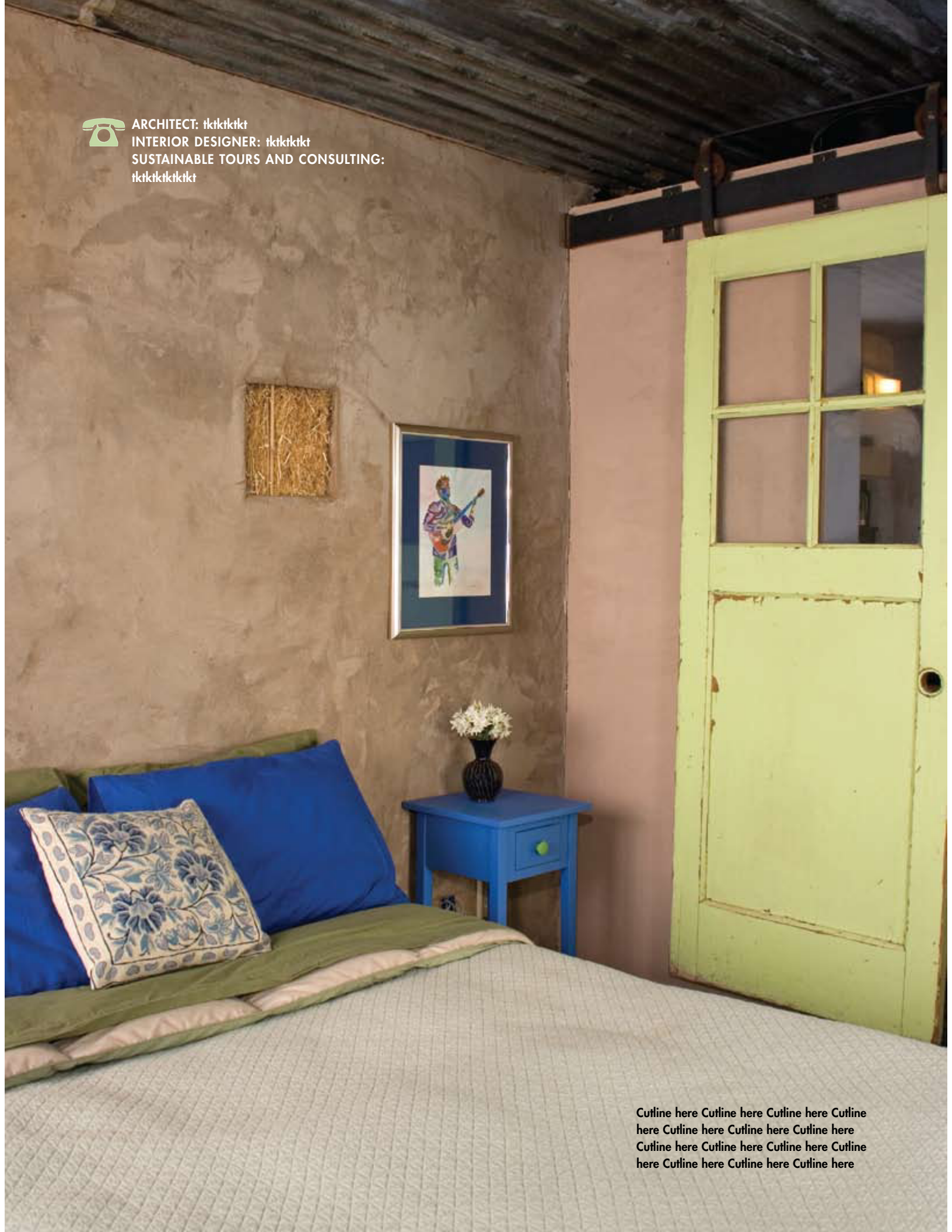
Constructing the house and salvaging building materials kept the Powers within their budget and green building ethics, but it wasn’t easy. “We were putting in upwards of 50 hours a week at our day jobs; then we’d get home at 10 at night from scavenging and read books on straw bale and natural plaster,” Aaron says.

“It’s a miracle we’re still together,” Meghan says with a laugh.

Fortunately, Meghan and Aaron had help. Siblings, friends and parents housed in an ad-hoc array of tents, RVs and a tipi helped with the construction—which Aaron jokes was the greatest challenge of the entire building process. Meghan points out details made possible by the help, such as the handmade bathroom sink made by her sister and mother—both potters—and the large steel door that her other sister spent days scraping with a wire brush to create a modern brushed finish.



ARCHITECT: tktktktk
INTERIOR DESIGNER: tktktktk
SUSTAINABLE TOURS AND CONSULTING:
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New techniques, old ties

The homeowners also wanted to incorporate as many elements of the Teton Valley’s rich agrarian history into their house as possible. The golden barley straw revealed in the straw bale’s “truth window”—a feature in many straw bale homes that allows viewers to peer into the straw-filled wall interiors—mirrors the crops in the surrounding fields, as do the walls’ earthen textures. The reclaimed doors throughout the house match those on the abandoned barns just down the road.

Next to the house sits an old 30-foot grain silo from a neighboring farmer’s field, which Meghan and Aaron resurrected into a two-floor studio, workshop and garage. Downstairs in the workshop, Aaron can concentrate on projects related to his contracting business, Natural Dwellings; upstairs is Meghan’s office, which doubles as a guest bedroom.

The Powers’ land ethic doesn’t end there. In the spirit of the homesteaders whose descendents still populate the valley, the Powerses have an extensive garden that provides much of their food throughout the year—not an easy feat in Idaho’s short, temperamental growing season. They also raise chickens, pigs, cows and geese, which they feed with food from their garden and barley dregs from the local brewery. In turn, the animals provide meat, eggs, milk (TRUE HOMEOWNERS??) and manure to fertilize the garden.

“During the construction, Meghan said, ‘If I could raise my own meat, maybe I’d eat it,’” Aaron says, “So my dad went out and ordered two piglets the next day.”

As in most homes, the kitchen is at the heart of the Powers’ house. But for Meghan, it takes on added significance. “The kitchen is the part of the house that ties us to everything we like about this place,” she says. “The garden, the animals, the chicken we’re cooking for dinner right now.” **NH**



THE GOOD STUFF

- Approximately 90 percent of the house is constructed from reclaimed materials including: appliances, doors, windows, floor tiles, garage doors, chimney pipe, granite countertops, corrugated steel ceiling and roofing, and lumber.
- Passive solar design
- Post and beam construction with straw bale infill, straw from local farmer
- Interior wall plaster is a combination of handmade earthen mix of straw, sand and local clay and natural Loma plaster from American Clay.
- Exterior plaster is lime and sand-based.
- Blown-in recycled-content cellulose insulation and Bonded Logic recycled denim insulation
- Homemade casein milk paint
- Wheatboard cabinets and shelving
- Windowsills of beetle-killed pine scavenged from the dump
- Adobe floor made with local clay, sand and straw, and finished with Bioshield oil and wax
- Redwood shower is built from scavenged boards from a pool room in Jackson Hole, Wyoming??
- A silo bought secondhand from a local farmer functions as studio and garage.