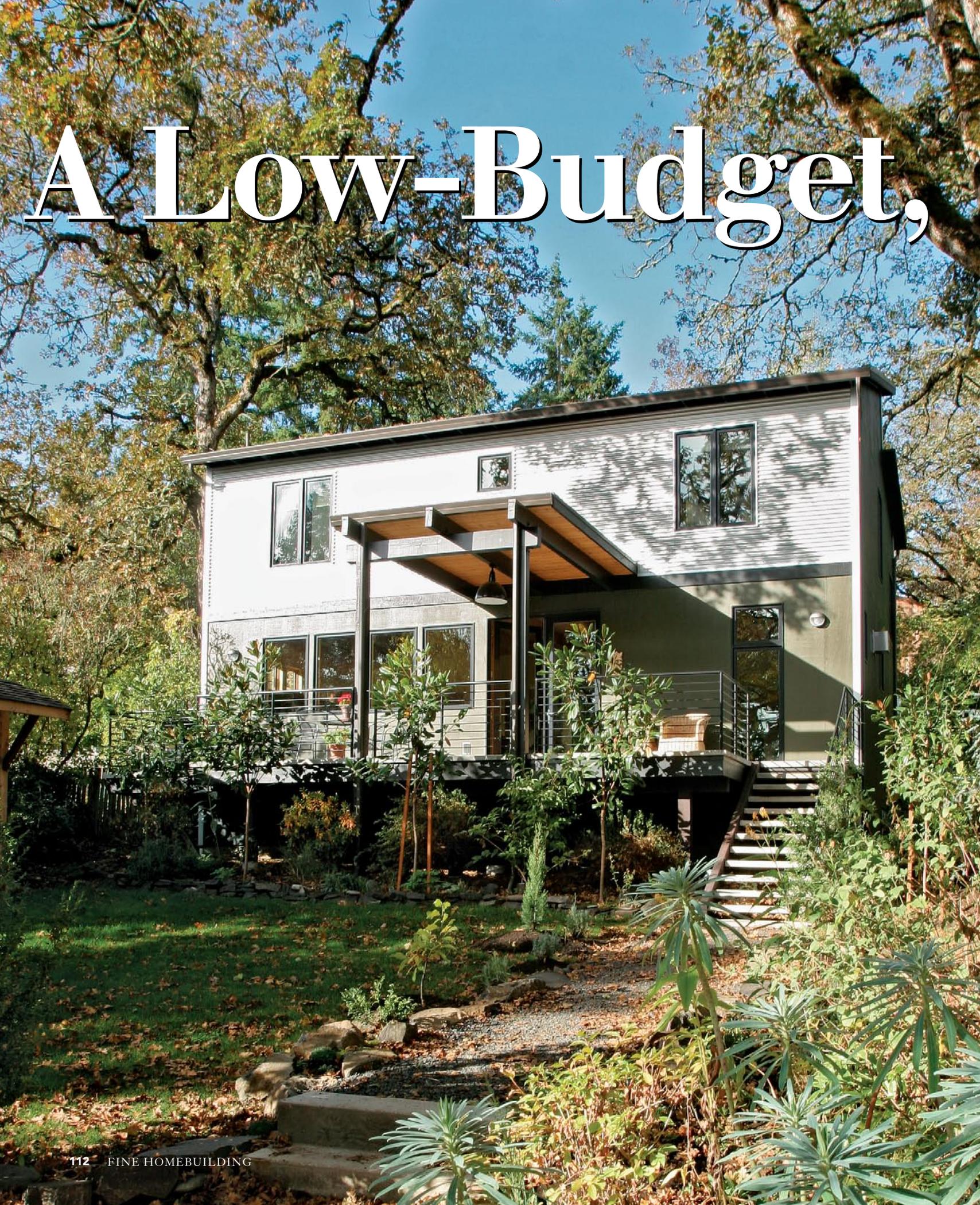


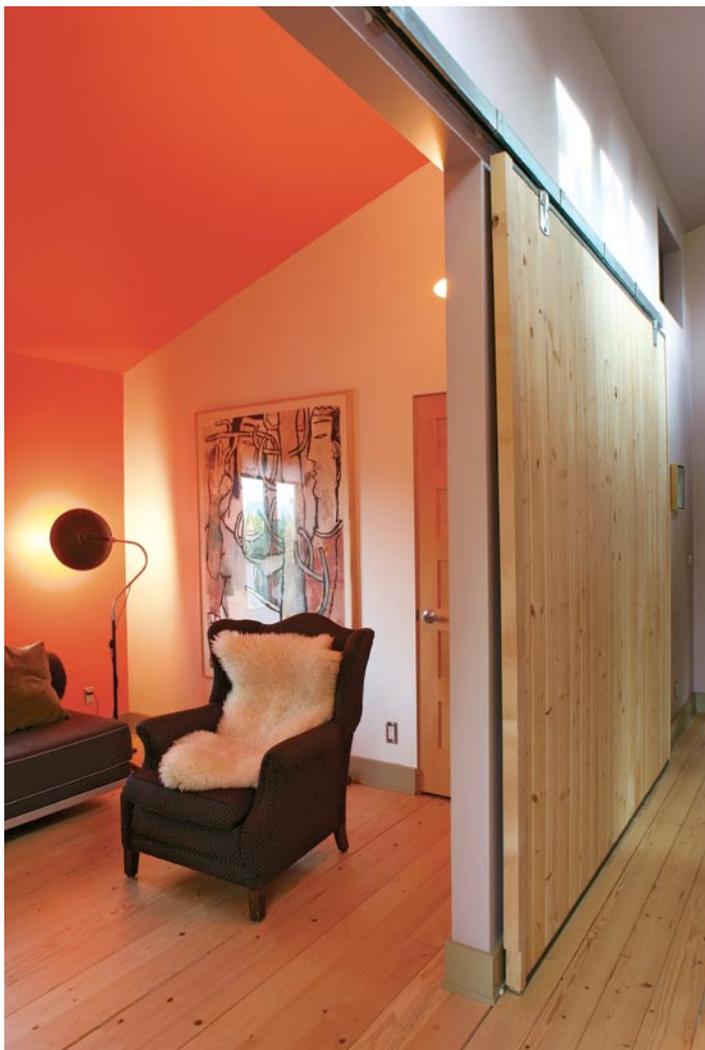
# A Low-Budget,



# High-Impact House

A design/build team delivers a custom house with copper counters, oak floors, travertine stairs, and a great outdoor space for \$126 per sq. ft.

BY CHRIS STEBBINS



**A**dozen years ago, Bill Brewer and Nancy Mannelli left the hectic city that Seattle had become and started a simpler life in Eugene, Ore. They bought a fixer-upper on a sloping double lot in a neighborhood of smallish old homes and big oak trees on the west side of town.

The extra lot naturally evolved into their garden, but over the years, Bill and Nancy kept eyeing it as a potential site for a new home. By 2003, property values had gone up enough to make the project feasible, if some important conditions could be met: The new house had to be a bit larger than the old one, with more natural light, and it couldn't cost more than their current mortgage.

As Bill and Nancy's designer/builder, I knew we could meet those conditions if we stuck to some ground rules. Their new house had to be simple in shape and had to use standard building materials efficiently; where possible, they had to do double duty as both the structure of the house and its finished skin. Any splurges on finishes had to be played in conspicuous places. Finally, taking advantage of Bill's experience as a decorative painter, we had to have fun with color.

## **Get the homeowners involved in the design**

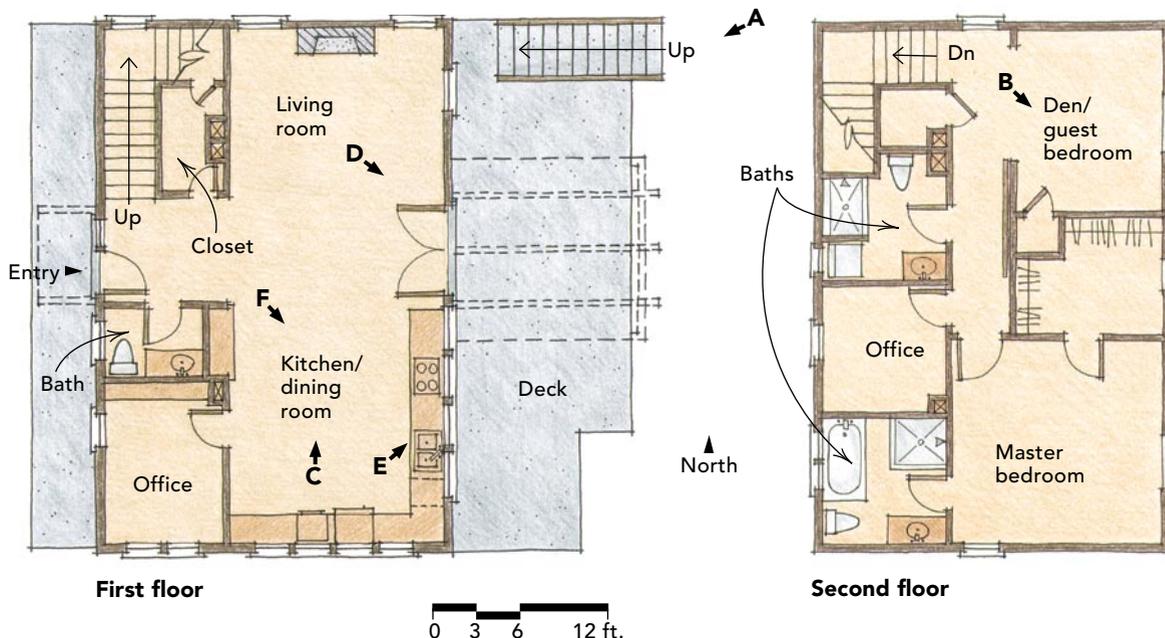
Instead of taking on this project in the traditional role of a designer/builder, I asked Bill and Nancy to have a go at being their own designers, with me as

**The basic box, played well.** A partly sheltered deck makes an outdoor room that can be used in any weather. Upstairs, an open, airy den can be converted into a guest room with a sliding door/wall. Photo facing page taken at A on floor plan; photo left taken at B.

## AN AFFORDABLE HOUSE BEGINS WITH THE FLOOR PLAN

Keeping the shape of the house simple is part of the equation. At 24 ft. by 36 ft., the house takes advantage of materials that come in 4x8 increments. Stacking one bath over another cuts down on plumbing costs, and keeping hallways to a minimum gets the most from the available floor space.

Photos taken at lettered positions.



### SPECS

**Bedrooms:** 2, plus 2 offices

**Bathrooms:** 2½

**Size:** 1728 sq. ft.

**Cost:** \$126 per sq. ft.

**Completed:** 2005

**Location:** Eugene, Ore.

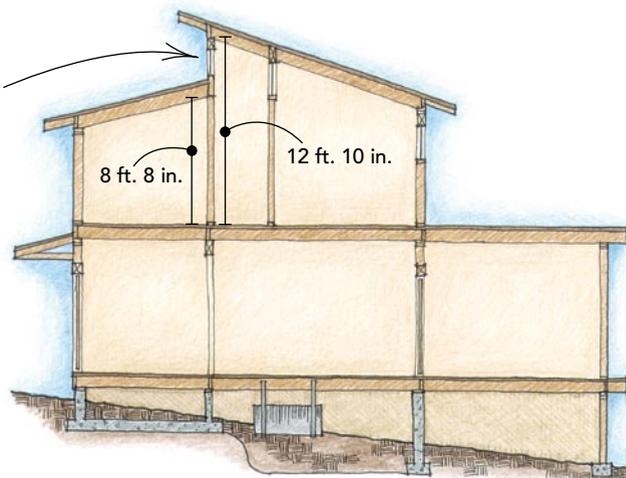
**Designers:** Chris Stebbins and Bill Brewer

**Builder:** Chris Stebbins

Clerestory windows

### Light and roomy

High ceilings and clerestory windows that run the length of the upstairs give the house a sense of airiness, even in Oregon's sometimes cloudy climate.



their guide. I wanted them to own the project from conception to completion.

Our design process began with sketches describing spatial relationships and quickly moved into cardboard models that Bill constructed in order to understand the volumes and shapes of the house.

We also took walks around town to identify desirable features in Eugene's eclectic neighborhoods. Then we talked about

which details or strategies would deliver the greatest return on the time and materials that it would take to make them.

We started with something simple; it gradually grew more complex and layered with details and expenses that weren't really necessary. Then we pared things down. "Happiness is a place between too little and too much," according to a Finnish proverb. That drumbeat drove this project: Our goal was to arrive at a

design that was just enough and no more.

### Build multipurpose spaces into a simple package

The only hurdle in the design phase was Bill and Nancy's sentimental desire to have a bedroom for their college-age daughter when she comes home to visit. They also wanted a den, but the budget wouldn't allow for both if we tackled the design traditionally.

Instead, we compromised, creating a large, open space at the head of the stairs (floor plans above). It feels and functions like a den until you pull the 8-ft.-tall barn-type sliding door closed, turning the space into a private bedroom. Other dual-purpose spaces include the kitchen, which has a big table and doubles as the dining room; and an upstairs bath, which is also the laundry.

Eventually, the house took shape as a simple two-story 24-ft.



**A double-door connection.** The eastern half of the downstairs is one big room, with 9-ft.-tall walls and a pair of French doors that open onto the deck so that the two spaces can mingle in nice weather. Photo above taken at C on floor plan; inset taken at D.

MATERIALS MAKE THE DIFFERENCE



**Space-saving sideboard.** Shelves and a cabinet use a bit of the wall space between the powder room and the dining table.



**Stone work.** The travertine tile in the foyer gives way to a playful spread of colorful vinyl tile in the entry closet.



**Local colors.** Olive-green plywood siding below and corrugated metal cladding above reflect the dominant colors of the site.

## Copper counters: field notes

At \$27 per sq. ft., copper countertops are a good midprice alternative to slab stone. They have the benefit of minimal joints because the backsplash and the nosing are integral to the copper's profile.

Any seams would have to be butt joints (two pieces glued edge to edge), so I try to minimize them from the start. I lay out the counter by designing the seams to coincide with natural breaks, such as drop-in cooktops, sinks, or inside corners. I keep counter sections to 8 ft. or less because the material distorts easily at longer lengths.

I've resolved the butt-joint problem by turning the counter edges down  $\frac{1}{4}$  in., as shown in the drawing. This design leaves a clean, soft joint that seals easily with clear silicone caulk. I cut a kerf in

the  $\frac{3}{4}$ -in. plywood substrate at every seam to allow for the turned-down edge.

I glue the copper to the substrate with latex-based floor-tile adhesive spread with a  $\frac{1}{8}$ -in. notched trowel. Once the glue has set up, I make the necessary cutouts for sinks or cooktops with a bimetal blade in a jigsaw. By the way, cutouts for electrical outlets in the backsplash need to be done before countertop installation and reinforced during the cut with a clamped-in-place wooden block to prevent distortion.

If the counter has an exposed end, I instruct the metal shop to fold down the edge to match the nosing profile. The shop solders the corner and smooths it out to eliminate any sharp edges.

A light application of olive oil every now and then keeps copper counters relatively stain-free. However, nothing can prevent acids from etching and discoloring copper. That is part of its great charm.

by 36-ft. rectangle. It is topped with two shed roofs, allowing a daylight-grabbing clerestory over the upstairs spine of the house. The design minimized waste by sticking to 4-ft. modules, and we eliminated unnecessary framing members by aligning rafters, beams, joists, and studs. Windows and doors were positioned to fit within this efficient frame rather than the other way around, which can waste lumber.

Even though we were on a budget, we weren't willing to sacrifice quality. Every item we used will wear well and will survive design trends. For longevity, we treated the framing materials with a borate-salt solution to inhibit mold and dry rot.

### Double-duty materials, and some surprisingly affordable upgrades

The downstairs ceilings are 9 ft. to the bottom of the exposed 4x10 beams. This extra height added little to the cost of materials but went a long way toward creating a sense of spaciousness. We used wire brushes mounted on grinding wheels to remove grade stamps and mill marks from the beams, and to give them a pleasingly rough texture. The 2x6 decking serves as both ceiling and upstairs floor.

We also saved money by using Breckenridge plywood siding ([www.rfpco.com](http://www.rfpco.com)). It comes in 10-ft. lengths and has patch-free veneer faces that take paint well. Breckenridge costs more than other exterior-grade plywood, but because it serves as both sheathing and siding, it's worth the price in the long run.

The upper story is clad with Galvalume ([www.aep-span.com](http://www.aep-span.com)) siding. This corrugated metal breaks the house's tall facade into separate horizontal bands.

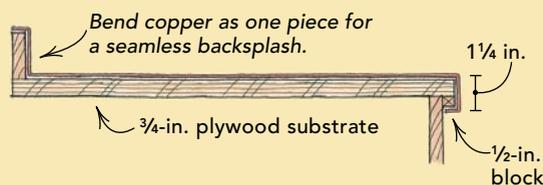


A  $\frac{1}{4}$ -in. sawkerf accepts turned-down edge.



#### Strategic seams

To minimize seams, sections of countertop are arranged to meet in the center of drop-ins like stoves and sinks.



#### Plywood support

Beneath the copper skin, a plywood substrate provides the strength necessary for the countertop to span the cabinets.

The 9-ft.-high ceilings go a long way toward creating a sense of spaciousness.



*Is it a window or a pass-through? It's both, of course. Big windows overlooking the deck make it easy to hand platters back and forth. At the south end of the kitchen, a row of windows above the refrigerator/oven cabinets equalizes the light. Photo above taken at E on floor plan; photo left taken at F.*

Although Galvalume costs more than Breckenridge siding, it is virtually maintenance-free and helps to cool the house in the summer by reflecting heat.

Copper counters in the kitchen seem like a luxurious splurge in a budget-minded house, but at \$27 per sq. ft. (for the 16-oz. material used here), they were less expensive than other premium countertop materials.

Another affordable premium material is travertine. Because

of the high cost of traditional hardwood stair treads and the labor that it takes to install them, we looked for alternatives. We found travertine tiles for less than \$3 per sq. ft. They turned out to be easy to cut and forgiving to install as well as solid to the touch and lovely to look at.

#### **Put a flexible outdoor space within easy reach**

At 1728 sq. ft., Bill and Nancy's house is not large. But because

of its tall ceilings and long sightlines, it has a distinctly spacious feel. An important component of that feel is the concrete deck off the first floor. Big windows overlooking the deck make it a real presence inside the house.

The deck is large enough to host a party and small enough to have the intimate feel of a room. Concrete wears well here in the Northwest (often called the "Northwet" by locals) because it doesn't grow the moss that

plagues wooden decks. Partly open to the sky and partly under a roof, the deck can be enjoyed in any weather, and the grill doesn't have to wait for a clear evening to be fired up. □

Chris Stebbins is a designer/builder working in Eugene, Ore. For more information about this house, email the owners at [billbrewer5@msn.com](mailto:billbrewer5@msn.com). Photos by Charles Miller.