

# Rural Landscape, Modern Sensibility

A first-time home designer nails it with an updated farmhouse that includes double-duty spaces, a serious mudroom, and a five-star energy rating

BY DIANE KOLAK



**A contemporary farmhouse.** Fiber-cement siding painted with complementary colors and a roof composed of contrasting materials energize this classic image of home. The garage is a separate building, adding to the farm-compound look. Once her design came together on paper, the author built this foam-core model (right) to evaluate the composition. Photo taken at A on floor plan.



**F**rom an early age, I dreamed of designing my own home. My early creations, drawn on coated paper from the mill where my father worked, were sprawling, exotic, and modern. Walls of glass met at impractical angles, and there were many, many bathrooms. In every way, these imagined houses were different from the home of my youth in Michigan's rural Upper Peninsula, a simple farmhouse built by a Swedish immigrant in 1913.

Decades later, on a couple of wooded acres near Traverse City, Mich., I found myself imagining a home once again. My husband, Paul, and I had lived in a tiny apartment, then in our first home on a busy street in the city, and eventually in a nondescript trilevel in a rural neighborhood. These varied expressions of shelter helped us to develop a distinct idea of what we wanted—and didn't want—in a home of our own design.

I started reading books, sketching, and listing requirements: a flowing layout with long views through adjacent spaces, a first-rate mudroom, a window-filled kitchen, porches, a detached garage, thoughtful window placement, and a real connection to the outdoors. I wondered how my modern aesthetics could be reconciled with a house that fit our rural lot. Then I realized my Scandinavian ancestors had been doing that for a long time. Practical, efficient, and connected to nature, Scandinavian houses have an effortlessly modern elegance.

From that point, my sketches became more focused on a familiar, spare farmhouse structure, but with a streamlined edge. Paul and I visited the site on weekends to determine where best to place the house, roping off rooms and evaluating views, and figuring out the best way to route the driveway. We decided to set the house in the least picturesque area of the lot, a spot filled with weak second-growth poplars. I stood and imagined; I sketched and resketched.

With the site determined, I could begin to refine the shape and plan of the house. Nothing seemed just right. Then one night, while sketching on a coaster at a local brewpub, I hit upon a design that fused a two-story structure with a 1½-story structure roughly divided in half by a center stair (floor plan, p. 60). This became the key to situating all the rooms exactly where we wanted them in relation to the site and to each other.

### Model takes on a leading role

I spent the following winter cutting and gluing foam-core walls and roofs to make a three-dimensional model of the house (photo left). It helped us solve some ceiling-height problems, and also allowed us to use a flashlight to mimic the path of the sun so that we could evaluate roof overhangs for summer shading and window placement for winter solar gain. Equally important, the model helped us to communicate our ideas to potential builders.

After talking with several, we met builders Mark and Jennifer Steinorth at their green model home in Traverse

City. Immediately, we knew that we shared similar philosophies of design and craftsmanship, and we knew they understood our goals for the project. We turned our model and plans over to the Steinorths, who refined them and made suggestions to improve efficiency, structure, and budget use. They educated us and helped us to make as many green choices as our budget allowed (sidebar p. 62). The completed house eventually earned a five-star Energy Star rating ([www.energystar.gov](http://www.energystar.gov)) and green certification from the Home Builders Association of the Grand Traverse Area.

### Multipurpose rooms enrich the floor plan

At 2350 sq. ft., the house is smaller than average for our region, but I think it lives larger because many of the spaces do double duty. For example, we combined the more formal function of a living room with the informality of a family room by putting the TV in a closetlike recess covered with a barn-style door (photos facing page).

The guest room on the main floor is typically used as a library/game room. When guests arrive, we close off the foyer entrance to the three-quarter bath and allow them exclusive use of the bathroom.

Upstairs, the second bedroom is outfitted with an armoire that contains all my sewing gear and serves as a work surface when opened up. For extra guests, we close the armoire and pump up an air bed. We installed a 1930s pedestal sink in the bedroom and provided access to the shower and toilet of the master bath via a pocket door, eliminating the need for a third bathroom in the house.

The loft space upstairs is very flexible. We decided that a built-in nook was adequate for our home office, rather than the extra room most house plans seem to include these days. The open space is great for exercising as well as for practicing our musical instruments. The vaulted ceilings have excellent acoustics.

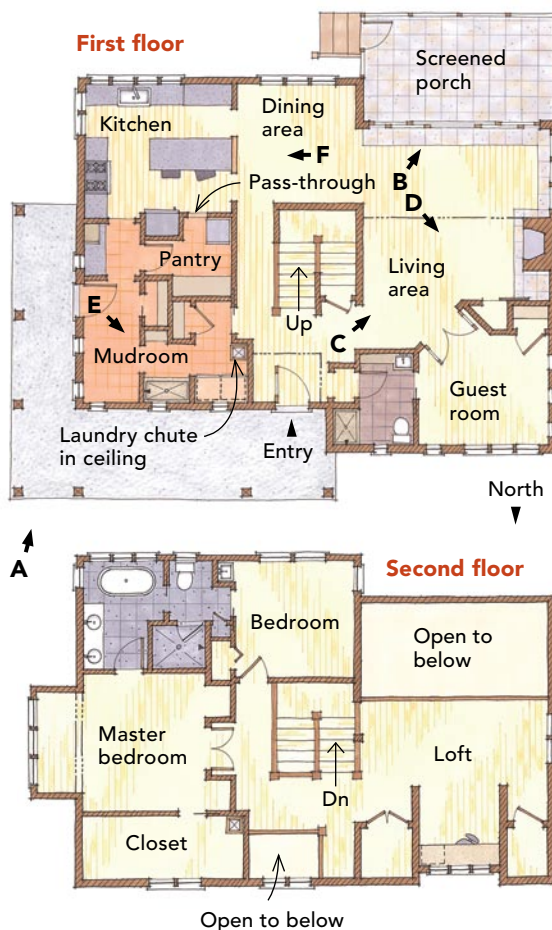
The mudroom is a functional bonanza. In about 170 sq. ft., we have two closets; a dog shower/dirty-shoe washer/drip-dryer/plant-waterer (photos p. 62); a washer/dryer and a folding counter; a hamper under the laundry chute from the master closet; space for the dog's bed and bowls, and a door to the outdoor kennel; built-in shelves for recycling and outdoor accessories; and a small counter space for sorting mail and all the other stuff



### Offset rectangles add a dynamic element

At the entry, a 4-ft. jog in the floor plan makes room for a deep, welcoming front porch. In the foyer, the vestibule that leads to the powder room is sized to accommodate a future elevator. The side entrance leads to a multipurpose mudroom that includes the laundry and an elevated shower stall for parking muddy boots or washing the dog.

**Screened-porch sliders.** Big glass doors between the porch and the living room allow the spaces to mingle when the weather is pleasant. Roof overhangs and deciduous trees shade the porch in summer. In winter, low-angled sunlight streams into the living room through the porch. Photos taken at B and C on floor plan.



### SPECS

- Bedrooms:** 3
- Bathrooms:** 1¾
- Size:** 2350 sq. ft.
- Cost:** \$153 per sq. ft.
- HERS rating:** 53
- Completed:** June 2006
- Location:** Lake Ann, Mich.
- Designer:** Diane Kolak
- Builder:** Steinorth Fine Homes



Photos taken at lettered positions.



**Multipurpose room.** Long diagonal views through the doors to the screened porch extend living-room sightlines. Slide open the barn door on the north wall, and the formal living room turns into a TV/family room. Photos taken at D on floor plan.

## ENERGY-SMART SAVINGS

# Geothermal heat

Because it cost more, we initially decided to forgo a geothermal heat-pump system in favor of a 95%-efficient propane furnace. Then fuel prices rose, and we realized our mistake. When calculations revealed that we could pay off a loan in four years based on the difference in operating costs for geothermal versus propane, we changed systems. An added bonus, the geothermal system also keeps our house cool in summer.

In fact, our geothermal system saves money in several ways. The local utility company, Cherryland Electric Cooperative, encourages the use of geothermal as a smart energy alternative by discounting electric rates. They wire the geothermal heat pump to a separate meter and sell us that electricity at half price. In exchange, they have the option to shut down power to that meter should the system become overloaded. Since the utility began offering the program, they have never had to shut it down. But if it happens, our furnace still functions on propane as a backup. That is one advantage of having installed a conventional furnace, which we now use chiefly as an air handler.

Also, a new federal tax law allows a deduction of up to \$2000 of the cost of a residential geothermal system installed after Dec. 31, 2007 ([www.waterfurnace.com/tax\\_credits.aspx](http://www.waterfurnace.com/tax_credits.aspx)).

During the first winter, we saved 70% on heating costs compared with the previous two winters. We went from an average of \$90 a week for propane to \$70 a month for electricity. Our house is also more comfortable because the system operates most efficiently by maintaining a constant temperature. There is no need to turn down the thermostat, so indoor air and surfaces maintain a comfortable temperature all the time.

### FineHomebuilding.com

Visit the Magazine Extras section of our home page for an explanation of how a geothermal heat pump works.

that makes its way into the house. This room catches all the dirt and clutter, which makes it a lot easier to keep the rest of the house clean. Also, a nearby pantry takes pressure off storage space in the kitchen, freeing up wall space for windows.

We have lived in the house for a few years now, and there are few things we would change. The electrical walk-through happened on a subzero day in March, resulting in some rushed decisions about switches and outlets that should have been better analyzed. And the landscaping is still a work in progress. We were shortsighted not to install geothermal heat from the start and have since converted to it (sidebar p. 61).

Considering the complexity of building a house, we're quite happy with the result. The key was allowing a lot of time for the design to evolve naturally, hiring a builder who understood us and our goals—and never losing sight of the home I pictured in my head. □

Diane Kolak is art director of *Traverse, Northern Michigan's Magazine*. Photos by Brian Confer, except where noted.



## WHAT MAKES IT GREEN?

### STRUCTURE

- Icynene foam insulation creates an extremely tight structure, minimizing heat loss in winter and heat gain in summer.
- An insulated foundation and basement floor prevent significant heat loss.
- A whole-house electrostatic air-filtration and air-exchange system ensures fresh air and prevents moisture problems that can be associated with a tightly insulated house.
- Low-e windows minimize heat transfer.
- Asphalt and metal roofing with a lifetime warranty are durable, keeping waste out of landfills.
- A detached garage keeps exhaust fumes out of the house.

### ELECTRICITY

- Energy Star appliances, CFL bulbs, and fluorescent cove lighting in the living and dining rooms lower energy consumption.

### WATER HEATING

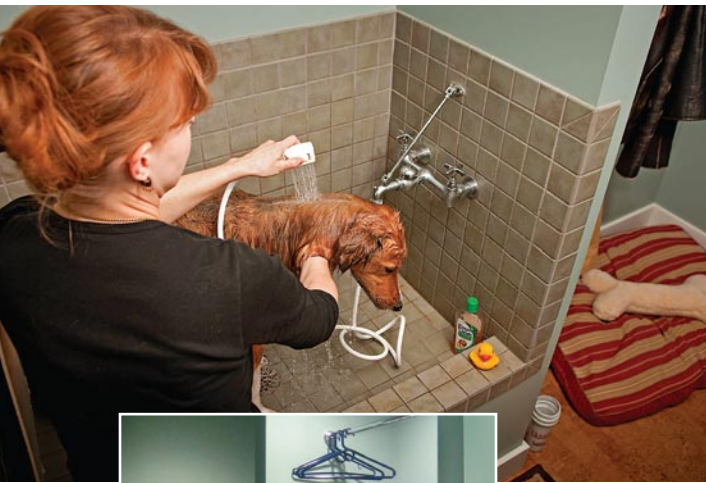
- A tankless water heater saves energy by heating water on demand instead of maintaining a large tank of hot water.

### HEATING AND COOLING

- A geothermal heating and cooling system (sidebar p. 61) efficiently maintains physical and economic comfort.

### SUSTAINABLE FEATURES

- Low-VOC paints contribute to better air quality.
- Bamboo and cork flooring are made from rapidly renewable materials. There is no carpeting to trap allergens.
- MDF trim and interior doors save trees.
- Using recycled components, such as an antique pedestal sink, a screen door, and antique leaded-glass windows, extends their useful life and keeps them out of landfills.
- Bins for easy sorting of recyclables are built into the kitchen (photo above, taken at F on floor plan) and the mudroom.
- The homeowners recycle more than they throw away.
- Landscaping consists of ground cover, flowers, shrubs, and trees native to Michigan. The site has no turf; therefore, the homeowners use no fertilizers, no pesticides, and no lawn mower. In the fall, leaves are allowed to decay in place, mulching the plantings.



**Mudroom shower.** Next to the laundry, an elevated mini-shower stall makes a handy place to hang wet clothes, hose off muddy boots, or wash the dog. Photos taken at E on floor plan.