

Raising the

Bit by bit, an architect builds a vacation house in the Vermont foothills

BY PETER KURT WOERNER

In the late 1980s, I bought 10 acres of hillside in southern Vermont and moved a big antique barn onto the property for a vacation house. I left most of the site wooded but cleared 3 acres, creating a meadow with nice views to the east.

By 1995, I got the urge to build again. This time, I wanted to build a small guest house that would echo the main house. I had the perfect place for what I call the "Baby Barn," nestled against the tree line overlooking the meadow and far enough from the big barn for privacy.

To control costs, I wanted the Baby Barn to be relatively simple. I planned to put the finishing touches on it working mostly solo on weekends, with occasional extended sessions. If the house was too complex, I'd never get it done. On the other hand, I wanted to create a variety of spaces, both intimate and expansive, and to use reclaimed barn timbers and siding to emulate the warmth and richness of an old structure (www.conklinsbarnwood.com).

The sloped-site advantage

The Baby Barn is based on a traditional New England bank

barn, which is built into a slope and typically has two floors. The upper floor opens to the uphill side, and vice versa. Placing the Baby Barn on a slope allowed me to save some money on a foundation and to have daylight in the downhill lower-level rooms.

The main floor has one big space for living and dining, a kitchen, a bedroom, a loft over the bedroom, and a bathroom (floor plan p. 83). There is no formal entry with a closet, just pegs for coats.

The primary rectangle of the foundation is 18 ft. by 40 ft. I chose 18 ft. so that I could use 2x12 floor joists and not pay extra for I-joists (I don't mind the floor being a little bouncy). The living room feels quite generous because of the 12-ft. walls and 10-ft.-high windows.

On the lower level, the mechanicals and the laundry are on the windowless uphill side of the barn. Next to this area is a central stair and hallway with a shared bath for the two bedrooms that open to the meadow by way of French doors.

Hard work, smart choices accelerate move-in day

My goal was to start in May and have the house weathertight,



insulated, heated, and livable (vacation style) with one working bathroom by Thanksgiving. I hired a full-time carpenter and two helpers for this big-push stage of the project, and I did all of the ordering of materials and coordinating of subs even though I live three hours away.

I spent money strategically, investing in high-quality finish items but also saving on components that would be easy to change later. For example, the windows are from Pella's Architect Series, and the roof is covered with western red-cedar shingles. On the other hand, the first kitchen I put into the

Under a rustic skin, high-performance insulation.
Recycled barn-board paneling and hand-hewn timbers set the tone. Polyisocyanurate foam insulation behind the paneling keeps the rooms comfy. At the top of the stairs, a sleeping loft overlooks the living room. Photo taken at A on floor plan.

Baby Barn



Simple building, great variety. From the intimate dining deck off the kitchen to the 20-ft.-high living room, the Baby Barn packs a lot of different spaces into a small house. Photo taken at B on floor plan.

With reclaimed timbers, the barn emulates the



A lofty space with distant views. Banks of windows reach to nearly 12 ft. above the living-room floor. Wide spruce planks carry on the rustic feel of the recycled barn-board paneling. Photo taken at C on floor plan.

Baby Barn was made of CDX plywood cabinets that I built in a day and a cast-iron sink that I found in a Dumpster. This camp kitchen worked fine for the first three years, until I had the time and resources to put in a proper one.

To simplify the mechanical systems, I chose a direct-vent, propane-fired hot-air furnace and hot-water supply. This saved me the time and money required to build a masonry flue for a conventional oil-fired boiler.

I would choose direct-vent gas appliances again, but I would approach the electric service differently. Because I went with gas for heating, I decided I could save a little money by installing a 100-amp service panel. It has worked fine so far, though if I decide to add a garage, I'll likely have to upgrade the electric service. In retrospect, I should have spent the extra money for a 200-amp panel.

The plan worked. By Thanksgiving, I had the Baby Barn

weathertight, plumbed, and rough-wired. With a three-burner camp stove, a tub with a poly shower curtain, and some tag-sale furniture, voilà, the house was livable.

Fireplaces as centerpieces

I love fireplaces, so I put one in the master bedroom and another directly above it in the living room. The raised stone hearth in the living room accommodates firewood storage underneath. By stacking the fireplaces, I needed

warmth and richness of an old structure.

only one chimney. I kept all the firebox and chimney masonry inside the building envelope for two reasons: one, so that I could work on them in any type of weather; and two, to save energy. Why build a fireplace outside the building envelope when all the masonry will be exposed to low temperatures (especially in Vermont, where it can be as cold as 45°F below zero)?

I built the fireplaces myself out of concrete block. Both are Count Rumford designs, which are great for looks and for throwing off heat. I did, however, have a mason take the chimney through the roof for me. Then I spent a couple of years covering the block with stone veneer.

Long-term projects have their advantages

As you get to know a house over time, opportunities present themselves that aren't always obvious in the big push to finalize a plan. As the Baby Barn grew up, I got to customize it—in 1950s hot-rod parlance—with some bolt-on goodies. Three in particular stand out.

• **Barn door.** During framing, I thought it would be neat to have a sliding barn door to cover up the three French entry doors, both for security and, for lack of a better word, “barnishness.” So I built a 10-ft. by 10-ft. barn door in the living room. It wasn’t until I had finished the door that I realized it wouldn’t fit diagonally through the French-door opening. A classic screwup. I got off light, though, because I hadn’t put up the siding yet. I cut a slot in the plywood sheathing and slid the door through it.

• **Cupola.** The building was looking a little too plain, even

for a minimalist like me. A cupola is a classic detail on a bank barn, where it serves as a vent. I thought it would be pretty cool to have one over the dining room for daylighting; at night, it would shine like a beacon.

To avoid a repeat of the barn-door fiasco, I carefully designed a cupola that could fit through the double doors in the kitchen. I built the cupola in the living room, minus its base, and finished it inside and out with cedar shingles. I then got up on the roof and used a chainsaw to chop a hole so that I could build the cupola’s base in place.

On a nice late-spring day, we had a cupola-raising party. The local lumber company donated its crane truck, we lifted up the cupola, and it dropped in place perfectly.

• **Covered porch.** Originally, there was an 8-ft. by 12-ft. notch in the southeast corner of the house, next to the kitchen. A year or two after the Baby Barn was up, I started thinking about how nice it would be to have a covered porch for dining alfresco. With just a corner post, a bit of roof, and some decking, there would be room for a little table.

Working with a top-notch framer, we completed the porch in three days and feathered some new cedar shingles into the old roof. I also added a quirky little dormer, which brings light to both the porch and the sleeping loft.

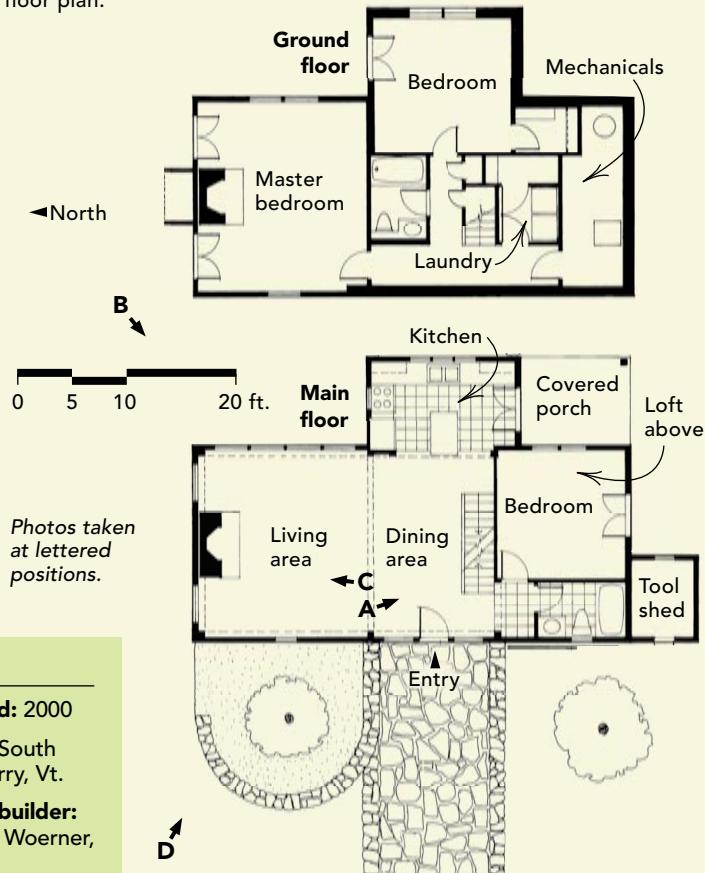
Obviously, building a house this way is not for everyone. A vacation house can be doable, and if you’re young, you might be able to take a similar approach to building a permanent residence. Stress on a relationship can be severe, though, so it’s critical to have a few construction-free zones, especially a clean bathroom and

a tidy place to sleep. The sweat-equity savings are significant, but the key to it all is to remember that life is in the living. □

Peter Kurt Woerner, FAIA, is an architect based in New Haven, Conn. Photos and drawings by the author, except where noted.

THE BANK BARN REBORN

Notched into a hillside and having entries on two levels, the Baby Barn is a direct descendant of the venerable bank barn. A ramp composed of fieldstone leads to the main entryway. A barn door with a cutout for the bathroom window seals off the French doors between visits. Photo taken at D on floor plan.



Photos taken at lettered positions.

SPECS

Bedrooms: 3, plus sleeping loft
Bathrooms: 2
Size: 1700 sq. ft.
Cost: \$100 per sq. ft.

Completed: 2000
Location: South Londonderry, Vt.
Designer/builder: Peter Kurt Woerner, FAIA