



## SPECS

**Bedrooms:** 4

**Bathrooms:** 3 full, 1 half

**Size:** 4400 sq. ft.

**Completed:** 2009

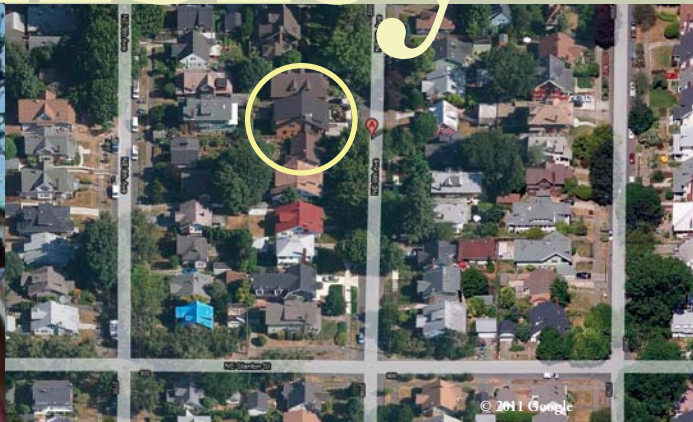
**Location:** Portland, Ore.

**Architect:** Donna Wax

**Builder:** Donna Wax and Jeff Jones;

photo taken at A on floor plan

# Designed for Density

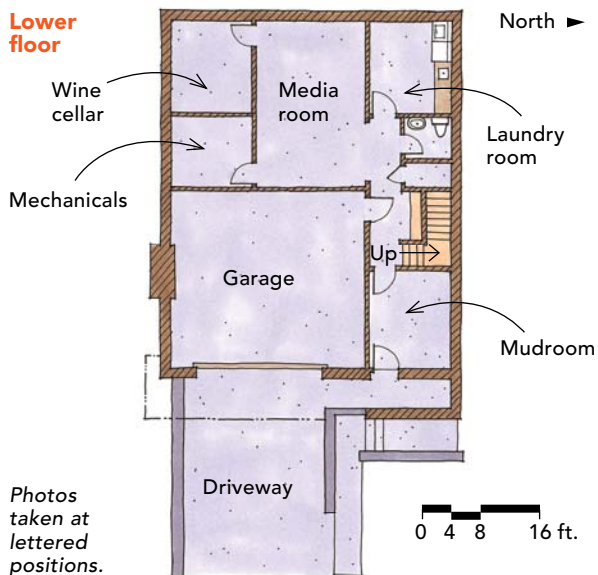
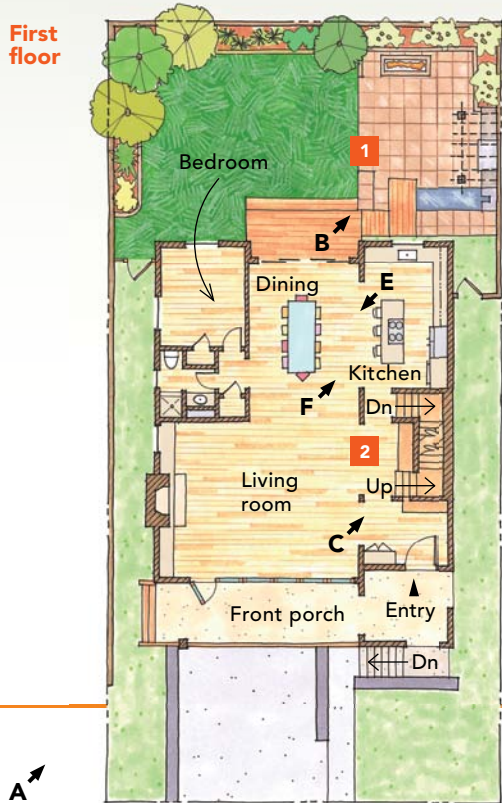
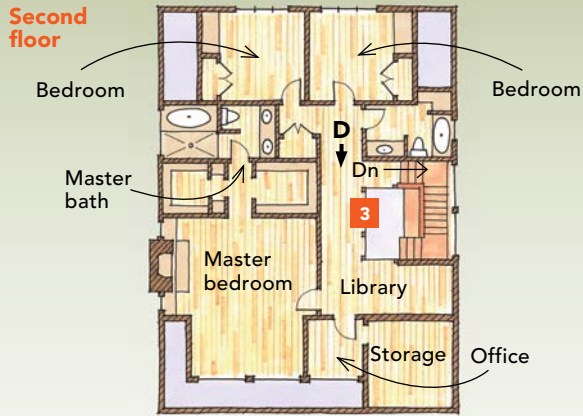


A big house on an infill lot embraces its historic neighborhood and proves that buyers are willing to pay for energy efficiency

BY DONNA WAX

**A**n empty residential lot in the Irvington neighborhood of Portland, Ore., is hard to come by. When a lot down the street from our home became available, my husband and I seized the opportunity to develop the property. The handful of new houses built in our neighborhood, which was recently added to the National Register of Historic Places, have traditional Craftsman details in an attempt to blend in with turn-of-the-century Craftsman bungalows. Putting a new spin on a classic design isn't always easy, though, and is often unsuccessful when scale and proportion are not carefully considered.

Porches, large roof overhangs, open communal spaces, built-ins, and usable backyards are bungalow characteristics that inspire families to preserve this area and continue to move to it. Our



Photos taken at lettered positions.



By blending indoor and outdoor living space, and by providing indoor space with access to an abundance of light and views, this house creates a living environment that's private but inviting—a valuable quality on small, urban lots.

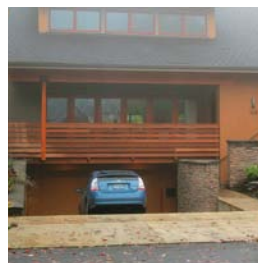
## A floor plan fused to the outdoors

approach, then, was to use the design principles that made the bungalow form so successful in the Northwest without imitating home plans of a bygone era. We sought to bring this bungalow into the 21st century by redefining spatial connections, providing better outdoor access, and creating an energy-efficient, low-impact house.

We took a chance on this project by opting to build a big house with fine details and healthful, energy-efficient features. This approach drove up construction costs, but it was worth the investment.

### Keep scale in focus

This house, which is larger than 4000 sq. ft., doesn't overwhelm smaller neighboring homes because it has been scaled appropriately.



For example, instead of bringing the driveway along the side of the house to a backyard garage, which is typical in our community, we tucked the parking area under the front porch a half level down from the sidewalk. Because the two-car garage is below grade, its impact on the street facade is minimal.

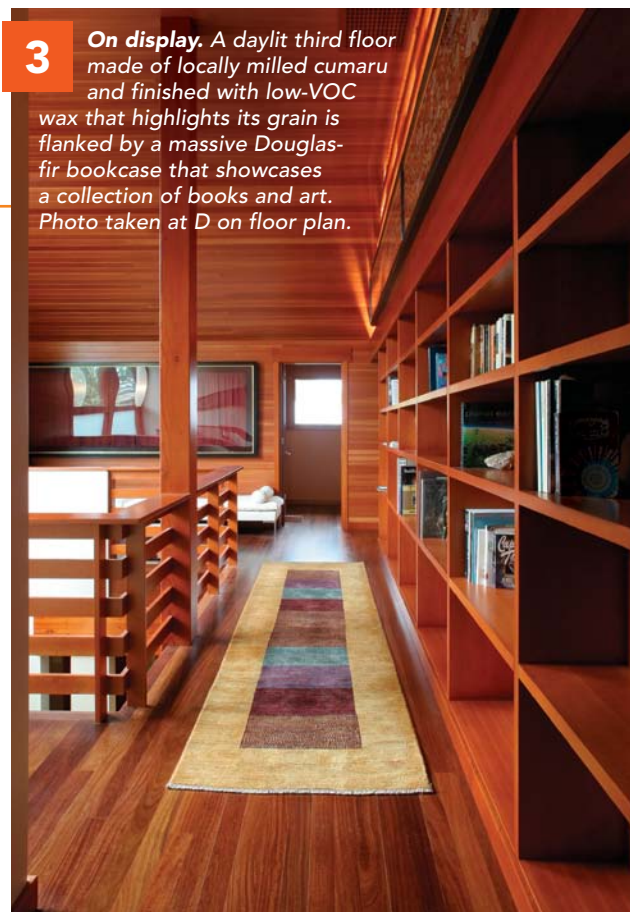
The building is set back 19 ft. from the sidewalk and is aligned with adjacent homes. Also,



**1** *Private year-round.* The deck bridges a water feature and leads to an outdoor room. Stucco garden walls help define the patio as an extension of interior living space. Photo taken at B on floor plan.



**2** *Connected.* The fir staircase sits below a large window that floods indoor living space with light. A central desk is a good spot for doing work, while a cantilevered stair tread supports an entry bench. Photo taken at C on floor plan.



**3** *On display.* A daylit third floor made of locally milled cumaru and finished with low-VOC wax that highlights its grain is flanked by a massive Douglas-fir bookcase that showcases a collection of books and art. Photo taken at D on floor plan.

by appropriately proportioning the shed dormers, the second story sits comfortably within the roofline so that the building reads as just another story-and-a-half bungalow.

The interior was designed with careful consideration of scale and functionality. A fir staircase with open risers threads through a dramatic lightwell beneath a 13-ft. by 13-ft. window. The staircase terminates at the main level and incorporates an entrance desk and cantilevered bench. Not only does this detail connect the bedroom spaces and the living spaces below—a solution that avoids vaulted, overscale, double-height living spaces—but it also allows light to filter through the stairway to the finished basement areas below.

### Embrace outdoor spaces

Outdoor space is a premium on an urban lot, so what little room there is should be used thoughtfully. Front porches are prevalent in a lot of neighborhoods and serve as informal outdoor living rooms. Building on that idea, this home has an 8-ft.-deep polished-concrete porch and a movable front wall (sidebar p. 76) that provides an opportunity for the entire living room to spill outside. The house opens front to back when the living-room folding wall and dining-room sliding doors are open, blurring the boundaries between enclosed and outdoor living spaces.

# Get a great sliding door for less

Over the past few years, window and door manufacturers have increased their offerings of big doors that create dramatic openings within exterior walls. These units are impressive, functional, and typically expensive. We settled on a less expensive alternative and couldn't be happier with the results.

The front wall of this house consists of seven glazed Simpson fir doors that were mounted to Eclipse Architectural hardware and installed by our local Loewen dealership. One door operates as a normal swinging patio door, and the rest fold like accordion doors to open 21 ft. of the living room to the adjacent porch.

The floor had to be perfectly flat prior to installation, demanding that the beam beneath the threshold, which had a 1¼-in. camber, be leveled. We put the unit through its paces when the Energy Trust of Oregon performed a blower-door test on the house. The folding door, as well as the entire building envelope, proved to be extremely airtight. The door is easy to operate and allowed us to achieve a detail that would normally have been out of our budget.



Source

**Eclipse Architectural** [www.eclipsearchitectural.com](http://www.eclipsearchitectural.com)

**Length:** 21 ft. **Savings:** Roughly 50% over conventional options considered



**Seen and heard.** Historically, bungalows were built when the prevalent belief was that children should be seen and not heard. Today, children participate in most household activities. In response, this design uses an open floor plan, built-ins, and common areas that embrace modern family lifestyles. Photo taken at E on floor plan.

**Light and durable.** This house—and the kitchen in particular—is built for heavy use and minimal maintenance. Quartzite countertops sit atop custom Douglas-fir cabinetry. Energy-efficient appliances and low-flow fixtures handle the tasks of a busy kitchen. Layers of compact-fluorescent lighting controlled by individual dimmers illuminate task and dining spaces. Photo taken at F on floor plan.



Climate dictates the extent to which outdoor spaces will be used. Here in Portland, the weather remains mild and keeps people turning to the outdoors year-round. To anticipate that type of lifestyle, sliding dining-room doors were added to permit the continued flow of open indoor spaces to a deck that gently steps down to a small yard.

### Build responsibly

Like many progressive urban areas, Portland is attractive to people who want bike-friendly neighborhoods, access to public transportation, stores within walking distance, and good public schools. This heightened focus on community helps to foster a market for efficient homes and smart building practices, so we built this home with efficiency being paramount. It is ultra-airtight, is well insulated, and has a geothermal closed-loop system for hydronic radiant heating and cooling. A fully ducted heat-recovery unit, timed bathroom-exhaust fans, and zoned thermostats help to regulate fresh air and comfortable temperatures. Air quality in the garage is controlled using a high-

efficiency motion-activated fan. We chose exterior and interior finish materials with life-cycle costs, durability, and aesthetics in mind.

This approach certainly increased the construction cost of the house, but Portland is a unique, educated market where people understand the benefits of environmentally friendly design and spend their money wisely. Despite the slowdown in the housing market, this home sold immediately upon completion. □

Architect Donna Wax ([www.donnawaxarchitect.com](http://www.donnawaxarchitect.com)) practices in Portland, Ore. Photos by Rob Yagid, except where noted.