

# DESIGNING GREEN

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Personal choices and a desire for sustainability inform a remodel job that morphed into new construction



story by Marilyn Standley and Pam Williams

photos by Sarah Bradbury



WHEN ELIZABETH (BETTY ANN) RYDER SUTTON decided to remodel and add on to her small cottage in Occidental, she never pictured that she would wind up with an entirely new home. The house that she had occupied since 1993 was originally a small barn converted to a residence. It had been added on to, although not always conventionally, over the years.

Betty Ann is a local philanthropist, animal rescue advocate, and owner of Mr. Ryder & Co. Antiques and Art in Graton. When Betty Ann is at the store, visitors are likely to encounter Scout the border collie/terrier and Willie the dachshund. The dogs also give visitors to her residence an enthusiastic welcome. The two resident donkeys, Mary Alice and Lucia, watch with interest from their pasture. Several rescued feral cats also live on the property as part of Betty Ann's work with Forgotten Felines.

When this Occidental Road property went on the market, Betty Ann immediately knew she wanted it. "It was adorable," she says, "but there was quite a battle for it." There were 22 offers with which Betty Ann had to compete. In the end, she made the winning bid and built an art studio—Donkey Farm Studio—down the hill from the cottage.

Other local painters such as Bill Wheeler and Jack Stuppin visited to paint and hold art shows. The bucolic setting inspired landscape paintings and encouraged picnics and parties. But Betty Ann grew tired of the cold winters in her poorly insulated home. She sought out an architect to discuss how she might remodel and enlarge the cottage, and hired Sebastopol architect and planning commission member Marilyn Standley.

After reviewing design sketches and cost estimates, and giving serious consideration to the many issues related to remodeling and adding on to this unique structure, Betty Ann agreed with Marilyn and contractor David Leff that the money and effort would be better spent on designing and building a new structure.

Standley and Leff have collaborated on a number of projects in Sonoma County over the past seven years including new custom homes, granny units, home remodels and additions. The team approach they use for designing and building works well when meshing their client's budget with the vision the client holds for their home.

When faced with the prospect of an entirely new house, Betty Ann asked excitedly, "Can I be off the grid?" From that point on, Betty Ann embarked wholeheartedly into an education of "green" architecture, and the project evolved into Betty Ann's own personal statement of treading lightly on the planet.

Fitting into the land without disturbing important existing vegetation became the main design priority for Betty Ann. [She] wanted to save an existing trellis that supports 40-plus-year-old wisteria and grape vines. In addition, she wanted to preserve a prize walnut tree to the north, and a thicket of bamboo and various fruit trees to the east.







Other key design considerations included orienting the structure for good solar access, focusing on favorite views and vistas, and creating strong indoor-outdoor relationships.

Guided by Marilyn and Dave, with additional energy sustainability consulting from Petaluma architect George Beeler—who has been on the frontier of the green building movement for many years—Betty Ann was able to envision her new house as more than just a place for her to live.

Fitting into the land without disturbing important existing vegetation became the main design priority for Betty Ann. That was the challenge of the project for Marilyn. “Site constraints were definitely a challenge,” says the architect. The property sits along a southwest-facing hillside. Betty Ann wanted to save an existing trellis that supports 40-plus-year-old wisteria and grape vines. In addition, she wanted to preserve a prize walnut tree to the north, and a thicket of bamboo and various fruit trees to the east. “I really didn’t want anything taken out,” she says of the trees and ornamental plants.

She also knew that she wanted a single level home and could only have one bedroom by county perc test limits. The plans for the new home, a cozy yet spatially interconnected country residence with office/work space and a garage, grew from the site as the site allowed.

With the core of the house centered at the location of the original cottage, a bedroom wing reaches out toward the west and the great room extends to the south, creating a courtyard around the old trellis. Other key design considerations included orienting the structure for good solar access, focusing on favorite views and vistas, and creating strong indoor-outdoor relationships. The grade of the site allowed for an ample basement below the living level.

Betty Ann did not always understand the two-dimensional drawings during design discussions, so Marilyn relied on 3-D computer modeling during office meetings. Dave staked out the spaces at the site. Betty Ann was thus able to visualize the house both from the inside and the outside. “Betty Ann was not my easiest client,” says Marilyn, “but she was one of the most fun. She always knew what she

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The finished project was awarded a certificate from "Build-It-Green" of Berkeley. The design earned 128 green points, exceeding Title-24 state-mandated energy standards by approximately 50 percent, and will approach being a zero net energy use home.



wanted, what she liked and what she didn't like, and she was very open about expressing that."

Neither was Betty Ann shy about asking for changes, even late in the design development stage. It wasn't uncommon for her to come in and start a meeting with a statement like, "You're going to kill me, but could we make this window bigger again?"

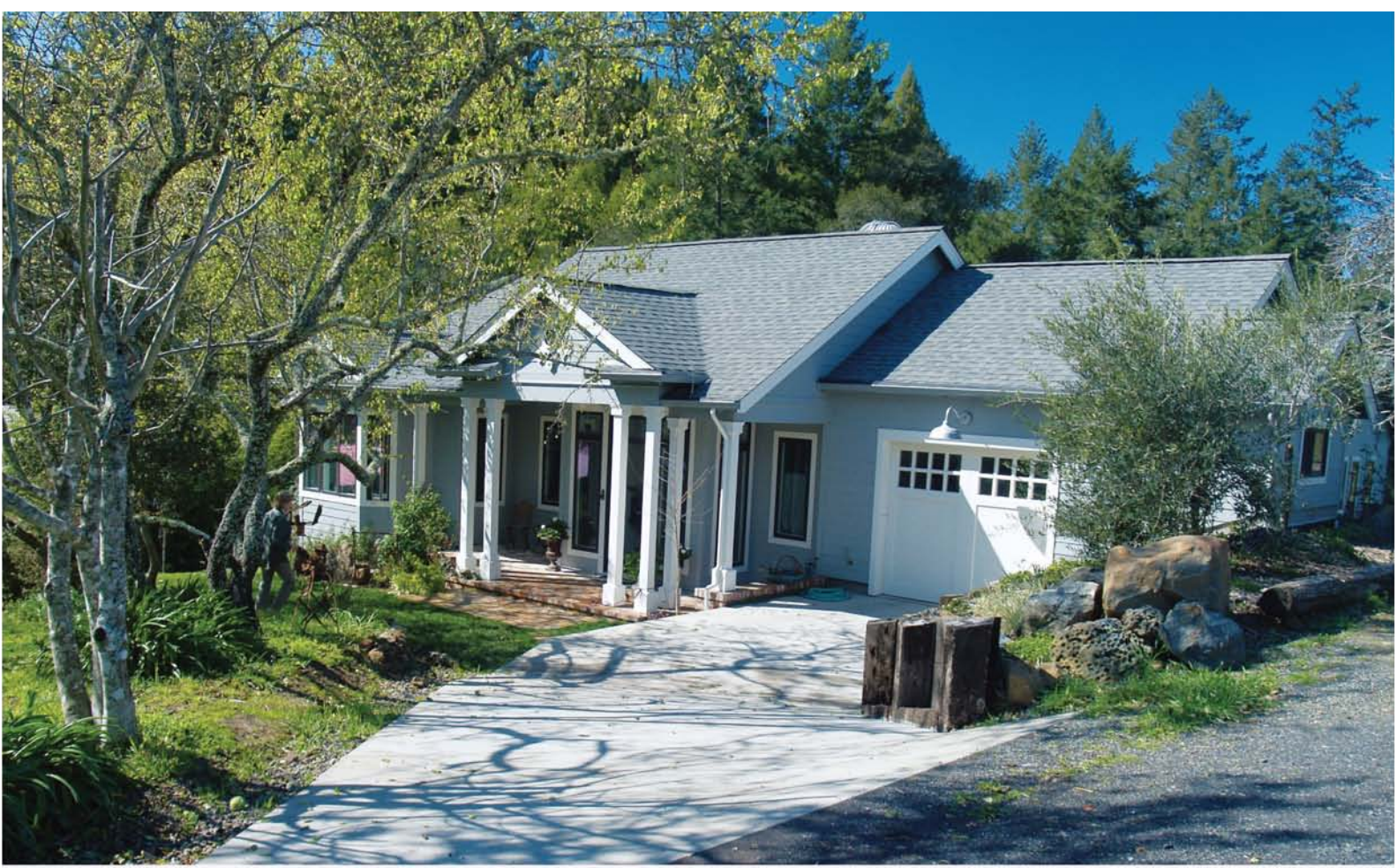
The finished project was awarded a certificate from "Build-It-Green" of Berkeley. The design earned 128 green points, exceeding Title-24 state-mandated energy standards by approximately 50 percent, and will approach being a zero net energy use home. The house is not "off the grid" but does have a photovoltaic array with a tie-in to PG&E.

Some of the green and climate comfort features in the design include:

- Roof orientation for maximum solar exposure for the photovoltaic panels
- Fiberglass windows and doors with Low E II glass
- Porch overhangs to shade some of the extensive glazing
- Good cross-ventilation and a passive house turbine ventilator for night time cooling in hot weather
- R-40 blown-in cellulose insulation in the attic and reflective barrier roof sheathing

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- 2x4 framing at most exterior walls with 1-inch expanded polystyrene insulation on the inside of all exterior wall framing for a complete thermal break
- All FSC (Forest Stewardship Council) certified dimensional lumber
- Engineered trusses and beams, FSC certified as available
- OSB (oriented strand board) or FSC certified plywood for all sheathing and sub-floors
- Finger-jointed wood materials
- Fiber-cement exterior siding
- 40-year minimum roofing
- No redwood or plastic content decking
- Salvaged materials where appropriate

The concrete foundations and concrete slab floors have a low 20 to 25 percent fly ash content. The warm brown tone of the concrete finish flooring has the beauty of ceramic tile or stone and is underlaid with radiant heating that is divided into four separate programmable zones. A solar hot water pre-heater feeds both the domestic hot water and the radiant heating boiler that has a minimum 92 percent AFUE (Annual Fuel Utilization Efficiency) efficiency rating.

Betty Ann also chose sustainable concrete for her kitchen countertops, hiring Patrick Miller of Bohemian Stoneworks to create surfaces to match her color scheme and which incorporate colorful pebbles that Betty Ann collected from walks on the beach as aggregate accents surrounding the large farmhouse-style sink and the cooking range.

The interior lighting, designed by Donna Best of Santa Rosa's D. Best Lighting, has no recessed can ceiling fixtures and increases the use of fluorescent lighting. In her closet, Betty Ann installed a Sola-Tube for natural light. All the paints and construction adhesives used were low VOC (volatile organic compounds) content.

Marilyn's patient attention to detail allowed Betty Ann to feel comfortable that she understood everything before progressing on to the next level of design development. Betty Ann concludes, "I learned more than I'd bargained for about environmental efficiency and green design. It wasn't what I'd set out as a first priority, but my eyes were opened as to what is possible, and I didn't have to compromise what I wanted in order to be green. My house is truly my house."

[This page] Exterior of Sutton house; [Page 8] Sample of stones laid into kitchen countertops; [Page 6] *top*— light-filled living room as seen from dining/kitchen area, *center*— kitchen with beadboard cabinetry and concrete countertops, *bottom*— reading nook in the living room; [Page 5] Forty year-old wisteria; [Page 4] The foyer presents an open view to the front garden