

VICTORIAN REVAMP

*Green building methods and modern style
renew an 1894 Berkeley Victorian*



Architectural rendering: home under construction at press time.

East Bay residents cherish the unique style of the region's Victorian homes. But as charming as they may be, these older houses tend to be drafty and dark, inaccessible for wheelchairs, and often lack modern conveniences. Berkeley residents Kristin Leimkuhler and Jeffrey Wilk hired McCutcheon Construction to modernize their 1894 Victorian while preserving the building's traditional exterior. Raising the house by three feet allowed them to transform a six-foot-high unfinished basement into a contemporary wheelchair-accessible first floor, doubling the home's size to 2,815 square feet.

Upstairs, the focus was on returning the home to its original Victorian roots by reusing most of the existing fixtures while augmenting new spaces with found and recycled objects. At the back, a south-facing steel-and-glass addition brings in daylight and provides a dramatic counterpoint to the home's Victorian facade. Even the attic was reinforced, and skylights were added to transform dead space into a useable storage and craft space.

*“Saving the 100-year-old building and reusing it was
just the beginning.”*

—Kristin Leimkuhler, homeowner

McCutcheon architect Michael Williams acknowledges that remodeling an old house from top to bottom isn't necessarily less expensive than tearing it down and building from scratch; however, his clients were committed to saving the original structure. “Our goal was to restore the house, while modernizing the shared living spaces on the first floor and improving their accessibility,” says Kristin Leimkuhler. “We wanted to build a durable, energy-efficient family home that could house three generations comfortably.”

On the day of the Green Home Tour, the home will not yet be occupied but construction is expected to be 90% complete.

GREEN at a GLANCE

ENERGY & SYSTEMS

- Hydronic radiant-floor heating on the first floor
- Recirculating boiler and heat pump for radiant-floor heating, second-floor air handler and household water use
- House wrap installed under siding
- Low-e wood-frame windows (Kolbe & Kolbe)
- Shaded south-facing windows (Blomberg) for daylighting and passive solar heating
- Energy Star® dishwasher, washing machine and refrigerator
- Skylights for natural daylight and whole-house ventilation
- Low-voltage ceiling lighting throughout

MATERIALS & PRODUCTS

- FSC-certified framing lumber (Truitt and White)
- Engineered wood (Weyerhaeuser TJI and Parallams)
- Exposed concrete as finish floor
- Bamboo flooring (Eco Timber)
- Cabinet boxes with low formaldehyde content
- Salvaged doors, windows, plumbing and lighting fixtures (from original building, local architectural salvage yards, and eBay)
- Low-VOC, water-based wood finishes

OTHER GREEN FEATURES

- Close to BART, walkable location
- Permeable paving for groundwater replenishment
- All lead-contaminated materials were contained and removed from site
- Passive drain system installed
- Built-in recycling center

ENERGY EFFICIENCY

Efficient heating and hot water. The home has a new radiant-floor heating system, with hot water circulating in tubes embedded in the exposed concrete slab on the ground floor. A recirculating boiler and heat pump supply hot water for both the in-floor heating system and household water use. The boiler generates hot water for use with an air handler that heats the upper floor.

Better envelope. House wrap under the siding reduces air infiltration, making the home more comfortable and lowering heating bills. Cotton insulation made from recycled blue jeans has been fitted into wall and ceiling cavities. Double-pane wood-frame windows with a low-e coating replace the drafty single-pane windows. At back, a large expanse of south-facing glass illuminates the home with natural daylight and provides passive solar heating.

INDOOR AIR QUALITY

Cabinets. In many new and remodeled homes, cabinet shells are made with particle-board or medium-density fiberboard (MDF) that may offgas formaldehyde gas into the home. The cabinet boxes and doors here were made in Canada from MDF with an extremely low formaldehyde content.

WISE RESOURCE USE

Bamboo flooring. Floors in the entry and kitchen are bamboo. Bamboo is as durable as hardwood for flooring. A rapidly renewable resource, bamboo is a fast growing grass that can be harvested in three to five years.

FSC-certified lumber. New wood framing has been certified by the Forest Stewardship Council (FSC) to have come from sustainably managed forests.

ORIGINALLY BUILT: 1894

REMODEL & ADDITION COMPLETED:
Summer 2005

ORIGINAL SIZE:
1,400 SF

SIZE AFTER REMODEL:
2,815 SF

ARCHITECTS:

GUY LUBROTH (Initial Design)
McCUTCHEON CONSTRUCTION
(Final Design)

GENERAL CONTRACTOR:

McCUTCHEON CONSTRUCTION



“This house stood for over a hundred years. With our help it will be a great home for generations to come.”

—Kristin Leimkuhler, homeowner