

# A NEW GENERATION OF BUILDERS

*Laney College's Green Built Housing Project gives students hands-on experience with building green*



Linda Svendsen

Laney College's Green Built Housing Project offers students in its Carpentry Department an unparalleled opportunity to learn the ins and outs of building eco-friendly houses. In partnership with the City of Oakland and the Oakland Rotary Club, the project has already completed one house and has another under construction. Truitt & White Lumber and other corporate sponsors are helping make the project possible.

In 2004, students wrapped up phase one, a 1,400-square-foot, three-bedroom, two-bathroom house. They are now building an 1,800-square-foot, three-bedroom, two-and-a-half bathroom house next door, which they expect to complete in July 2006. Both homes demonstrate how energy efficiency, resource conservation and other cost-effective green strategies can be incorporated into houses built with moderate budgets.

The project sponsors anticipate that the house currently under construction will ultimately feature even more green building materials and methods than the already-completed home. Tour participants will be able to walk through the completed house and the construction site.

*“Not only did we achieve our objective of teaching students valuable house-building skills, we were able to create affordable housing that will remain affordable thanks to our use of green building products.”*

— Darin Daskarolis, Oakland Rotary

## RESOURCE EFFICIENCY

**Reduced construction waste.** The students found a variety of ways to reduce jobsite waste. Form boards used when pouring the foundation of the first house were reused for the second house, and then sent to campus to be used yet again. Scrap plywood was reused on site to make recycling bins. Rebar scraps were saved and used on the second house. Metal, glass and cardboard were recycled.

## GREEN at a GLANCE

### ENERGY & SYSTEMS

- On-demand water heater (Takagi)
- High efficiency furnace with HEPA filter
- Housewrap installed under siding (Tyvek)
- Recycled cotton batt insulation (Bonded Logic's UltraTouch)
- No-added-formaldehyde fiberglass insulation with recycled content (Johns Manville)
- Energy Star® appliances
- Compact fluorescent lighting

### MATERIALS & PRODUCTS

- Flyash in foundation's concrete
- Engineered wood: floor joists (Weyerhaeuser TJI), beams and trim
- Fiber-cement siding (James Hardie's Hardiplank)
- Natural linoleum floors (Marmoleum)
- Recycled-content carpet (Mohawk)
- Certified cedar floors in master closets (EarthSource)
- Zero-VOC interior paint (Benjamin Moore Pristine Eco-Spec)



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## ENERGY EFFICIENCY

**Cost-effective strategies.** The houses are built with off-the-shelf products proven to be effective at saving energy and improving comfort. Two types of insulation were used: recycled cotton batts, and fiberglass insulation with no added formaldehyde. A high efficiency furnace has a HEPA air filter for improved indoor air quality.

**On-demand water heater.** The completed house has a tankless water heater that provides hot water as needed rather than storing it in a tank. While it initially costs more than a conventional water heater, it can save money over time by reducing energy use.

## GREEN PRODUCTS

**Fiber-cement siding.** The completed home is clad with Hardiplank fiber-cement siding, which is composed of cement, sand and cellulose fibers. Fiber-cement siding is more durable than wood, termite resistant, noncombustible, and warranted to last 50 years. Using fiber-cement siding reduces demand for old-growth redwood or cedar siding.

**Natural linoleum flooring.** Marmoleum, a brand of natural linoleum, was used for kitchen, bath and laundry floors. Unlike vinyl flooring, linoleum does not contain petrochemical products or chlorinated chemicals such as polyvinyl chloride (PVC). Natural linoleum is very durable, lasting up to 40 years, whereas vinyl often has to be replaced within 7 to 10 years.

### 5673 DOVER

**YEAR BUILT:** 2004

**SIZE:**  
1,400 SF

### 5675 DOVER

**YEAR BUILT:**  
2006 (under construction)

**SIZE:**  
1,800 SF

**ARCHITECT:**  
KIRK E. PETERSON & ASSOCIATES  
ARCHITECTS

**CONTRACTOR:**  
LANEY COLLEGE CARPENTRY DEPT.

*“If we teach future carpenters and contractors how and why to build green today, they will have the resources to build successfully in the future.”*

—Cynthia Corriea, Laney College



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