Project Summary
This single-family home, overlooking the Bay Bridge and San Francisco, is designed to merge comfortably into its steeply sloped site while providing a tranquil setting for a young couple and their two children. The home incorporates a photovoltaic panel system that generates all electricity necessary for the home and solar thermal panels which provide pre-heated domestic hot water and radiant heat. Other features include an underground cistern and an interior air quality management system.

Green Building Features
Site Design & Community
- Bunkered into hillside for Geothermal cooling and heating, the house utilizes thermal mass of concrete, tile floors, and walls.
- Floor-to-ceiling South & West facing glass and extensive sun shading overhangs.

Water Conservation
- 600 sq. ft. intensive planted green roof and deck.
- Low water/drought tolerant landscaping and plants.
- Underground cistern to capture rain and groundwater for reuse in landscaping.

Resource Conservation
- Blown in soy-based foam insulation was used in the walls.
- Minimum 25% fly ash content was used in all concrete poured for the foundation, walkways and retaining walls.
- Engineered framing materials such as recycled steel, OSB, LVL and Timberstrand wood products.
- Windows locally sourced and counters made of recycled glass and concrete were chosen.
MARGARIDO HOUSE

Indoor Air Quality
- Zero VOC paints and finishes.
- Carefully placed operable windows take advantage of winds off bay and allow cross ventilation to cool house.
- Automated air exchange system that exhausts stale air and brings in fresh air; whole house fan.

Energy Efficiency
- 55% more energy efficient than California’s tough Title 24 energy standard
- Solar powered electrical system.
- Comprehensive construction recycling and waste management plan allowed 80% of waste from site to be recycled.
- House conserves energy by eliminating the need for air conditioning and replacing traditional temperature control devices with more natural passive solar heating and cooling systems.
- Solar power collectors and solar thermal panels on roof provide electricity, hot water, and heat.
- Solar thermal/hot water system that preheats water for in floor radiant heat system and domestic hot water use.
- Light dimmers, high-efficiency appliances, and low-energy LED lighting.

Project Team
Construction & Development: McDonald Construction And Development Inc., Michael McDonald, Mike Dwyer, and Fernando Sorto, 5950 Margarido Dr., Oakland, CA, 94618
Architecture: Plumbob, LLC
Subcontractors:
- Medium Plenty, 352 24th Street, Oakland, CA 94612
- Chris French Metal, Inc., 951 62nd St., Unit D, Oakland, CA 94608
- Concreteworks, 1137 57th Ave, Oakland, CA 94621

"The house conserves energy by eliminating the need for air conditioning and replacing traditional temperature control devices with more natural passive solar heating and cooling systems."

Michael McDonald
President of Margarido Group

Learn More! www.oaklandgreenbuilding.com