

## Moraga Barn: On its Way to Platinum

By Sophie Bracinni



Just like his father and grandfather before him, Chris Avant could have become a National Park Ranger. Instead, Chris became a builder who incorporates his love of nature and beautiful craftsmanship into the structures he builds. Today, as the owner of Canyon Construction, he and his team are putting the finishing touches to their new office building, the Moraga Barn. In doing so, they are bringing the historic landmark to a new level of construction sustainability.

Every third grader in Moraga will tell you that the Barn never harbored any cattle. The building standing at the corner of Viader and Country Club Drive started its life as a hotel in 1914. In 1915 it became "Moraga Mercantile," where one could buy hay, groceries or collect their mail. A bar was added in the 1930's but a State law prohibiting the use of the term "bar" forced the owners to add the infamous "n." The Barn stayed in operation as a bar until it closed in 1997 and the building started to decay. When Avant went looking to buy an office for Canyon Construction, he contacted the owner, John Pentara, who agreed to sell it to him. In February of last year the remodel started, with the objective of conserving the original look of the property while creating a state of the art, sustainable building.

The optimum in green building is achieved by Platinum LEED certification. LEED is a rating system developed by the US Green Building Council to evaluate a building's level of sustainability. There are 5 levels of performance with the majority of recipients being sim-

ply LEED certified or Bronze, hundreds being silver or gold certified, and only about 30 reaching platinum. To be granted Platinum, all aspects of the construction are evaluated, from its location, the materials used, its energy efficiency, water usage and so on. Canyon is innovative in all these areas. The roof is made of solar tiles. The 1 square foot slates manufactured by Atlantis Energy incorporate photovoltaic circuits. The result is both an efficient and beautiful roof. Three 5000 gallon cement tanks are buried in the courtyard and collect the rain water that will irrigate the property. Buried around the tanks are three layers of geothermic piping that supports a radiant heat and cooling system for the building. Walls and roofs are insulated to R30 level (twice today's norm) while a carbon dioxide sensor allows fresh air to enter when needed. Natural ventilation and lighting has been optimized throughout the building. Bruckner Windows from Austria offer the best possible insulation and UV protection while maximizing natural lighting. All windows can be opened, including the top cupola, to allow natural night cooling. All lights are LED or fluorescent and programmed to turn on and off depending on movement and darkness.

It was hard for Canyon Construction to conserve a lot of the original materials since modern codes are more demanding. Otherwise, all the material used for construction was either salvaged or locally and sustainably produced. For example, the ground floor is made of salvaged Sierra white granite from San Francisco's Union Square. All the finishes and furniture required the same creativity and focus. For Jeremy Fisher, a young project manager at Canyon, this has been an incredible learning experience, interacting with people from all over the world and collaborating with firms like Rumsey Engineering, an Oakland group that already had LEED platinum experience. Chris Avant concurs, "Having a building LEED certified can be done at normal cost, but achieving platinum certification costs about 30% more. The learning, experience and exposure gained from this project are well worth it."

Stay tuned for the inauguration, scheduled for late fall.



Jim Kirkworl Superintendet Canyon Construction

