

# Exceeding the status QUO:

A developer fights "green washing" one building at a time



With an eye on high-performance green building, Zocalo Development is no longer considered the new kid on the block. The Denver, Colorado-based organization has stood by their commitment to green building technology and sustainable design since the company's inception five years ago. During this time, the company has originated some of the more prominent residential green building projects in Denver's downtown core. This may explain why the company was given the "Business Citizen of the Year Award" from the one of Denver's leading non-profits for its commitment to sustainable building practices. The company's sensitivity to the well-being of others and interest in preserving the environment is precisely why Zocalo has attained its current level of success in such a short amount of time.

"The 'Greenprint Denver' initiative challenges the business community to minimize its environmental impact. It's a commitment to finding sustainable solutions in building design that will benefit those living in the Denver metro area," explained David Zucker, one of the principals of Zocalo Development. "Our goal is to reduce our buildings' energy consumption by 25 percent. In five years, we hope to extend our expertise to building additional projects nationwide."

## A NEW TAKE ON AFFORDABLE HOUSING

The company is well on its way. Zocalo is the developer of the first LEED certified residential condominium community in Denver. RiverClay is a \$19 million, 6-story, 60-unit condominium project that will be the Rocky Mountain region's first Silver LEED-certified development in its category.

"Our third-party energy modeling consultants anticipate that RiverClay will be nearly 40 percent more energy efficient than buildings that are comparable in size," said Zucker. "Several features of the project are used to create a more affordable living environment for its residents."

In addition to being energy efficient, the project meets five different categories of LEED certification.

"In order to be LEED certified, not only does the building have to be more energy efficient, there also has to be a reduction in indoor air pollutants," explained Zucker. "There is also a component of the certification that tackles conservation and the reduction of waste materials."

RiverClay's green features include compact fluorescent lights, recycled fire resistant treated newspaper used as cellulose installation in the walls, Energy Star-rated appliances and a strict maximum limit on indoor air pollutants. He also said that RiverClay's is the largest solar photovoltaic installation of a residential building project in the Denver area to date.

"We reduced water consumption by 40 percent, so it uses less water than a typical condo project. We installed dual-flush toilets, low-flow faucets and high-efficiency shower heads. Rather than installing a water heater and furnace that is less expensive and provides a moderate level of energy efficiency, we installed a more expensive heating system that is 90 percent more efficient."

"The photovoltaic installation alone produces almost 10 percent of the electricity demand," said Zucker. "All of these elements combined can save \$400 a year on electrical costs. In the long-term, that is quite a savings for owners, especially for home buyers whose incomes are below \$40,000 per year."

Located at 2240 Clay Street, the price range for RiverClay is between the mid-\$200,000s to the mid-\$600,000s. For each unit, that price includes sustainable hard wood flooring; an imported Italian designed stainless steel sink; a 36-inch

commercial Italian Five Burner, dual stove with Wok ring; custom-made designer cabinetry; granite countertops, scenic mountain views; and underground parking. The project has a completion and occupancy date of May 2008.

Taking into account the current state of the economy, Zucker says in the next five years there is going to be an enormous amount of change in the construction industry.

"The home building market right now is a risky endeavor," said Zucker. "Typically this industry has been very slow to adapt to change. Lately, there has been a demand in the urban core for buildings that are more sustainable. When you're in a buyer's market you have to adapt to the demand. Surprisingly the entire industry has not adapted yet to this change, but we have."

## WHEN GOLD TURNS GREEN

Zucker also believes that two things are happening in the industry right now that need to be addressed. One is that builders haven't been creating real levels of sustainability and in return, he feels they will be penalized by the market in the next several years.

"There's a lot of 'Green-washing' in the home-building business. Builders are making relatively empty claims about sustainability by adding features that are a little better than just adhering to the latest building code requirements," said Zucker. "There is going to be trouble ahead for those developers who have over promised the sustainability of their projects, especially when owners start to realize that the promised benefits of these 'green' buildings aren't being delivered. I think there will be a body of evidence that suggests and quantifies the genuine operating cost benefits of sustainable design."

He added that the second major change in the market is that there will be a demand for higher degrees of LEED certification.

"Though not a perfect fit, LEED certification has adapted itself to residential structures and will continue to be the gold standard," predicted Zucker. "Building codes will continue to adopt more and more rigorous environmental standards. I imagine that LEED could eventually become a default standard for an increasing number of municipalities' building departments for single-family and multi-family energy efficiency standards. The benefits are already apparent in office buildings and that will also become apparent in LEED constructed residences that have a more intrinsic design quality than its predecessors."

Zucker says that the "new car smell" that residents have become accustomed to when it comes to a brand new building is actually harming its occupants.

"The building community often associates that new smell with the good smell of progress, but it is really composed of such things as VOCs (Volatile Organic Compounds) and formaldehyde. In our LEED buildings, we take care of the building environment before the tenant or owner moves in. Each of us at Zocalo feels a personal responsibility to do better. We look at everything and analyze what it may mean to the occupants. For instance, we bring all of our consultants, designers and engineers together to look at every aspect of the building project. We think of ways that we can improve the indoor environment of the home and how it will affect the occupants. We think of new ways to make heating and cooling systems more efficient by maximizing ventilation capacity without adding on additional costs."

## LESSONS LEARNED

A quirk in the green building initiative is the mistaken belief that sustainability is new. Zucker says it isn't, and hasn't been for quite some time.

"The level of interest in protecting the environment has ebbed and flowed in the US; generally it's directly related to energy costs," he said.

When looking back at the history of the construction industry, Zucker pointed out that Thomas Jefferson's Monticello addresses many sustainable design elements which promote energy efficiency and productive use of space.

"Monticello is a model of sustainable building efficiencies," he said. "It surprises me that we as a society think that this is something new."

Jefferson's Virginia estate utilizes double windows, shading from trees, and operable shutters to heat and cool the building at different times of the day. In order to maximize open space, the dining room table, and the beds, including his private bedroom study and dressing room, folded into the walls.

Zucker agrees that with the rising cost of energy comes greater awareness to the subject of energy efficiency.

"During the Oil Embargo of the 1970s we were neck and neck with the Europeans," noted Zucker. "Then when oil became cheaper North America lapsed back into our old ways, while in Europe they continued to strive for greater sustainability in building design. The average building in Europe is 30 percent more energy efficient than a typical building in the U.S. In my opinion, we can do better."

In the years to come, Zocalo is planning to build projects that are larger and more complex.

"My sense is that once we become involved in larger building projects, we will be able to develop greater levels of sustainability," said Zucker. "This includes achieving higher levels of water treatment and renewable energy generation. That is definitely one area that we are interested in expanding."

Zucker said by next year the company has one goal in mind: building more sustainable building projects.

"We have an energy efficiency goal we are working on that involves creating a truly net zero energy residential building," said Zucker. "I would like to be building a project that is at least 80 percent more energy efficient than the buildings we are building today. If the current buildings are impacting the environment by creating 40 percent of all global warming, I want to build a building that cuts that down by more than half. If we can reduce carbon dioxide gases by 80 percent, it will prove our commitment to delivering sustainability and stewardship to the public."

## JG ARCHITECTS, INC.

JG Architects, Inc. is a fledgling design firm spawned from the vision and guidance of Architect, John Gagnon. The initial design concepts and production of the RiverClay project was directed by John while working within Samuel Engineering, in Denver, Colorado. John now brings his design excellence to JG Architects.

*JG Architects, Inc.*  
Architecture Planning Interiors

JG Architects, Inc. was the architectural muse and designer for the RiverClay Condominium project and is proud of its advanced sustainable design. The RiverClay project addresses many of today's architecture and sustainability challenges and is the stepping stone for advances in the future.

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6525 South Richfield Street  
Aurora, Colorado 80016  
(P) 720.231.6385 • (F) 720.367.5053