

Green McDonald's Teaches Lessons In Environmentally Friendly Buildings



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Is it, as the project manager chuckles, an oxymoron to think of a McDonald's restaurant built to green specifications?

Not so much, says Ric Richards, owner of a McDonald's in Cary. The structure he bought nearly four years ago was a quarter-century old. He knew it needed a major investment.

"When we looked at the cost to tear it down and rebuild, and the cost of adding green fea-

tures, we said, 'Why not?'" says Richards, who runs The Richards Advantage, owner of six other McDonalds in Cary, Raleigh and Durham.

Richards assembled a team to demolish the old building and put up a new Cary McDonald's that is LEED-certified. It meets US Green Building Council requirements for a gold, or second highest, rating under Leadership in Energy and Environmental Design guidelines.

And the project manager who smiled at the concept is impressed. "It encourages me for the future of green building," says Geoff Starks with



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Alabama-based Hudson Company, the general contractor. Starks, who keeps a Southport office, adds, "If McDonald's can do it, to me that means the average project can easily do it."

For Richards and Tony Myers, his operations director and an equity owner of the green McDonald's, "do it" means create a fast-food outlet with features such as light emitting diode (LED) lighting, tabletops made of sunflower seed or bamboo and large windows that provide 92 percent of interior spaces with natural light. And these are just a few of the innovative features, both inside and out.

Fully 99 percent of the old building was recycled or reused in the new structure.

Richards wanted to complete the job quickly. He broke ground on March 1, 2009, and opened his new McDonald's on July 14.

"I'm used to working on projects that spend a year in preconstruction and two years being built, and we have another few months to wrap up documentation," says Will Senner, who has been involved with a number of green building jobs with Skanska USA Building in Durham. "There were a lot of decisions that we had to make a little quicker," he adds.

Skanska USA Building was program manager for the LEED portion of the project.

Senner praises Richards and his commitment. "He gets it," Senner says of Richards. "Once I got to know him and understand his aspirations and goals, it was a pleasure to be part of it."

The timeline was slower than for the typical McDonald's, says Hudson's John Steinbach, project superintendent. His company constructs many McDonald's outlets, but this was his first green project.

"We build a dozen McDonald's a year in North Carolina," Steinbach says, "and normally we do them in 90 to 100 days. That Cary project was about 130 days."

Still, the total cost pleased its owner. "It's about a \$2 million project," Richards acknowledges. "We thought we were going to pay 10 percent or more to make it green, but it's turning out I'm spending only about 5 percent more."



He got a 3,500-square-foot store, about one-sixth larger than the one he razed.

Richards recently built a conventional McDonald's of the same size on Western Boulevard in Raleigh, so he knows his numbers.

"Based on what I learned on this green store, if I build another one, I could probably build it for less," he reckons. He'd use LED lighting, but design the illumination pattern more economically.

Customer reaction "has been terrific," Richards says. "I invite anyone interested in green building concepts to visit our store at 1299 Kildaire Farm Road in Cary. It's a very esthetic building, both inside and out. It came together just right."

When customers visit the McDonald's they can learn about the restaurant's green features, through educational signage placed throughout the building and on an Energy Efficiency Education Dashboard, an interactive display located in the lobby. Customers can learn how the green features used help the environment and are cost effective. They can also test their new knowledge with a 'green' quiz.

An important team member on the project was Logan Luzader, 24, an Architecture graduate of Miami of Ohio University. He was an intern in Durham for Richards' designers, LMHT Associates.

"LMHT allowed me to work as a contract employee with Hudson," says Luzader, who left to pursue a master's in Architecture at the University of Illinois the day after the McDonald's opened. "I thought of myself as a facilitator."

Though he'd never worked for an employer on a green endeavor, Luzader's college portfolio included a project with a large environmental component. An important advantage Luzader offered had to do with the paperwork-intensive nature of building to LEED standards. He quickly adapted to the various forms.

"Logan is an awesome kid," Richards raves. "He did a super fantastic job."

"That's Ric for you," replies Luzader from the Illinois campus. The two are good friends and they communicate regularly.

The teammates Luzader worked with met each Tuesday to talk about progress and set goals. That cooperation proved invaluable in holding 15 subcontractors and 70-plus workmen to the green plan.

"I'd have to say the biggest challenge was getting the subcontractors to comply

with the new procedures and the different materials that had to be used," offers Steinbach, the project superintendent for Hudson.

For each subcontractor, team members scheduled a learning lunch where they taught green precepts and responsibilities in adhering to them.

"It was refreshing that instead of just telling them how it needs to be done, we told them why we are doing it," Steinbach says. "It was really fun to see how much these subs wanted to get involved and learn more about what we were doing."

Jose Rosa, vice president of Kyle Gregory Electrical, Hope Mills, said his company has done lots of work with McDonald's. He found the Cary McDonald's project a one-of-a-kind learning experience. "We paid attention to purchasing our electrical components locally, recycling and keeping up with the tedious paperwork." Rosa found the weekly team meetings were helpful in keeping the job running smoothly despite change orders and pricing challenges.

Michigan-based Charter House Innovations (CHI) provided the interior dining room seating and décor for this project.

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According to designer Nicole Sheahan, "the project was doubly challenging because the sustainable materials I chose had to comply with LEED standards and satisfy McDonald's expectations for aesthetic quality and durability. We had to seek out new, alternative sources for finishes and challenge our suppliers to create materials that were both well-designed and environmentally-friendly."

The result of CHI's efforts is evident in the restaurant's sleek seating and décor. The raw materials and finishes used to construct these products boasts 29% recycled content, while 92% of all wood used is FSC certified and extracted from responsibly managed forests.

The most pleasant surprise to Ed Morgan, mechanical engineer with LMHT, is how other clients are buying into environmental-friendly building practices. His firm concentrates on restaurant designs and works with a national client base. Many of



those clients have included green initiatives in building designs in the wake of the Cary McDonald's.

Morgan took the lead on the HVAC and

plumbing. He enjoyed the freedom Richards allowed in putting in better, if more costly, features such as low-flow toilet fixtures.

For Courtney Lorenz, an environmental manager for Skanska USA Building, Richards' project was not her first LEED endeavor. But it was much smaller than her previous jobs.

"We had the opportunity to present to McDonald's executives at the project's end and show them the payback period and return on investment," Lorenz says. The upshot is that, although the Cary store is one of only three green models among the

13,000 US McDonald's, there is another environment-conscious McDonald's going up in Riverside, CA. That franchisee has visited the Cary site.

"This is basic business sense the whole community can learn from," Lorenz adds. "We've had 15 or 20 other restaurants approach us about what we did."

Jim Griffin, vice president, Griffin Engineering, Morrisville, commissioned the Cary restaurant. "It was exciting and rewarding to be a part of a project where all team members couldn't wait to see the end result – and what a result it turned out to be," Griffin said.

"Commissioning is a team process and we enjoyed working with the owner, designers, and contractors who all pulled together to provide a LEED Gold facility that meets the owner's requirements," added Griffin. "This project truly exemplifies the future of design and construction."

Richards says he's not ready to commit to other green restaurants, but he plans to consider some reinvestments in the next year or two. Meanwhile, for his house in Morrisville, LED lighting figures prominently in renovation plans he and his wife have started discussing.

Myers has spent nearly 40 years in McDonald's franchise restaurants, the last seven with Richards. He's gradually installing LED in Richards' other McDonald's as fixtures need changing. And he's altered his personal routine.

"I'm certainly not a tree hugger," Myers says, "but I do a better job not only at work but at home in recycling."

Energy Efficiency Education Dashboard - There is an interactive display in the Green McDonald's that will test your environmental knowledge and tell all about the environmentally-friendly and energy-saving features in the restaurant



Solatubes - There are 19 Solatubes fixtures throughout the restaurant that can light approximately 150-500 square feet of space.



Dyson Airblade Hand Dryer - The high efficient hand dryers will dry your hands in about 10 seconds compared to 20-25 seconds for a typical hand dryer.



Cotton Batt Insulation - In the restrooms, there is a clear view of the blue cotton batt insulation. This insulation consists almost entirely of bi-products generated during the manufacturing process of demin blue jeans.



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