



PROJECT DETAILS

Project: KB Home GreenHouse™, an Idea Home with Martha Stewart/
BUILDER Concept Home 2011

Location: Windermere, Florida

Size: 2,667 square feet

Builder and architect: KB Home, Los Angeles (Central Florida division)

Interior design and merchandising: Martha Stewart Living Omnimedia, New York

Green certification: LEED for Homes Platinum (93.5 total points), awarded January 2011

C&D waste diversion: 88.7%

Partnering for Progress

Housing giant KB Home enlists Waste Management to help streamline its materials demand and divert its C&D waste stream to achieve a LEED® Platinum rating for a net-zero energy house.

Los Angeles-based KB Home had long been considered a model of efficiency in the housing industry, except when it came to managing its C&D waste.

That is, until the builder engaged Waste Management's construction services to boost its recycling proficiency during the development of a suburban house in Windermere, Fla., designed and built to achieve a Platinum rating under the USGBC's LEED for Homes program.

Dubbed the KB Home GreenHouse™, an Idea Home with Martha Stewart, reflecting the builder's longstanding partnership with the style icon, the 2,667-square foot ranch-style house offered a conservative face to the street that masked an exquisite interior design and enviable outdoor living areas.

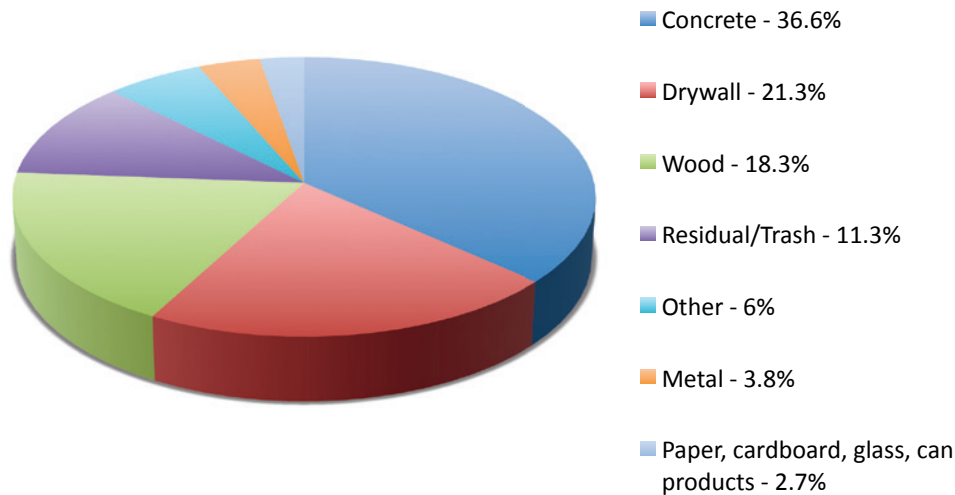
Getting Better. Before it broke ground on the GreenHouse in mid-2010, KB Home was very close to achieving LEED certification, if not Platinum status, thanks to a decade-long commitment to building energy and resource-efficient new homes in several communities across the country.

To reach Platinum status, the builder looked to leverage the waste management prerequisite, as well as additional credits in that respect, toward certification.

"Achieving a Platinum rating presented some challenges to our processes, but diverting more of our construction waste away from landfills appeared to be low-hanging fruit," said George Glance, president of KB Home's Central Florida division in Orlando. "We wanted to divert more waste away from landfills, not just to achieve LEED certification, but because it's the right thing to do."

Aggressive Goals. As it prepared to start construction on the GreenHouse, KB Home consulted with Waste Management's Central Florida representatives to help design a program that would divert 90 percent of its C&D waste from the landfill.

"It was very similar to the work we do with custom builders," said Jim Halter, vice president of Construction Solutions for Waste Management, in that the scope was limited to the specific conditions of the GreenHouse, the first of its kind for KB Home toward achieving the highest standards of environmental performance. "We worked with them to understand the project and integrate our solutions into it."



C&D WASTE DIVERSION: 88.7%

Planning and communication were critical to that effort. “If we are consulted early in the process, as we were with the GreenHouse, we can design a program that best meets the builder’s needs,” says Halter. “KB Home was very forthcoming about their materials selections, building schedule and the conditions of the site, which really enabled that cooperation.”

Waste Management studied the builder’s plans and purchasing practices to help reduce the amount of material needed for construction, thus reducing the opportunities for waste to be created. “To make this work, you have to look at your total building system and takeoffs and make sure value engineering is designed into your homes,” said Glance.

While KB Home already streamlined the construction and materials use of its homes in the design phase, its collaboration with Waste Management furthered that effort toward not only reducing jobsite waste, but also upfront costs. “The more you can reduce your waste factor in an estimate, the better,” said Glance.

Waste Management also understood that it could not delay KB Home’s highly efficient production processes in order to achieve its C&D waste diversion goals. “The biggest fear builders have is that we’ll impact their schedule, which impacts costs,” said Halter. Typically, KB Home sets a 90-day building schedule for new homes, and was not willing to compromise that timeline.

However, KB Home was able to keep to its schedule by comingling a variety of C&D materials, including lumber, drywall, concrete, cardboard, and metals, into recycling containers provided by Waste Management. Hauled to a nearby recycling facility, waste was source-separated for various recycling markets or outlets, such as drywall for agricultural soil amendment and lumber for landscaping mulch.

Remarkable Results. The results were dramatic: 4.51 tons of C&D waste, consisting primarily of concrete, drywall, and wood, was recycled from the GreenHouse project (see chart above). Overall, 88.7 percent of C&D debris was diverted from landfills.

That effort not only satisfied the LEED for Homes prerequisite for waste management within the rating system’s Materials & Resources category, but also earned KB Home three additional credits toward the home’s Platinum certification, which the builder earned in early 2011.

C&D recycling set a new precedent for KB Home and its trade partners and suppliers, and not just in Central Florida. Following the success of the GreenHouse model, the builder announced plans to offer net-zero, LEED-certified homes in 10 communities across the country as an optional upgrade. “It would be very difficult to do that without an integrated waste management plan,” said Glance. “It’s now part of our building process.”

The KB Home GreenHouse™, and Idea Home with Martha Stewart was presented as the BUILDER Concept Home 2011 at the International Builders’ Show in January 2011 and is still available as a photo-realistic virtual tour at builderconcepthome2011.com.