

Project Profile



Project

McDonald's Restaurant, Abercorn Common
Savannah, GA

Owner

McDonald's USA, LLC

Developer

Melaver, Inc.
Savannah, GA

Architect

Adams & Associates Architecture
 Mooresville, NC

Roofing Contractor

Southern Roof & Wood Care Corp.
Hilton Head, SC

Roofing System

Adhered Roof System, using 60 mil, G410 Energy Smart Roof® membrane in white (flat portions) and Décor Roof System, using 60 mil, G410 membrane in custom yellow (sloped portions)

Project Size

4,500 square feet

Completed

November 2005

McDonald's First LEED® Restaurant Features Sarnafil Décor Roof System

Anyone who thinks all McDonald's restaurants are alike hasn't visited the McDonald's at Abercorn Common in Savannah, Georgia. This new McDonald's restaurant is unique in that it is the company's first LEED (U.S. Green Building Council's Leadership in Energy and Environmental Design) certified building in its 53-year history. One of the features that make it eligible for this award is its Sika Sarnafil roofing system.

Hungry for an Energy Efficient Roof

According to Randy Peacock, project manager for Melaver, Inc., developers of the 180,000 square foot Abercorn Common Shopping Center, Melaver wanted Abercorn Common to be the first LEED certified all retail shopping center in the United States and also provide energy efficiency, water conservation, and day lighting, while still offering tenants a competitive market rate. To this end Melaver incorporated sustainable features at Abercorn Common such as preferred parking for hybrid vehicles, bike racks, ultra low flow toilets, natural lighting,

and porous pavement to reduce site runoff. An energy efficient building envelope was also especially important.

The McDonald's roof at Abercorn Common has highly reflective white and yellow roof membranes that make it energy efficient, and is made with post industrial recycled materials. The reflectivity of the white and yellow roof membranes help reduce the amount of solar heat being absorbed by the building, thereby keeping the interior of the building cooler, and decreasing air-conditioning costs. In addition, the high reflectivity of the roof also contributed to the building's LEED certification. The energy savings of a light colored reflective roof were documented in a two year study commissioned by the U.S. Department of Energy (DOE) and the Environmental Protection Agency (EPA)*. In this study, researchers at the Lawrence Berkeley National Laboratory retrofitted a black EPDM roof on a 100,000 square foot retail building in Austin, TX with a Sarnafil EnergySmart Roof®. The result for the building owner was total annual air conditioning savings of \$7,200.

According to Melaver, the building envelope

Sika®

Sarnafil®

on Abercorn Common – including the reflective, light colored McDonald's roof – will make the retail center 30 percent more energy efficient than a typical shopping center, thereby saving tenants money on utility bills.

Roof Appearance a Strong Consideration

Just because a roof is energy efficient doesn't mean it will necessarily meet the aesthetic requirements of the building's owner. Since the McDonald's building's appearance and colors are an important part of the McDonald's brand, it was critical that the roof on the Abercorn Common McDonald's resemble the roofs of other McDonald's.

"The typical McDonald's roof has a red mansard roof with decorative aluminum roof beams," said David Anderson, project manager for Adams & Associates Architecture of Mooresville, NC, the architects for the project. "There have been some variations on that look recently, but they still wanted the roof to look a certain way."

Anderson said they did consider specifying a standing seam metal roof, but rejected that option because, unlike the Sarnafil Décor Roof System, the standing seam roof "didn't meet the requirements of the LEED program."

Another reason Anderson liked the Sika Sarnafil system was because Décor uses decorative profiles on top of the vinyl membrane to give the appearance of a metal roof. This meant that the same roofing system could be used on both the flat portion of the McDonald's roof as well as on the pitched yellow roof over the atrium and play space areas of the restaurant, allowing for seamless transitions. "We could use one manufacturer and one roofing installer for both roofs, which was a plus," Anderson said.

In addition, Sika Sarnafil could provide a custom yellow color to match McDonald's familiar color scheme. "They were able to come up with a yellow membrane and profiles that very closely matched McDonald's classic yellow," Anderson explained.



The Sarnafil Décor Roof System in custom yellow on top of McDonald's in Savannah, Georgia

Anderson added that Sika Sarnafil's reputation in the building industry was another reason to go with the Décor system. "Although this was our first Décor system, we have lots of experience with Sika Sarnafil and know they make a long lasting roof. We had a lot of trust in the membrane and the company."

A Quick Service Installation

Once the challenges of selecting the roofing system were overcome, the rest of the roofing project went smoothly. "Even though we had never installed a Décor roof before, the installation was pretty straight-forward," said David Swanson, president of Southern Roof and Wood Care Corp. of Hilton Head, SC. "We fastened the polyiso insulation to the metal deck substrate, adhered the membrane to the insulation, welded the seams, and installed the metal coping and through-wall scuppers," he explained. "The only difficult part was installing the membrane and profiles on the 4/12 pitched roof. We had to use a chicken ladder and safety harnesses for the protection of the crew working on that portion of the roof."

Swanson added that Sika Sarnafil provided the technical expertise they expect from such a reputable, well known company. "We've only been installing Sika Sarnafil

roofing systems for a short period, but we've had a good experience with the company and its products," he stated. "We are proud to be one of their installers."

A Result Worthy of Smiles

The end result brings as many smiles as a Happy Meal. "The yellow roof jumps out at you and looks very nice," Swanson remarked. "In fact, we've received several inquiries from customers who like the way it looks."

"The roof came out very well – we are very happy with the color and installation," Anderson said. "We would definitely use the Décor system again."

** LBNL-47149 - Measured Energy Savings and Demand Reduction from a Reflective Roof Membrane on a Large Retail Store in Austin*

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