



# SIKA AT WORK

## KARMANOS CENTER FOR NATURAL BIRTH ROYAL OAK, MICHIGAN

GREEN ROOF SYSTEM USING 60 MIL  
Sarnafil® G410 MEMBRANE

**Sarnafil**

**BUILDING TRUST**



# KARMANOS CENTER FOR NATURAL BIRTH A LABOR OF LOVE

Imagine a place where women in labor can soothe themselves by walking on paths in a rooftop garden. A place where families can gather on outdoor patios as they await the birth of the newest family member. A place where “natural” childbirth has two meanings.

That was the vision behind the new Karmanos Center for Natural Birth in Royal Oak, Michigan. This luxurious, six-room labor and delivery center was created by renovating an inpatient area within the Beaumont Hospital and the two existing roof areas of the hospital it overlooks. One roof was transformed into a decorative roof, which is enjoyed by patients in the rooms above, and the second was made into a walkable garden roof, where birthing parents and their families can unwind outside as they prepare for the miracle of childbirth.

## A ROOFING SYSTEM THAT DELIVERS

Selecting and installing the proper waterproofing system and materials for the garden roofs was not easy. “One of the biggest challenges was designing a system that the existing structure could support,” said Don Sekula, estimator at Lutz Roofing Company, Inc., of Shelby Township, Michigan, who added that some of the roofs’ planter boxes weighed 3,000 pounds apiece. “We also needed something that would be leak-free and that could be installed with minimum odors or noise that would disturb the occupants of the building.”

The Sarnafil EnergySmart Roof system delivers all those benefits. Its single-ply membrane is lightweight, adding very little load to the structure. Seams of the roof are hot-air welded, creating a monolithic sheet that is as strong as the membrane itself. In addition, installation of the water based adhered system is quiet and with low odor.

## A DIFFICULT LABOR

As with some births, the installation – which also included removing an EPDM and a built-up roof – was not without complications. Staging was one of the biggest challenges. “The hospital prides itself on the appearance and landscaping of the campus, and there is heavy pedestrian, vehicle and delivery traffic,” Sekula explained. As a result, Lutz Roofing was given a small restricted area on a loading dock where they could stage their crane. Roofing materials were stored in a rear parking lot half a mile away from the crane, and Lutz Roofing could only load materials onto the roof on an ‘as needed’ basis.

“To top it all off, one roof section was recessed 25 feet down in the center of the hospital and ‘land-locked’ by other hospital sections,” Sekula stated. “Our materials and debris had to be craned up to a higher roof, transported approximately 150–200 feet, and then lowered by a hydraulic hoist to the roof. The size and weight of some roof materials required them to be lowered ‘piece by piece’ before they could be installed.”

### PROJECT

Karmanos Center for Natural Birth at  
Beaumont Hospital  
Royal Oak, Michigan

### OWNER

Beaumont Health

### ROOFING CONTRACTOR

Lutz Roofing Company, Inc.  
Shelby Township, Michigan

### LANDSCAPE ARCHITECT

Debra Axelrod LLC  
Ann Arbor, Michigan

### ARCHITECT, STRUCTURAL AND MECHANICAL ENGINEER

Harley Ellis Devereaux  
Southfield, Michigan

### GENERAL CONTRACTOR

Clark Construction Company  
Lansing, Michigan

### WATERPROOFING SYSTEM

Green Roof System using 60 mil Sarnafil  
G410 membrane

### PROJECT SIZE

16,000 square feet

### COMPLETED

November, 2014







The safety and comfort of the patients and staff were other concerns. “One roof area had operating and patient prep rooms underneath where noise, smells and other disruptions from the roof installation would not be tolerated,” Sekula commented. “As a result, much of our work was done on weekends, when no surgeries were scheduled.”

#### **DECORATIVE ELEMENTS THE CROWNING ACHIEVEMENT**

The final challenge of the project was the installation of the decorative components.

Debra Axelrod, owner of Debra Axelrod LLC of Ann Arbor, Michigan, the landscape architects on the project, said she and architect Gary Przepiora of Harley Ellis Devereaux of Southfield, Michigan, researched several green roof systems and decided to use the LiveRoof® tray system. “Sika Roofing and LiveRoof have an agreement to provide a single-source warranty when requested by the owner or specifier, and we were impressed with the expected longevity of the combined roof system,” she remarked. Axelrod also worked with Geraldine Drake, LEED green associate and interior design program and standards manager at Beaumont Hospital, on specifying the pavers, decking, fences, pergola, decorative stone, plants, planters and trees.

“We worked with Sika to make sure these elements qualified to be part of the approved system,” Axelrod said. “Sika and Lutz Roofing were very cooperative throughout the design and construction process, very conscientiously attending multiple meetings and working with us to achieve our overall design goal.”

Ryan Doyle, project manager at Clark Construction Company of Lansing, Michigan, agreed that teamwork was key to the success of the project. “Months of pre-construction work by Lutz Roofing, Clark Construction Company and Sika made the construction process run smoothly,” he commented. “Lutz Roofing worked around the clock to successfully deliver this project on time, and I was impressed with their attention to detail and ability to work within the budget. They were by far a top performing subcontractor on the project.”

Todd Feliks, program manager at Beaumont Hospital, said he also was impressed with the professionalism of Lutz Roofing. “They were very

accommodating about dealing with a working hospital, and did a very good job minimizing any disruptions.”

It was this professionalism that earned Lutz Roofing first place in the Waterproofing Category of Sika Sarnafil’s 2014 Project of the Year competition.

#### **MOTHER NATURE HELPING EXPECTANT MOTHERS**

As envisioned, the finished roof has many features that help expectant mothers and their families. “We incorporated walkways that are circles or patterns, which calm laboring women and help them focus,” Drake said. “We also created an area of respite that was open to family members so they can be in an outside patio setting that feels like home.”

Drake added, “What’s really amazing is there are patients and family members in other areas of the hospital who are enjoying the roof, especially those in the upper-level patient rooms that overlook it. Even the doctors and nurses appreciate it, because it gives them a break from the intense work they do to connect with nature. It’s great having something everyone can enjoy.”

As with giving birth, the labor was well worth the result.



# KARMANOS CENTER FOR NATURAL BIRTH



## WHO WE ARE

The commercial roofing industry has relied on thermoplastic single-ply membranes from Sika for more than 50 years to achieve sustainable roofing and waterproofing solutions.

Sika is a globally active specialty chemicals company. Sika supplies the building and construction industry as well as manufacturing industries (automotive, bus, truck, rail, solar and wind power plants, facades). Sika is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting load-bearing structures. Sika's product lines feature high-quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems..

Our most current General Sales Conditions shall apply.  
 Please consult the Product Data Sheet prior to any use and processing.  
 ISO 14001: 2004-Compliant  
 ENERGY STAR® for roofing products is only valid in the United States  
 ENERGY STAR is a trademark of the U.S. EPA.  
 LEED® is a trademark of the U.S. Green Building Council.  
 Green Globes® is a trademark of the Green Building Initiative



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