Project Profile

Project
Dixie Regional Medical Center

Owner
Intermountain Health Care
Salt Lake City, Utah

Architect
Anshen and Allen Architects
San Francisco, California

Roofing Contractor
Clark's Quality Roofing
Salt Lake City, Utah

Roofing / Waterproofing Systems
EnergySmart Roof®, 60 mil adhered, G410 membrane in white; Mechanically fastened S327 membrane; Waterproofing Grid System with 60 mil G459 membrane

Project Size
170,000 square feet

Completed
November 2003

Not Your Ordinary Roofing Job

Roofing the new Dixie Regional Medical Center in St. George, Utah started off as just another project for the experienced workers at Clark's Quality Roofing. Despite a design calling for 23 separate roof sections on eight different levels — a daunting project for some roofing companies — project managers at Clark's still thought it was a straightforward job . . . until work began.

"The project required constant innovation and adaptation," said Jim McCowan, regional operations manager at Clark's Quality Roofing's Southwest office.

"What started out to be a project using two standard roofing systems and one Sika Sarnafil membrane turned into the need for four different Sika Sarnafil systems with three different membranes. We also used five additional Sika Sarnafil products to help us meet the various challenges as they cropped up."

Three mind-bending challenges presented themselves during installation: the design specifications, roof top aesthetics, and the intense construction schedule.

Design Spec Challenges

"The first challenge came during the approval process from the building's insurance carrier, Factory Mutual (FM). They required that the roofing system meet their design criteria. The design specifications for the tapered insulation exceeded FM's maximum thickness limit for a mechanically-attached system. We could not meet the quarter-inch slope requirement and keep the insulation thickness under the maximum approved by FM," said McCowan.

In consultation with Sika Sarnafil's local technical representative, Clark's designed a system that would meet the architect's specifications, local building codes, and FM requirements. Instead of using the specified mechanically-fastened method of attachment, it was decided an adhered system was the only way to meet everyone's requirements. FM's criteria for adhered

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systems do not have thickness restrictions like those for mechanically-attached systems.

Sika Sarnafil's adhered system also met the performance requirements. However, for the installation team, some roof areas required individually layering and adhering as many as six layers of insulation. "This is much more difficult and time consuming than assembling all the layers and attaching them at the same time with long fasteners," said McCowan.

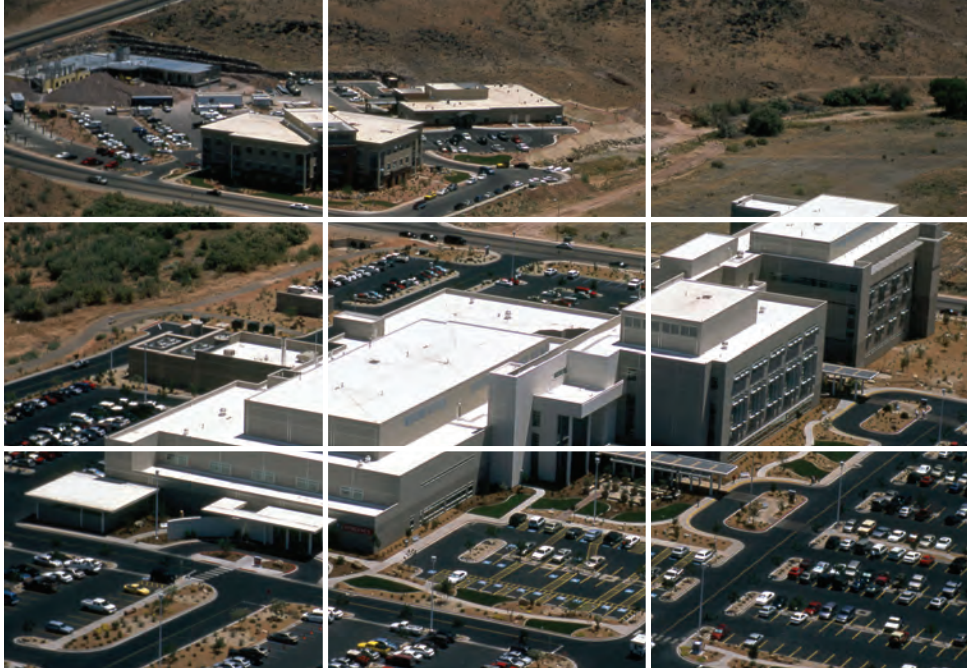
In other areas of the roof, the design specifications called for interior metal gutters. For Clark's, the challenge was to determine how to attach the thermoplastic membrane to the metal and still maintain a watertight seal. "We designed a metal gutter using Sika Sarnafil's Sarnaclad metal," explained McCowan. "This enabled us to hot-air weld the roof membrane to the membrane laminate already factory-sealed to the metal. This fully integrated the gutter with the roofing membrane and covered the gutter system under Sika Sarnafil's System Warranty."

Aesthetic Challenges

Executives at owner Intermountain Health Care (IHC) were very concerned about having a pleasing, soothing atmosphere for patients and employees both inside and outside the building. Because many of the roof sections would be visible from higher elevations, they chose to use Sika Sarnafil throughout.

Sika Sarnafil's white EnergySmart membrane has a factory-applied lacquer coating that is dirt-resistant, keeping the membrane more uniformly clean and new in appearance. Sika Sarnafil's G459 membrane is grease resistant, an ideal solution for the roof section near the cafeteria exhaust fans.

On the lower roof sections, landscaping was incorporated, including large planters and decorative rock on top of a ballasted roof system. The goal with this type of landscaping is to lower the amount of water required to maintain a vegetated area. Clark's used Sika Sarnafil's G459 waterproofing membrane to ensure long-term watertight security and root penetration protection under the ballasted roof system.



Clark's Quality Roofing of Salt Lake City used a variety of membranes and systems to meet the challenge of roofing the Dixie Regional Medical Center in St. George, Utah.

The architect's call for decorative rocks required more problem solving — this time for a color palette that would match the surroundings hills. "The architect had chosen native red, grey, and yellow rocks from local landscaping companies. To keep the color lines crisp and to prevent individual rocks from migrating into adjacent colors after installation, we used Sika Sarnafil's Décor Profile ribs to keep them separate," explained McCowan.

"The Décor Profiles are thermoplastic ribs that can be hot-air welded to the membrane in any shape. The Profiles are often used to simulate the look of a standing-seam metal roof, but in this case the ribs function as dividers to maintain design integrity."

Schedule Challenges

With an extremely tight construction schedule, maintaining roof integrity was yet another struggle for Clark's Quality Roofing. Often the roof work was scheduled before the exterior walls on adjacent sections were finished. "With eight levels and 23 separate roof sections and the special equipment and complex mechanical and electrical systems of a modern hospital, there were more trades people than usual trying to coordinate schedules," said McCowan.

Winning Solutions

Brad Blackett, project manager for the general contractor on the project, Okland Construction Company, summed up Clark's and Sika Sarnafil's contributions to the project. "No matter what we threw at them, Clark's and Sika Sarnafil always came back with a solution to every problem."

For its hard work and creative problem solving abilities, Clark's Quality Roofing earned second place in Sika Sarnafil's 2003 Roofing Project of the Year competition.

Meanwhile, Intermountain Health Care continues to be pleased with Sika Sarnafil. "We've used them on other projects, like the Latter Day Saints Hospital in Salt Lake City," said Stephen Dibble, architect and project manager at IHC. "We specifically chose Sika Sarnafil for this project for its product quality. We have been very happy with its performance."

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