

Sure-Weld® TPO

Roofing Systems

CASE STUDY

University of Utah North Patient Parking Garage Gets Carlisle Sure-Weld TPO Roof



JOB PROFILE

PROJECT LOCATION:
Salt Lake City, Utah

CARLISLE APPLICATOR:
Flynn BEC

BUILDING OWNER:
University of Utah

ROOFING SYSTEM:
Carlisle Sure-Weld 60-mil TPO
membrane in White, Terra Cotta,
and Slate Gray

When the University of Utah initiated a new construction project for an eight-level, 1,400-space patient parking garage on its medical campus, the original plans quickly evolved into a major infrastructure project including two new roundabouts, a road realignment, a pedestrian tunnel, and a 70-foot earth retention wall with a sculpted rock finish that was necessary for the sloped site.

The project was a massive and highly complex undertaking that required extensive planning and coordination with the university and the medical center, which had to remain open with full access 24/7.

As with everything in this project, the roof on the parking structure was also complex, beefy, aesthetically pleasing, and designed to last.

The roofing system specified for the project was Carlisle's 5', 60-mil Sure-Weld TPO membrane. The roof was installed by Flynn BEC of Salt Lake City and had different assemblies for the garage roof, stairwell sections, and pedestrian tunnel.

Carlisle's Sure-Weld TPO was selected for the project for its advanced polymerization technology that combines the flexibility of ethylene-propylene (EP) rubber with the heat weldability of polypropylene. In addition, all Sure-Weld TPO membranes include OctaGuard XT™,

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an industry-leading, state-of-the-art weathering package. OctaGuard XT technology enables Sure-Weld TPO to withstand extreme weathering, making it the ideal choice for this Salt Lake City project.

The main roof over the garage was divided by crickets into eight sections, each with a four-way taper to a center drain. Flynn first mechanically fastened 5/8-inch USG SECUROCK® Roof Board to the steel deck followed by the membrane.

The biggest challenge was installing three different colors of Carlisle TPO membrane on the roof in an oversized sundial design. To do this, Flynn installed white membrane in a quarter circle design from two opposite corners of the roof. The membrane was mechanically attached using Carlisle HP-X Fasteners and PIRANHA™ Plates installed 12-inches on center.

The Flynn team of highly skilled professionals carefully measured and precisely installed the membrane in increasingly bigger arcs across the roof, using the white, terra cotta and slate gray membrane. This required the 5-foot membrane to be installed up and over the crickets, which meant that it was often installed in multiple planes and angles to accommodate the roof design.

Across the center section of the roof, between each band of slate gray, Flynn carefully installed white TPO membrane that had to be installed across several crickets with two different radius curves cut in opposite directions. Then they repeated the design with bands of gray, terra cotta, and white on the other side of the roof.

The membrane was terminated at the edge using matching fascia. On the areas with a short parapet wall, the membrane



was installed up the wall about a foot and terminated with a termination bar. A coping cap was then installed over the top of the parapet wall sections.

The corner stairwells and pedestrian walkway entrance had essentially the same assembly, except there were two layers of 2.6-inch InsulBase® Polyiso Insulation installed over the SECUROCK roof board, along with a tapered insulation system for drainage over the stairwells. Over the pedestrian walkway, the cover board, insulation, and tapered system were secured with Flexible FAST™ Adhesive using beads spaced 4 inches on center.

Looking down on this artistic roof design from nearby buildings is simply striking.

Flynn completed the project on time, providing the university with a beautiful new roof with a sundial design and a 20 year, 110-mph peak gust wind speed warranty. For that they scored an A+ on the project.