

CITY CREEK CENTER RETRACTABLE ROOF

Since opening in 2012, City Creek Center in Salt Lake City, Utah, has become a retail and dining destination known for its man-made creek, 18-foot fountains, and one-of-a-kind retractable roof featuring a fluoropolymer coating system from Tnemec.

The award-winning roof consists of 36 whalebone-shaped structural steel ribs used to support the retractable glass panels that arch over the center's two-block long mall. Designed to part in the middle, the precision-fabricated panels ride along steel rail girders mounted on the rooftops of the center's building structures.

Due to the curvature of the structure, steel components vary from panel to panel, according to Jeremy Jenkins, Project Manager with steel fabricator Ducworks, Inc. "Out of the 36 whalebone ribs, there were 22 variations," he noted.

Coatings were 100 percent shop-applied by Ducworks in a special paint facility constructed specifically for the City Creek Center project. Specifications called for fluoropolymer finish coatings in a custom champagne color that matched the retractable roof's metal frames.

Steel that is visible to the public received a coat of Series 1078 Fluoronar Metallic, a high-solids fluoropolymer with a metallic finish, followed by Series 1079 Metallic Clearcoat, an aliphatic acrylic polyurethane coating. Steel sections that are shielded from public view received a finish coat of Series 1071 Fluoronar, a non-metallic fluoropolymer finish.

"The color-match was beyond expectation," said Michelle Call of Protective Coatings Intermountain, Inc. "Aesthetics was a key performance consideration in the decision to specify Fluoronar finish coatings. Durability was also critical, since you don't want to re-coat hard-to-reach areas like this every five years."

The finish coatings were applied over a prime coat of Series 90-97 Tneme-Zinc, a zinc-rich, aromatic urethane coating, and an intermediate coat of Series 66 Hi-Build Epoxoline, a polyamide epoxy coating. Surface preparation was in accordance with SSPC-SP6/NACE No. 3 Commercial Blast Cleaning.

The City Creek Center retractable roof received the 2013 IDEAS2 National Award from the American Institute of Steel Construction (AISC). The IDEAS2 Award is the highest, most prestigious project-based award presented annually for excellence in steel-frame building design by the U.S. structural steel industry.

FEATURED PRODUCTS

- Series 66 Hi-Build Epoxoline
- Series 90-97 Tneme-Zinc
- Series 1071 Fluoronar
- Series 1078 Fluoronar Metallic
- Series 1079 Metallic Clearcoat



PROJECT INFORMATION

Project Location

Salt Lake City, Utah

Project Completion Date

March 2012

Owners

City Creek Reserve Inc. - Salt Lake City, Utah

Architect

Hobbs + Black Architects - Ann Arbor, Michigan

Engineer

Magnusson Klemencic Associates - Seattle, Washington

Design-Build Contractor

Uni-Systems - Minneapolis, Minnesota

Shop Applicator

Ducworks, Inc. - Logan, Utah

According to the project's developers, the City Creek Center features the nation's first retractable roof in a shopping center development. Photos courtesy of Michael Dickter/MKA.

