American Dream, New Jersey’s much anticipated new mega retail and entertainment complex, has something for everyone. There’s an indoor ski and snowboard facility, an ice-skating rink, an indoor theme park, and hundreds of retail and dining attractions for families and individuals to enjoy.

And for visitors seeking upscale shopping, the center’s luxury retail space delivers an experience just as dazzling as an indoor roller coaster. The Collections, the center’s high-end retail section, features a magnificent barrel ceiling that twinkles with elegant LED lights. Sloan and Co. Inc., along with Duraframe Solutions LLC, fabricated the spectacular curved ceiling, which measures 700 feet long, 90 feet wide and 62 feet high.

Marc Hayward, project manager at Sloan and Co., a New Jersey-based acoustical ceiling and drywall contractor, worked with Doug Congdon of Duraframe Solutions. Yet, before the ceiling team could get to work on building the barrel ceiling, Sloan had to tear down an existing light duty ceiling that was not deemed structurally sound enough to hold the new conceptual design. Over the course of the construction process, the project faced financial challenges that led to ownership changes. The current owners required the removal of the original ceiling to make way for the new design with the GFRG sections, which adds signature beauty and elegance to The Collections.

A Sound Solution
The manufacturer and Sloan worked together to come up with a solution to present to the new owners that would ensure the highest degree of structural integrity, durability, aesthetics and cost savings. They worked tirelessly in the field as they planned the massive layout of the curved ceiling. The manufacturer’s prefabricated framing members were manufactured in their plant, numbered and labeled according to the layout plans, and then shipped to the American Dream jobsite for installation.

“Duraframe’s prefabricated system was effortlessly understood by the design team, and this helped us coordinate the whole project, according to Wilson Aldahondo, project manager, Construction Services at Sloan. “We were able to sequence the work of every trade involved to maintain a continuous work flow every step of the way.”

The sheer height of the ceiling presented significant logistical challenges. First, a giant tower of scaffolding had to be built forty-five feet above level one to create a deck so that construction crews could access the ceiling work. On top of the deck, additional scaffolding had to be used to install the
prefabricated sections. The curvature of the ceiling created a challenge for the installation crew. As soon as one section of the ceiling was completed, the scaffolding had to be broken down and rebuilt in another location. One by one, the team installed an erector set of 700 metal stud panels that were pre-bent by the manufacturer to the exact dimensions of the ceiling. In stages, the team sheathed the ceiling with 45,000 feet of half-inch plywood, then installed 55,000 square feet of half inch gypsum, and finally spackled every seam together.

**How it Comes Together**

Once the shell of the ceiling was finished, it was time to install the intricate GFRG framing and its integrated lighting system. The project managers meticulously factored together the project layout, coordination communication, construction documents, the GFRG plans and framing plans to ensure a smooth installation. Each light was positioned at a GFRG intersection, and the design team had to be sure that the framing did not conflict at those junctures.

On either side of each recessed section, Duraframe framed light pockets into their panelized ceiling frames. As if putting together a giant puzzle, crews installed 780 GFRG shapes, some as long as 15 feet and heavy enough to require the strength of five men. Only then was it time to disassemble the scaffolding and reveal the finished product.

Along with the signature ceiling, the manufacturer also provided Sloan with thousands of feet of Curv-Trak for many of the other curved walls, soffits and ceilings in the mall, as well as for the multiple curved planters and shallow pool walls.

“We were pleased with the streamlined organization of this project,” says Hayward, project manager at Sloan. “For a project that took 17 years to finish, this phase was a big success in terms of efficiency and precision.”

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