Curved Ceiling Commands Attention

Enhanced Acoustics at New Network Operations Control Center for Southwest Airlines, Dallas

Walking into the Network Operations Control (NOC) center of the newly erected Southwest Airlines Training and Operational Support building in Dallas, Texas, is like walking onto the set of a James Bond film, according to architect Andrew Bennett, Principal, BOKA Powell.

“It’s a very high-tech space for mission critical business. The sheer size of the control center is impressive. The height and design of the ceiling itself creates a real “wow!” factor for anyone who enters the room. Just walking into it makes people stop and stare,” he says.
Designing the command center

The NOC center is the heartbeat of the low-fare carrier’s growing air operations: no plane can fly and no crew or maintenance can be scheduled without directives from command center operatives. According to Scott Cherry, who serves as a project manager for Southwest Airlines, several hundred people are working in the center at any given time, each talking to other airlines and agencies as they control flight and ground crew activity. “It’s a very live room, 24 hours a day, seven days a week,” he explains.

To ensure a design that would be able to support all this activity and take their high-tech operations into the future, the airline tapped Bennett’s full-service architecture, planning and interior design firm BOKA Powell, located right in Dallas, which has both international design experience as well as intimate knowledge of the architectural needs of its city.

The design task specific to the command center was twofold:

> to create a beautiful, structurally sound facility
> to organize employees for more efficient, streamlined work

Ultimately, what Bennett and his team created was a high-tech bunker that could sustain operations through Texas-size F4 tornados as well as other emergencies. The team designed the interior in a way that expedites communication within and among teams of employees, then went beyond layout to include thoughtful acoustic design.
Controlling noise and delivering inspired design with new acoustic ceiling

Flat screen monitors light the dark, bustling room constantly abuzz with Southwest Airlines employees. A blue hue flows from the curved ceiling over the high-intensity work being conducted below. As ceilings often provide the best means for controlling acoustics within a room, it was natural for BOKA Powell to use the center’s ceiling as an aesthetic and acoustic element. They installed 16,000 square feet of CertainTeed’s Gyptone® BIG™ Curve — the industry’s only perforated acoustical gypsum panel that can achieve highly curved ceilings without the cost and time associated with custom fabrication. The particular style of the Gyptone BIG Curve selected provides an NRC of 0.70, offering remarkable sound absorption. Moreover, its intriguing shape is expressive of the curvature of airplane wings, expertly engineered for precision during flight.

In addition, Gyptone BIG Curve’s high light reflectance and ability to easily integrate with lighting elements creates seamless interplay between the ceiling and the center’s ambient blue lighting, which was installed to keep employees alert. Specifically, the blue LED lighting hangs below the curved ceiling and lights upward, to cast a blue hue throughout the room. By enabling this level of acoustical and lighting control, the dynamic ceiling blends form with function to maximize the performance and well-being of building occupants.

Iconic brand gives pulse to design

Certainly the nature of BOKA Powell’s design task was serious, but Bennett says working with Southwest Airlines and its iconic brand was thoroughly enjoyable. Southwest Airlines maintains an enviable brand that resonates deeply with people who fly the low-fare carrier as well as those who work for it. It has, after all, been ranked by FORTUNE as one of the world’s most admired companies for more than 20 years running, and Forbes ranks it as one of America’s best employers.

“We tried to think about things expressive of Southwest Airlines. Many of the design elements are curved, reminiscent of wings. We had fun playing with analogies of airflow over wings and how we could capture that in the design. I feel the ceiling really does encapsulate this in an exciting, playful way,” says Bennett.

Cherry agrees, and notes that the ceiling’s aesthetics and sound absorption are key to the overall design.

“It looks good and gets the job done. This ceiling is a real success story.”

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