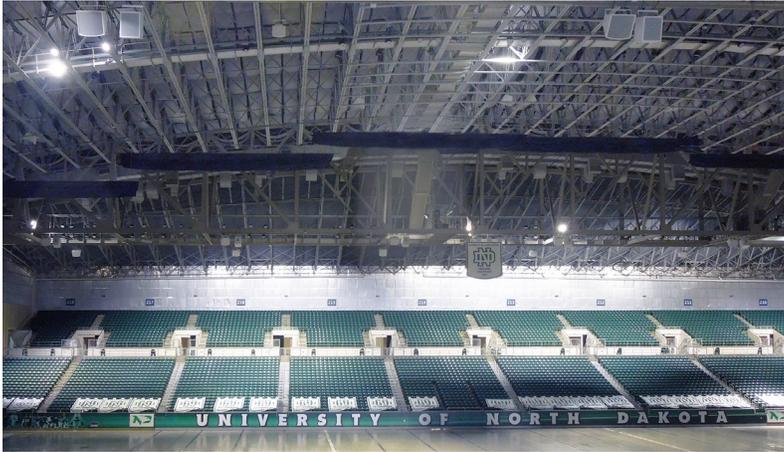


Alerus Center

Designed by Peterson Audiovisual Consulting

Installed by Parsons Electric/MEI with EAPC Architects Engineers



The Alerus Center is Grand Forks' premiere entertainment and convention facility. When not serving as home field to the University of North Dakota's D1 football team, the Center's 20,000-seat arena plays host to events ranging from conventions and car shows to concerts and basketball tournaments. Selected by the municipally owned Center's management to upgrade the arena's aging original sound system, Peterson Audio Visual Consulting principal Dave Peterson designed a simple and elegant system based upon Fulcrum Acoustic's advanced installation loudspeakers.

Challenges

The arena required a high-output, high-fidelity sound system with precise directional control and the ability to easily configure coverage for its diverse programming.

Solution

"Using the center line of the building's steel structure as a locating point, I developed seven coverage zones running the length of the field," explains Peterson. "Seating coverage is provided by two outer zones per side, each consisting of six Fulcrum AH65 full-range coaxial horns (60° x 45°) paired with CS121 21-inch cardioid subwoofers featuring Fulcrum's proprietary Passive Cardioid Technology™. 21 Fulcrum AH463 coaxial horns (60° x 30°) are deployed in three playing field coverage zones for football and arena-wide events. For basketball games' narrower field of play, the arena's west side bleachers are moved inward and the corresponding outer coverage zones are switched off."

"In designing the system, I knew the 70-foot throw from the arena's roof beams to the stands was at the edge of compatibility for a point-source solution – anything longer would have required a line array approach," states Peterson. "Fulcrum's AH coaxial horns' extremely high acoustical output and precise pattern control allowed me to design a straightforward and effective, configurable distributed system for the arena. The Alerus Center was the perfect venue for the application, and its management is very pleased with the wonderful visitor feedback they've received on their new sound system."

Project Details

Location

Grand Forks, North Dakota

Category

Sports (stadium)

Project Type

20,000-seat indoor arena

Fulcrum Products

- (28) AH65 High Efficiency Full-Range Coaxial Horns, 60° x 45°
- (29) AH463 High Efficiency Full-Range Coaxial Horns, 60° x 30°
- (30) CS121 21 inch Subcardioid Subwoofers

Supporting Products

- QSC Core 500i System Processor and Control Engine
- QSC 4.3 and 4.5 Power Amplifiers
- JBL Control Contractor Series Speakers

