Big Sky Acoustics, LLC

Consulting services for noise assessment & acoustical design.

PROJECT PROFILE: MSU SUB BALLROOM

PROJECT: Strand Union Building Ballroom

Montana State University
Bozeman, MT

The Strand Union Building is the community center of MSU. The building serves as the Campus conferencing center, hosting hundreds of meetings and conferences per year. MSU decided to renovate the Ballroom, which can be divided into multiple rooms with operable partitions. As part of the design team, Big Sky Acoustics provided the acoustical design of the refurbished space.

BSA's SERVICES AND SOLUTIONS:

- Completed a room acoustics analysis to control reverberation and improve speech intelligibility. Developed a computer models of the Ballroom spaces to analyze the reverberation times and acoustical characteristics. Evaluated multiple configurations, dividing the room into a combination of one to four spaces.

- Recommended installing acoustical wall panels on the upper east and west walls to balance the acoustics. Numerous different panel product options were provided to the Architect.

- An important aspect of the project was to include sound isolation design, to control the transmission of airborne sound between the Ballroom spaces.

- To improve sound isolation, recommended blocking the open ceiling plenum, and specified the acoustical requirements for the operable partitions and doors, providing multiple manufacturers.

- Took noise level measurements of the existing air handling unit that will continue to serve the renovated space. Quantified the audible "rumble" originating from the return air duct.

- Predicted the background noise levels of the new and existing mechanical equipment, using special software, and developed noise control design options.

- Specified acoustical requirements for the VAV boxes and return air transfer ducts, and required sound attenuators for the HVAC system.

Proper acoustics in the renovated Ballroom will ensure clear communication and enhance the functionality of the spaces.