

## PROJECT PROFILE: **AIRPORT**



**PROJECT:** Great Falls International Airport  
Residential Sound Insulation Program  
Great Falls, Montana

With aircraft noise impacting over 300 residences and the closest homes located only 1,400 feet from the end of the runway, Great Falls International Airport and the Federal Aviation Administration (FAA) implemented a Residential Sound Insulation Program (RSIP) to improve the quality of life for people near the airport. The goal of the RSIP is to reduce noise inside residences due to the commercial and military jet operations, primarily by replacing doors and windows, and making ventilation improvements. Big Sky Acoustics (BSA) measured and evaluated aircraft noise to verify the FAA goals were met, to provide residents with a clearly noticeable reduction in aircraft noise.

### **BSA's SERVICES AND SOLUTIONS:**

- ◆ Conducted pre-construction testing to determine the existing noise level reduction (NLR) of representative houses.
- ◆ Evaluated different design requirements and elements for residences within the DNL 70-75 dBA airport noise contour, compared to houses within the DNL 65-70 dBA contour.
- ◆ Reviewed contractor product submittals for comparison to the Project Specifications.
- ◆ Conducted post-construction testing to determine the NLR improvement due to the house modifications, and compared the results to FAA requirements for verification.
- ◆ Used the results and findings from the initial Pilot Phase to modify and improve the Project Specifications for future phases, to ensure appropriate sound-isolating materials are selected and installed.

