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CASE STUDY

The Venue at Thunder Valley | Lincoln, California

Acoustical Smoke Vents Limit Noise At California Entertainment Center

The California Central Railroad played an important role in the industrial development of Lincoln, Calif. A new entertainment venue, however, faced an unusual challenge in dealing with noise from a nearby rail line.

Lincoln, a suburb of Sacramento, was established in the mid-19th century when the railroad extended its tracks into the area. The installation of the rail line brought new settlers, goods and opportunities, transforming the town from a quiet area into a bustling hub. Lincoln's population has exploded recently, and it is now one of the fastest-growing communities in the United States.

The Venue at Thunder Valley, a 4,500-seat facility, recently opened after two years of construction and is part of the Thunder Valley Casino Resort. The \$100 million project replaced an outdoor amphitheater that opened in 2011. The casino is owned by the United Auburn Indian Community, which includes members of the Maidu and Miwok Indians who have inhabited the region for centuries.

"We wanted to be very sensitive to what their history had been and how they got to this point," said Gary Martinez, senior principal at OTJ, the architectural firm that designed the project. "They had this nice resort, but they didn't have an indoor venue."

Martinez remembers visiting the outdoor venue for a comedy show when a passing train interrupted the performance. "There's a major train line about 400 or 500 yards away," said Martinez, who attended the show with other team members during a site visit prior to starting the design phase. "We could hear it coming as it was crossing a street. Horns were blowing, and the comic just went crazy. I turned to my colleague and said we're going to have to do something about that. It wasn't a huge piece of land, so we had to be conscious of how we addressed that."

As part of the plan to minimize noise intrusion, the OTJ team specified six acoustical smoke vents from BILCO. The motorized smoke vents measure 5 feet x 10 feet and carry industry-high OITC-46 and STC-50 sound ratings. The OITC figure is the preferred rating when addressing sound insulation from exterior noise, as it rates the transmission of sound between outdoor and indoor spaces.

Lawson Mechanical Contractors installed the smoke vents while working for the project's general contractor, McCarthy Building Companies.



"We've done quite a few projects with performing arts center, and we've done a lot of historic buildings and places that were built in the early 20th century," Martinez said. "We have been very happy with the performance of the BILCO smoke vents. We've never had issues with them. We can't make it a single-bid situation but there are not many manufacturers that make acoustical smoke vents for projects like this."

Smoke vents play an important role in saving lives and reducing property damage in the event of a fire. BILCO vents spring open upon the melting of a fusible link, allowing smoke, heat and gas to escape and decreasing the possibility of smoke inhalation to building occupants.



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