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CASE STUDY

Huntington Theatre/Boston, MA

Historic Boston Theater is First Building To Include Thermally Broken Smoke Vent

Amid Boston's vibrant theatrical landscape, The Huntington Theatre stood the test of time since its opening in 1925.

Until it couldn't.

Beset by a complete shutdown in the wake of a worldwide pandemic and aging infrastructure, the theater closed in the spring of 2020. Doors swung open for the first time nearly 2.5 years later after a $55 million renovation that breathed new life into the venerable facility, which was America's first civic playhouse. "We were holding it together with chewing gum at the end," managing director Michael Maso told *The Boston Globe*.

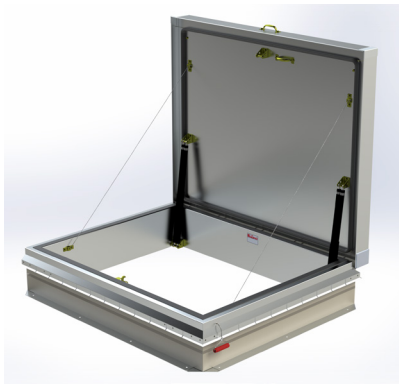
"The project restores and revitalizes key architectural features of the historic building, highlighting the beauty of the original theater while providing modern comforts and amenities both in public areas and behind the scenes," said Nurit Zuker, an Associate at Bruner/Cott Architects.

The renovations include all-new HVAC and electrical wiring, accessibility for all and amenities in both public areas and behind the scenes. The new look expertly unites the theater's history with contemporary performing arts venue standards.

"The balance is achieved by reclaiming the special character of the original façade, drawing attention to it with new signage and architectural lighting, embracing the unique character of the original auditorium and providing new architecture and interiors that enable modern day social experience and first-rate physical and technical support," Zuker said.

The blending of old and new also marries new building technology, including a new thermally broken smoke vent from BILCO. The vent is the first application of the product since it was introduced in 2022.

The smoke vent joins the company's thermally broken roof hatch in its line of superior energy efficiency products. The single-leaf smoke vent measures 4-feet, 0-inches x 4-feet, 0-inches and is designed with an element of low conductivity integrated between interior and exterior surfaces of the cover and frame to reduce temperature transfer. The thermally broken components also dampen vibration.



Three inches of polyisocyanurate insulation provide an R-value of 20-plus in both the cover and curb and a special cover gasket minimizes air leakage.

"The BILCO smoke vents were specified because they met all the project's needs," Zuker said. "The smoke vents are located at the top of the flytower, directly above the theatre stage, and therefore needed to be quiet acoustically. In addition, the unit also had the correct size to provide the required ventilation above stage."

The BILCO smoke vent also helped the architectural and construction teams solve a design challenge. The existing ventilation structure was ineffective, and the theatre relied on manual operation of smoke vents. The location and condition of the existing ventilation structure on the roof was positioned vertically and could not be replaced with a modern unit.

"Rather than attempt to replace the vertically positioned vents, the team abandoned the existing structure and looked for other options to ventilate the stage," Zuker said. "The BILCO smoke vent was specified as a solution as it was ready to install, could be integrated with the fire alarm, and was large enough to ventilate the entire stage appropriately."

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