

Noise Control Case Study Library



The Science of Comfort  $^{\scriptscriptstyle{\text{TM}}}$ 

# Project: Mixed Use Luxury Building in NYC

Location: **New York, NY**Project Type: **Mixed Use**Square Footage: **14,564 ft**<sup>2</sup>

Architect: Spector Group

and Rectangular Silencers

MEP Engineer: Robert Derector Associates
Structural: Dubinsky Consulting Engineers
Acoustical Consultant: Cerami & Associates
Owner's Representative: Interni, LLC
Products: Price Acoustic Panels

The Challenge: New York City is filled with mixed use developments that balance utility and comfort including this 34-story luxury building. The majority of the building houses residential space and the ground floor is filled with commercial tenants. The aging rooftop equipment was replaced with a higher output dry cooler, which resulted in increased exterior noise levels that threatened to impact surrounding residential tenants. The project location provided several challenges including limited access, existing roof curb utilization, building load constraints and surrounding rooftop equipment that could not be disturbed.

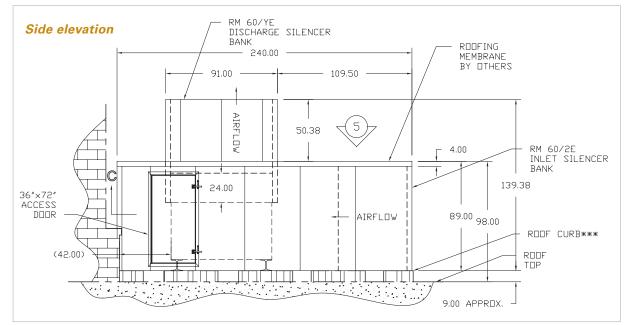
**The Solution:** The acoustical consultant performed a site survey of the existing installation and provided a report outlining noise findings and recommendations. Based on the report, Price worked with the design team to create and build a custom acoustic enclosure consisting of 4" thick acoustic panels and intake and discharge silencer banks.

Nearby surrounding rooftop equipment was enclosed with the acoustic panels or carefully built around to ensure sufficient clearance and access. The team also included structural support for the discharge silencer banks and roof panels and an access door was installed to satisfy maintenance requirements.

After installation, the project team measured dry cooler noise levels to confirm the requirements outlined in the design specifications. Price's complete noise control line allowed the design team to tackle multiple project hurdles and reduce noise levels while minimizing the impact on dry cooler performance.







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### Project: **Mercy Hospital Joplin**

Location: **Joplin, MO**Project Type: **Medical**Project Size: **875,000 ft**<sup>2</sup>
Project Cost: **\$345 million** 

Architect: **HKS Architects Inc.** 

MEP Engineer: **Heideman & Associates**Contractor: **U.S. Engineering Company** 

Price Representative: Jorban-Riscoe

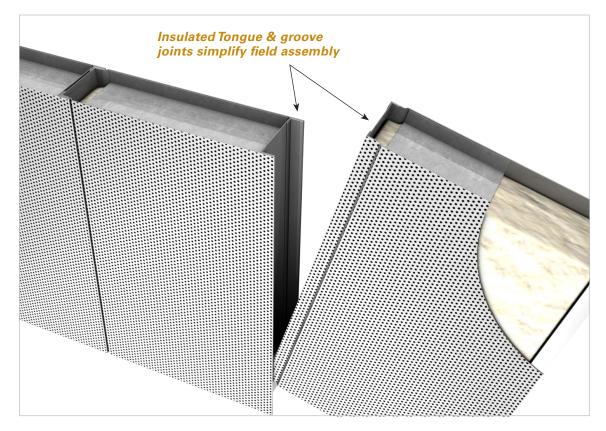
Associates, Inc.

**Products: Price Acoustic Panels** 

The Challenge: Mercy Hospital Joplin was built at a record pace, in order to replace St. John's Regional Medical Center that was destroyed in a 2011 EF-5 tornado. The hospital's destruction forced existing patients and wounded victims of the disaster to be treated from a temporary field hospital. The design team hired to rebuild the hospital had to reconstruct the entire hospital very quickly, and started by laying the foundation before the design was finalized. To prevent future destruction from strong storms and tornados, the team incorporated innovative storm-proof material and building techniques.

The Solution: Price worked with the engineer and contractor throughout the design process to determine the most cost effective solution for handling the hospital's outside air ventilation requirements. Ultimately, Price supplied over 13,000 square feet of acoustic panels to construct intake and discharge air plenums. These acoustic panel plenums allow mechanical equipment to function at higher efficiencies while minimizing noise transmission to surrounding occupied space. Price conducted site visits during the design and construction stages and delivered acoustic panels in phases to satisfy key project milestones.







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## Project: Morris, Manning & Martin, LLP

Location: Atlanta, GA

Project Type: Office

Project Size: 132,000 ft<sup>2</sup>

Architect: Gensler

MEP Engineer: Gray & Postell, Inc.

Mechanical Contractor: **Maxair Mechanical Inc.**Price Representative: **Tom Barrow Company** 

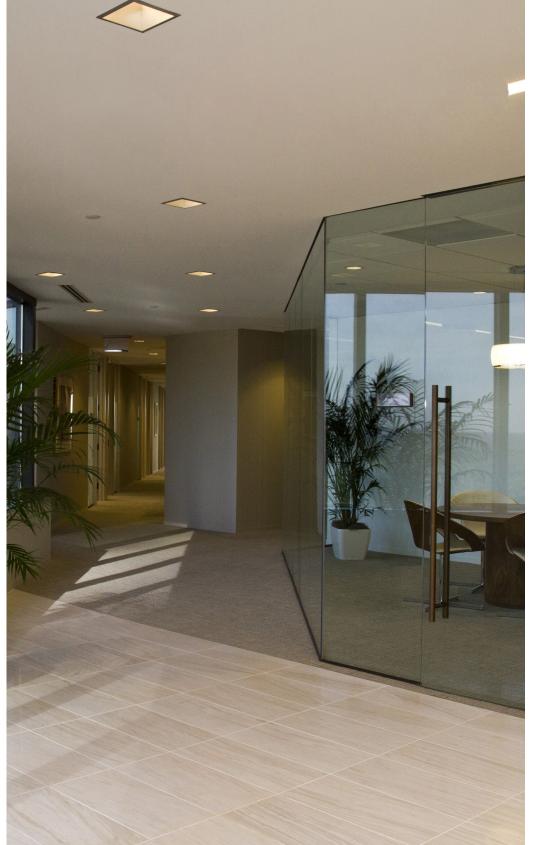
Products: Price TLRD®s

The Challenge: While refreshing their office in the iconic
Atlanta Financial Center building, Morris, Manning &
Martin, LLP also wanted to ensure that their workplace
provided a very high level of speech privacy and occupant
comfort. Noise transfer between occupied spaces
(typically referred to as "cross talk") is often limited by
using field fabricated lined elbows on top of non-ducted
return grilles. These lined elbows (often called "sound
boots") present several challenges. The boots are large
and cumbersome, require additional labor for attaching
to the deck above, do not fit within tight or shallow
ceiling plenums and do not have performance data.

The Solution: Price provided an engineered solution for low-profile return air requirements: the Thin Line Return Dissipater (TLRD®) silencer. This air transfer silencer addressed speech privacy concerns, labor and coordination challenges, and provided a flexible solution. Labor savings were immediately realized when transporting TLRD®s in the building; the customer could only load three to four sound boots in an elevator at a time but with TLRD®s they were able to load over 10 at a time. Price also worked with the design team and Maxair Mechanical Inc. by mounting TLRD®s on the back of the return grilles in the factory, further reducing labor time. Another key benefit of the TLRD® is its reduced height, which allows architects to design higher ceilings. Sound boots are often 24-36" tall while the standard TLRD® is only 4" thick. Ultimately, Price provided over 350 TLRD®s to help the design team create a luxuriously quiet and confidential office for Morris, Manning & Martin, LLP.







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### Project: SLC Public Safety Building

Location: **Salt Lake City, UT**Project Type: **Government & Public** 

Project Size: **335,000 ft**<sup>2</sup>
Project Cost: **\$125 million** 

Architect: GSBS Architects

MEP Engineer: Colvin Engineering Associates

Contractor: Okland Construction

Owner's Representative: MOCA Systems, Inc.

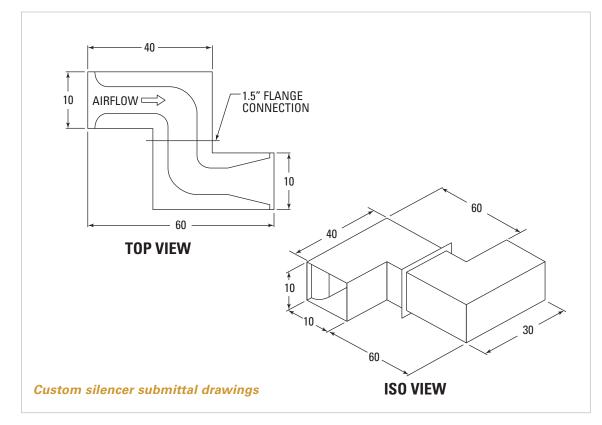
Price Representative: Midgley-Huber, Inc.

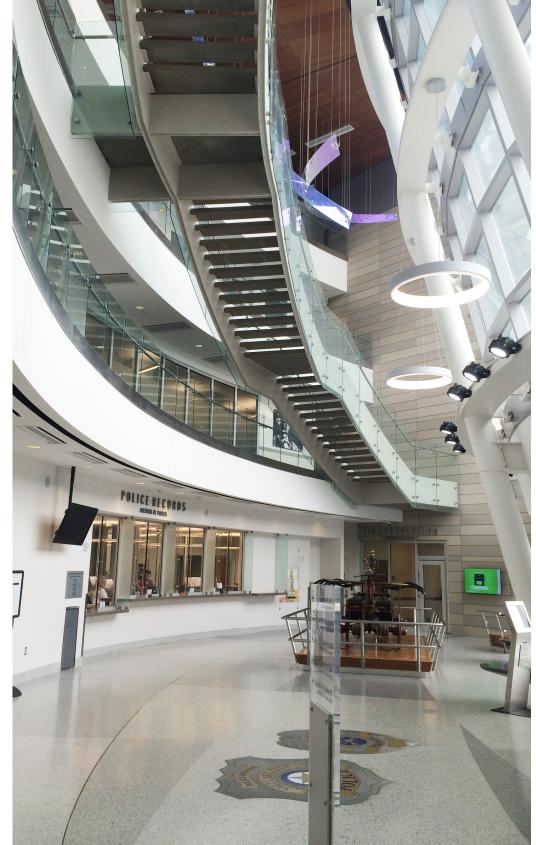
Products: Price Duct Silencers

The Challenge: Public buildings that house emergency services must be maintained during and after destructive events including earthquakes, storms, and terrorist acts. It is in these times of need when the grid is offline that emergency services are most important. During the terrorist attacks on September 11, 2001 for example, the New York City Office of Emergency Management had to abandon its offices at 7 World Trade Center due to risk of collapse. This challenge ultimately drove the design for the new Salt Lake City Public Safety Building. At the same time, the confidential and highly critical nature of conversations in the building required a quiet and properly isolated workspace.

The Solution: The Salt Lake City Public Safety Building is a 335,000 ft<sup>2</sup> building that houses the Salt Lake City Police, Fire, and Emergency Operations Departments. The building was designed to not only withstand a 7.5 magnitude earthquake that is possible in the region but allow full operations to continue afterwards. This impressive building also achieved the Mayor of Salt Lake City's goal of becoming the first 24-hour operating net zero energy building in the USA, as well as achieving LEED Platinum certification. In order to provide quiet and confidential spaces, silencers were placed near noise sources including air handling units and fan coils. Price provided various custom silencers when standard silencers would not work. Heavier gauge casings (16ga and 10ga) were also used for select silencers to reduce possible breakout noise that could impact nearby occupied space. Ultimately the design team provided a confidential and comfortable work environment that is equally resilient during and after catastrophic events when emergency services are most needed.







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## Project: Polsinelli PC Headquarters

Location: **Kansas City, MO**Project Type: **Office - Headquarters** 

Project Size: 235,000 ft<sup>2</sup>

Architect: 360 Architecture

Engineer: Lankford | Fendler + associates Consulting Engineers, Inc.

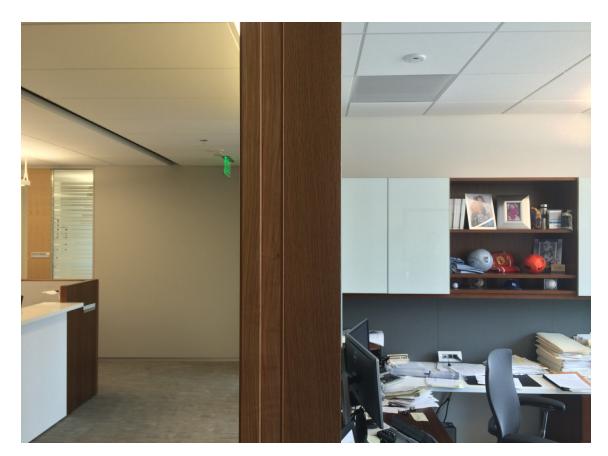
Contractor: **JE Dunn Construction** 

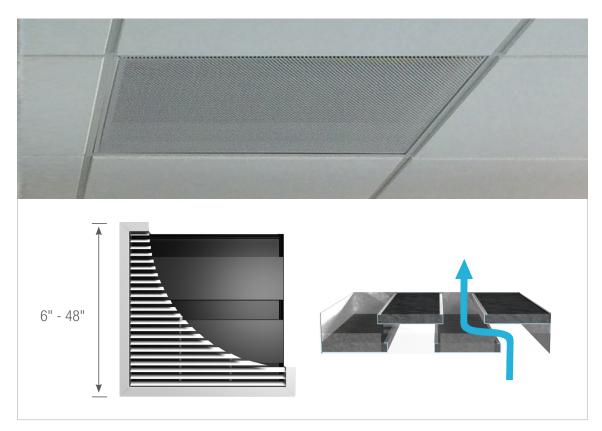
Price Representative: **Jorban-Riscoe Associates, Inc.** 

Products: Price TLRD®s

The Challenge: Polsinelli's new headquarters needed to provide transparency and confidentiality. Transparency was achieved in part by using glass panels and walls and a wide central staircase connecting the 9 story office. This design helped maximize operational efficiency and provide flexible room configurations, but in combination with common return air plenums and open layouts created speech privacy concerns. The law firm's intelligibility requirements and confidential nature of conversations throughout the office required quiet and properly isolated workspaces.

The Solution: Speech privacy between non-similar workspace was achieved by using over 400 Price Thin Line Return Dissipater (TLRD®) silencers to reduce noise flanking through the common ceiling return plenum. TLRD®s are laboratory tested and effectively reduce noise while having a minimal impact on airflow through the return grille. TLRD®s are also not visible through return air grilles and the slim 4" depth fits easily into shallower ceiling plenums, giving architects added location flexibility and freedom to design higher ceilings. In this project, TLRD®s were shipped pre-assembled with return grilles to provide a seamless engineered solution that also minimized installation labor and visibility into the return plenum from the occupied space.







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