

# Charles Tupper Office Building

Application: Duct Silencers (Axial Fan Systems)

## ! CHALLENGE

- > Break-Out Noise
- > Fit Existing Ducts

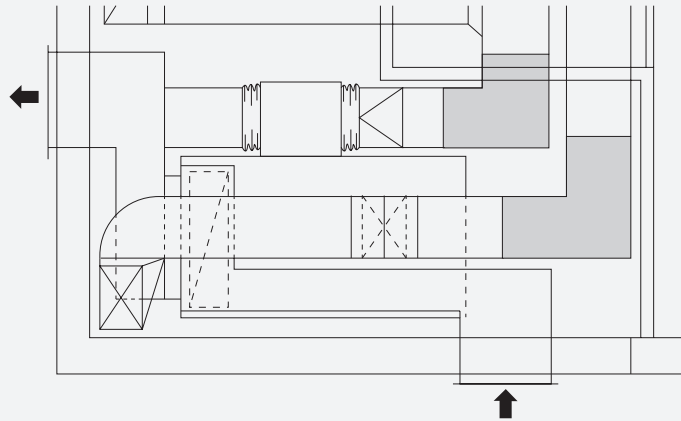
Fans and air handling units located in mechanical rooms adjacent to occupied spaces are scattered throughout the building. Return fans are axial type. Most existing ducts have elbow fittings in the occupied ceiling space adjacent to the mechanical room walls. Break-out noise from these duct regions was the most common and biggest problem.

## ✓ SOLUTION

### ELBOW SILENCERS WITH HTL WALLS

Most silencers are elbow type to fit the existing ductwork. To prevent break-out noise, silencers located at the mechanical room walls were supplied with higher transmission loss (HTL) walls.

Existing office building upgrade to NC-35 uses Vibro-Acoustics' fit-the-duct silencers to reduce fan noise.



Above: Simplified plan drawing (adapted from original)  
Left: Mechanical equipment room. Plan view.  
Right: Elbow silencers installed in equipment room walls to reduce breakout noise.

