

# Yorkville Village Shopping Mall Toronto

## Cooling Tower Solution

### SCOPE & SUCCESS

Vibro-Acoustics designed and manufactured Acoustic enclosures for three cooling towers and two Energy recovery ventilators to satisfy municipal noise level requirements.

#### HIGHLIGHTS

- > Eliminated noticeable equipment noise in the surrounding areas of the equipment
- > Overcame Pressure Drop limitations
- > Complied with architectural requirements of the project

### OVERVIEW

**Yorkville Village was built in 1976 as Hazelton Lanes. It was an upscale shopping mall in the Bloor-Yorkville luxury shopping district.**

In 2011, it was purchased by a major developer who sought to add 5000 square feet to the existing 21,000 square feet indoor space. The developer also wanted to replace the mechanical system as part of the redevelopment.

Three Cooling towers and Two energy recovery ventilators were part of the new mechanical systems. These were supposed to be located on the north east equipment yard of the mall.

### ! CHALLENGES

**THE EQUIPMENT** was to be installed in a residential neighborhood with a few condo buildings in the vicinity as well. To get a permit for the redevelopment, the developer needed to comply with the strict property noise laws of the city. An acoustical consultant firm, hired for this purpose, completed a noise survey and presented findings and recommendations.

Aerodynamic considerations were also critical in the design since cooling towers and energy recovery ventilators require certain air flow for satisfactory operation.

 SOLUTION

**Vibro-Acoustics partnered with the acoustical consultant and mechanical engineer to redesign the noise control solution with the Integrated Systems Approach.**

**A COMBINATION OF PRODUCTS** was used to come achieve the noise attenuation levels prescribed by the acoustic consultant.

Acoustic louvers were installed at the walls of the enclosure for air intake. Where air intake was not required, acoustic panels were installed on concrete walls. Silencers were installed at the roof of the enclosure.

The solution was aerodynamically designed to ensure that air paths were not obstructed and the equipment was able to perform according to its design conditions.

