

# Stone Wool Insulation Creates a Quieter Office Space

Case Study



## Project Description

Flynn Canada is a trade contractor of complete building envelope solutions. With 17 offices from coast-to-coast they manage single facilities, as well as organizations with national real estate portfolios. When the company needed to expand its own real estate, by turning a warehouse into office space, the noise inside the building from the nearby airport needed to be addressed. A re-roof was needed over the office space portion of the building. Valcoustics, an acoustical consulting company, performed acoustical testing on the initial building before and after the re-roof to assess the difference in noise transmission frequencies.

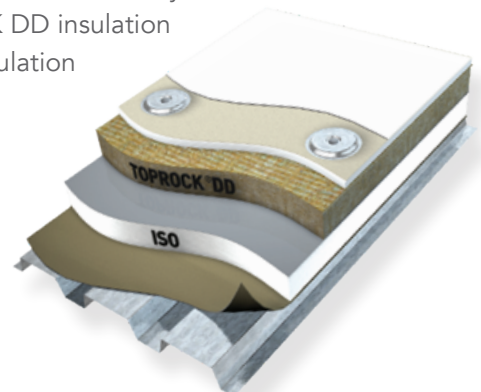
## ROCKWOOL Product Installed

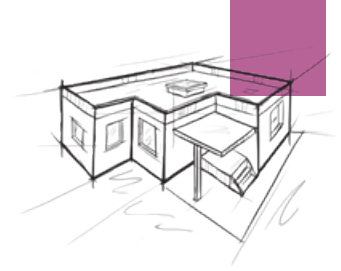
ROCKWOOL TOPROCK® DD is a rigid stone wool insulation board with exclusive dual density properties. It features a higher density top layer providing strong point load resistance and effective load distribution. TOPROCK is

fire resistant, water repellent, sound absorbent, sustainable and has a long term stable R-value.

## Roof Assembly

- White single ply TPO membrane adhered with asphalt
- 5/8" cover board mechanically attached to the deck
- 2.5" TOPROCK DD insulation
- 1.5" polyiso insulation
- Vapor Barrier
- Steel deck





*“Based on the same sound level at the roof for the pre and post renovation condition, the indoor NC level has been reduced from NC 61 to NC 39 with the indoor sound level dropping from 58 dBA to 45 dBA. This reduction is a direct result of the roof upgrade, which included the addition of the ROCKWOOL TOPROCK DD 2.5 inch insulation.”*

- Valcoustics Canada Ltd.

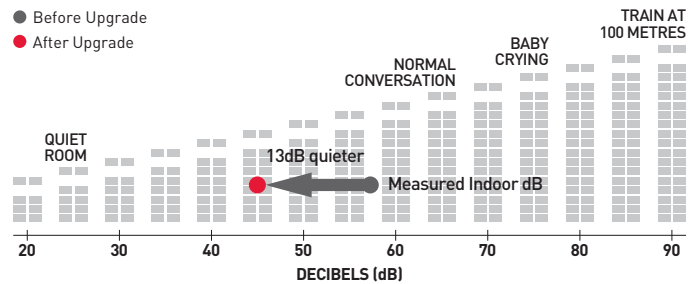


**Why TOPROCK® DD Was Chosen**

ROCKWOOL TOPROCK® DD 2.5” was used over existing materials to retrofit the roof for noise reduction. ROCKWOOL insulation products demonstrate superior sound reduction characteristic and improved low frequently sound absorption to both normal and random incidents of noise. The unique non-directional structure is denser than traditional insulations. This effectively reduces airflow and sound transmissions for excellent sound reduction.

**Results**

“Substantial improvement in the indoor acoustical environment was achieved. Outdoor sound levels due to the aircraft flyovers were reduced by up to 39 dB.”



**Architect**

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**Location:**

Toronto, ON

**Project Timeline:**

2010-2011

**Project Size:**

82,000 sq feet

**ROCKWOOL**

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Meetings are no longer interrupted by airport traffic noise due to 13 dB noise reduction after re-roof.