

## CASE STUDY

St. Thomas Moore + Delta Controls

# The Power of O3 Lighting At St. Thomas Moore Collegiate School

St. Thomas More Collegiate (STMC) is a Catholic co-educational independent secondary school (grades 8 – 12), in Burnaby, British Columbia (BC), Canada, that has offered young men and women from throughout British Columbia's Lower Mainland an extraordinary education and a second home for almost six decades. Since 1960, when three Christian Brothers opened the school to 125 Knights, STMC has helped shape thousands of young minds and touched the lives of their families.

## Background

In 2023 St. Thomas Moore Collegiate (STMC), a private secondary school (Gr. 8 –12) located in Burnaby, B.C. Canada completed a lighting upgrade in their Learning Resource Centre. The space provides supplemental aid to students with diverse learning needs, particularly Dyslexia and Autism Spectrum Disorder.

The upgrade's goal was to modernize the space both in design and functionality, taking it to the next level to create a comfortable, productive learning environment.



## The Challenge

The spectrum and intensity of light sources have significant impacts on health, affecting the daily aspects of student's lives, including sleep and energy levels.



In a classroom setting, the biggest challenge is maintaining a uniform spread of light across all surfaces of the space. It can be detrimental to a student's energy level when you have a wall being lit at 110-foot candles (the measurement of illuminance or light-intensity) and the surrounding space being lit at 20-foot candles, the stark contrast forces the pupil to open wide when looking up and narrow when looking down resulting in fatigue of occupants. The color temperature of light also impacts each occupant's circadian rhythm which constitutes the physical, mental, and behavioral changes experienced throughout the day.

## The Solution, Benefits & Results

The Delta Controls O3 Edge, combined with Amerlux's innovative lighting fixtures and the wireless technology of EnOcean delivered by Echoflex, provides a unique automated solution in key areas of the learning space. This solution regulates occupant comfort by delivering precise occupancy data, room temperature, light intensity levels, and color.

### Benefits & Results

Optimized regulation of circadian rhythms reducing fatigue during occupancy

Improved student sleep for better learning experiences each following day

Overall increase in space comfort for both students and faculty

Improved temperature and occupancy detection by combining multiple sensors through O3 sensor fusion technology

Energy and cost savings through building automation technology

Touchless control for the benefit of custodians and other building operators

## Testimonials

*"I was trying to think of specifics to send you and I think the biggest thing I can say is that I have heard nothing from any of the end users meaning everything has worked out great! I love the flexibility in the system going forward and a simple text for changes and it's done without any site visit. Anyone in the maintenance end of things like me would love this throughout their buildings everywhere. While it may be more costly up front the savings on labor alone, I'm sure covers the added cost over time."*

Maintenance Supervisor, St. Thomas Moore Collegiate

*"The lighting has been great! It has been so nice to be able to dim the lights for students and to change the settings so easily. The settings are fantastic. Thanks so much!"*

Learning Resource Coordinator, St. Thomas Moore Collegiate

*"We are really enjoying the new lighting in the Physics lab. They are nice and bright, and the control system has been very useful. We are configured with a) all lights on b) 1/3 of the lights on and c) a single light as a spotlight, all of which I have used at different points this year."*

Joe Muise, Physics and Earth Sciences Teacher

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## About Delta Controls

At the forefront of building automation systems, Delta Controls provides global solutions through its network of Partners in 80+ countries. Focusing on innovation and sustainability has made the company industry leaders for over 40 years. Delta Controls manufactures all products in Metro Vancouver, Canada, offering dependable, user-friendly control solutions for buildings in the commercial, healthcare, hospitality, education, and leisure markets. As part of Delta Electronics, Delta Controls is committed to leading building automation into a sustainable future. [deltacontrols.com](http://deltacontrols.com)