

CASLE had been working since 1992, making progress on improving existing schools' environmental health and safety. In 1998 the Department of Education requested that we do a walk-through of the Province's entry into the CaGBC (Canadian Green Building Council) contest, Horton High School, near Wolfville. The resulting report was published by the Department and circulated widely. It was the beginning of real advancements in healthy building design and construction. Some but not all "green" goals and items of new schools serve healthy goals.

A year later, CASLE was asked to reassess the school and a second report was published. (When we find these documents in our paper archives we will post them here.)

The Department responded to CASLE information on ECO (Environmentally Controlled Opportunity) classroom information by creating such a classroom in the new Lockview High School. Avis Degaust-Ratchford and Karen Robinson guided the NS Department of Education's team led by Paul MacLellan. (Lockview was also the first new school to have mechanically ventilated halls.)

It was a success. Environmentally sensitive students were transported in from places as far away as Hants County. A sensitive teacher staffed the classroom. The classroom was so successful that we suggested that the Province install an ECO Classroom in every new school. However, instead, the Province decided all children deserve healthy classrooms and set upon creating the Province's first, benchmark, Healthy School when it designed and built Halifax West High School.

Karen Robinson was asked to form and chair a committee to create guidelines for design and construction of the new school. She requested the committee have representatives from both the Department of Education and Transportation and Public Works to ensure good oversight and buy-in. The Department of Education was in charge of some aspects of new school creation and TPW was in charge of the creation process so it made sense to vet all aspects through both departments.

The document Healthy Schools Design and Construction and its Appendix was the outcome, with only 3 months to produce the document! Robinson and Debra Hum of CASLE, Gerald Muise of D of Ed, and Phillip Cox of TPW made up the core committee. They first produced rough "Task Lists" with input from volunteer professional experts in many aspects of healthy building design and construction from across Canada to help make it all possible. The generosity of all was outstanding. All were excited to have this opportunity to change the future of schools everywhere.

This was a fast-tracked school because the old school had been condemned. Students were being taught in several locations over the next two years. Therefore, the committee had only three months to create guidelines to be used. The committee drew in many skilled and informed professionals from across Canada to help. These professionals contributed as volunteers who could see this was an opportunity to make something very good happen.

Each item was then vetted by a team of engineers and architects from both departments and CASLE's Robinson and Hum. Healthy Schools Design and Construction and its equally important appendix were created.

It had to be finished with time left over to gas-off the building materials, special procedures were chosen to enable the building to be finished in time to be off-gassed well before occupants began using it. For example, the foundation was poured in the winter inside a large heated tent structure. Also, instead of using the gymnasium as a storage area and finishing it last, storage was found elsewhere and the gym floor was finished and gasses-off early. The building was divided into quadrants which were completely finished as if they were free-standing units, rather than having the entire building wait for the previous process to finish before calling in the next.

The day it opened there were no health complaints at all. This was the first time in anyone's experience or recollection that a new school was not accompanied by nose bleeds, headaches, asthma, or other health concerns related to the new building. In addition, many of the teachers who had fragile health from having become ill in the old Halifax West, a mouldy, worn out school, were able to return to full time teaching.

Soon, even the sicker teachers dared return to work. Students and ailing teachers from other school requested to be transferred to the school. The Principal remarked that he had a staff of sick people but one would never know it because they are healthy in this healthy building.

Some years later, Robinson ran into a newly retired Halifax School Board staff person who had been in charge of teacher placements. She told Robinson she transferred many ailing teachers into that school and they functioned as any healthy teacher would.

A significant error was made, however, and the price of that error continues. The Province had a regulation that the architectural company that designed the conceptual plan for a school could not be the same company that designed and built it. (Why?) Our efforts to have this requirement waived for this fast-tracked school failed. Soon a completely new company was hired and we all tried to impart all the information that had been learned and translated into the concept by the first company.

Robinson was brought into the big board room of the new company and was told, "You are going to be very happy about this. We are going to make this a green school." Robinson replied, that would be great to also have a green school, but what her committee (departments and community too) want is a Healthy School.

Then began nearly two years of struggle to get a Healthy School. The conceptual plans had indeed planned for green energy, but the plans, such as for passive energy, were tossed out and instead a heat pump system was created. We were assured that the passive systems were not even needed. That the school board would save so much money with this system they could afford to hire two new maintenance staff to manage the system.

Heat pumps in the ceiling of every classroom soon were dripping condensation. They created a significant and ongoing mould problem that principals and maintenance staff continue to deal

with (successfully, though it requires attention and funds). The heat source was a large water holding tank, which then needed to be heated with electricity to be warm enough to extract heat! And two maintenance staff were indeed needed to maintain the system. It was an energy pig that created a mould problem that needed constant attention in order for the school to remain a healthy school. The good news is that the requirement to change companies mid-project stopped with this school because of the hard lesson learned here.

Despite the energy and mould failures, with the commitment of the administration and staff to keep this a healthy school, along with all the successful Healthy School aspects that we managed to include, it is functioning as a healthy school.

The next school we built was Tantallon's Sir John A MacDonald High (soon to be renamed Bay View High). With all the lessons learned from the benchmark school, we created what we believe is a successful Healthy School. All subsequent schools have benefitted from what was done or not done at Halifax West.

The Departments of Education & Transportation and Public Works engineers and architects and CASLE's two reps then spent two years reviewing each item in the Healthy Schools Design and Construction guidelines again. This time, to incorporate them into the Provincial DC350 Design Requirements Manual so that every new provincial building would be a Healthy Building (schools, offices, jails...). About 90% of the guidelines were incorporated.

We asked the engineers and architects to share all they learned about healthy schools with their counterparts across the country. Robinson was a speaker at national and international conferences and served on committees and boards for federal departments such as Health Canada. Conference participants and researchers expressed excitement to see their research actually being put into practical use in Nova Scotia.

A couple years later Robinson received a request from the then sitting Health Minister, asking if she could assist his department to create healthy hospitals and other Department of Health buildings. She worked with the department's top engineer to relay all of the information. She could not work as hands on this time because her parents now needed her in their final years. However, the department began by building about a dozen new long-term-residences for seniors. Robinson walked through several when they were completed and was pleased to relay congratulations to the top engineer for a job well done.

A setback happened in the building of Citadel High School ~2007. The Province had continued to build new schools successfully around the province, and had continued to learn and refine the Healthy School goals. Citadel presented new challenges. It would be interesting to do a study of what went wrong and why. However, we only have Robinson's experience during the process and the reports of students and teachers who became ill in the early months after the school opened, and a draft report from the Department of Education that as far as we know was never completed. We have included on this website both the original redacted version of this report examining "flush-out" procedures at Citadel High, along with a document written by Robinson attempting to answer or correct parts of the report. Robinson had served as the Healthy Building consultant for the project, but found her voice was not being heard. Robinson also offers that the

situation surrounding the creation of this school was a “perfect storm” and entirely too complex for discussion here.

Robinson served as a consultant to the NS Human Rights Commission in two cases involving teachers who became ill at this school. She also spent years assisting many ailing students and staff to find physicians, medical help and information to overcome their health condition.

The Province continues to build healthy schools and repair older schools. School boards know how to operate healthy environments. We hope this continues far into the future.