



**BOTKIN HISTORIC  
BUILDING  
CONSERVATORS**

*CONSERVING A MOMENT IN TIME*

**JUNE BOTKIN**

DIP. (CON), PSC, HCP

# Regina Public School Board Sustainability Policy 14

## **Policy 14 SUSTAINABILITY**

- The Board of Education recognizes everything in our ecosystem is interconnected and that all of our actions impact its well-being.
- The Board understands its fundamental responsibility to be environmentally sustainable and to align current and future actions with governmental policies, regulations and laws.
- The Board acknowledges it has a responsibility to educate students and provide opportunities for staff, to develop social responsibility, ecological literacy, and sustainable behaviours and actions.
- The Board aims to develop effective environmental practices and strives to create and support innovation within our communities. As a result of our shared guardianship of this planet, implementation of this policy shall be the joint responsibility of the Board, students and staff in collaboration with parents and our community.**
- The intent of the policy is to create awareness and support building the necessary structures for a system-wide approach to environmental stewardship actions.
- Sustainability objectives will relate to the four domains: Curriculum/Teaching/Learning, Facilities and Operations, Professional Development and Governance and may include, but are not limited to the following subject areas:
  - Curriculum/Instruction
  - Energy Conservation
  - Grounds Greening
  - Student and Employee Leadership
  - Sustainable Purchasing
  - Sustainable Transportation
  - Waste Management
  - Water Conservation

The Director will report annually to the Board on the progress of the Division's sustainability initiatives.

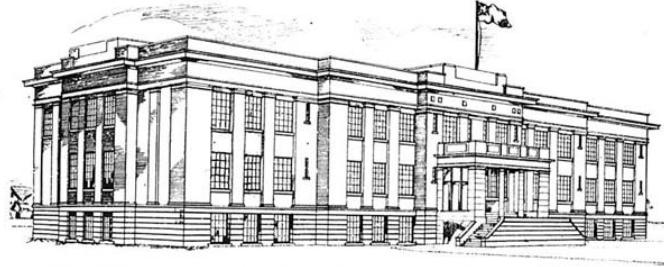
This is the Regina Public School Board's sustainability policy. Please keep this in mind as I go through my presentation.



Connaught School site plan

This is an aerial view of the Connaught School site which is beautifully lined with mature trees while offering ample open space for children to play. Note the orientation of the school on the property. JH Puntin was immensely aware of the importance of how he orientated the school prior to construction and ensured that it was placed on the site in a manner that would maximize the prairie landscape and environment while creating an inspiring learning environment.

## Architects rendering Connaught School

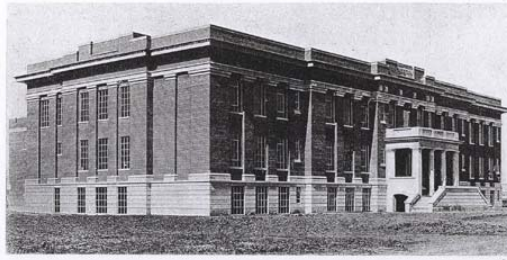


The Connaught School, Regina. Architect, Mr. J. H. Puntin; contractors, Parsons Building Company, Limited

- By always placing these buildings on the site with the main corridor longitudinally north and south, sunlight enters every classroom daily, those on the east receiving morning sun, and those on the west the afternoon sun, while none of the rooms are exposed to the glare of southern exposure, which on the prairie is particularly trying in summer.

The architect wrote in the January 1915 *Construction: A Journal for Architectural, Engineering and Contracting Interests in Canada* that *"By always placing these buildings on the site with the main corridor longitudinally north and south, sunlight enters every classroom daily, those on the east the morning sun, and those on the west the afternoon sun, while none of the rooms are exposed to the glare of southern exposure, which on the prairie is particularly trying in summer."*

He was acutely aware of how to orientate this school to maximize sunlight and environmental conditions to the benefit of the student, teachers and the building itself.



Connaught School, Regina

J. H. PUNTIN, Architect

Connaught School circa 1912 and present



This was Connaught circa 1912 and as it appears today. A poor example of its former glory. Windows have been bricked over limiting the amount of sunlight and fresh air which instead is now controlled through mechanical and electrical systems. This is completely contrary to the original design of the architect who so carefully took into consideration the orientation and placement of the school. The portico over the front entrance has been removed exposing the stairway to water penetration and environmental deterioration. This shows a complete lack of understanding between design elements, form and function.

## Exterior Masonry Condition

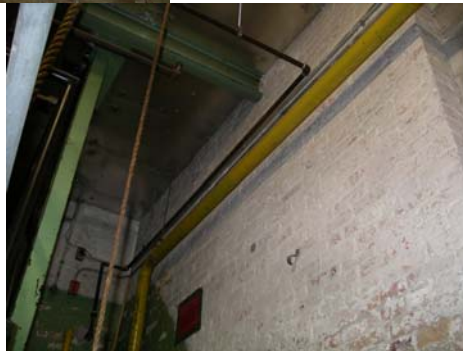


I have a limited time to be able to speak with you so I have chosen some elements that I feel require addressing and comment

The cornice was removed for unknown reasons allowing water penetration into a soft clay brick face that was meant to be protected by the cornice. The pointing mortar in this area has deteriorated or is missing due to this exposure. The cornice could be easily reinstated and the parapet repointed. The lower limestone sections if deterioration was caused by completely inappropriate interventions. The soft Indiana Limestone was pressure washed forcing water into the porous stone which in turn caused the efflorescence present on the exterior of the building face. Also the pressure washing removed the protective patina on the stone causing spaulting . The wand marks from the pressure washing are still clearly visible. This intervention was supposedly done to remove graffiti but instead has caused substantial damage.



Interior Masonry Conditions

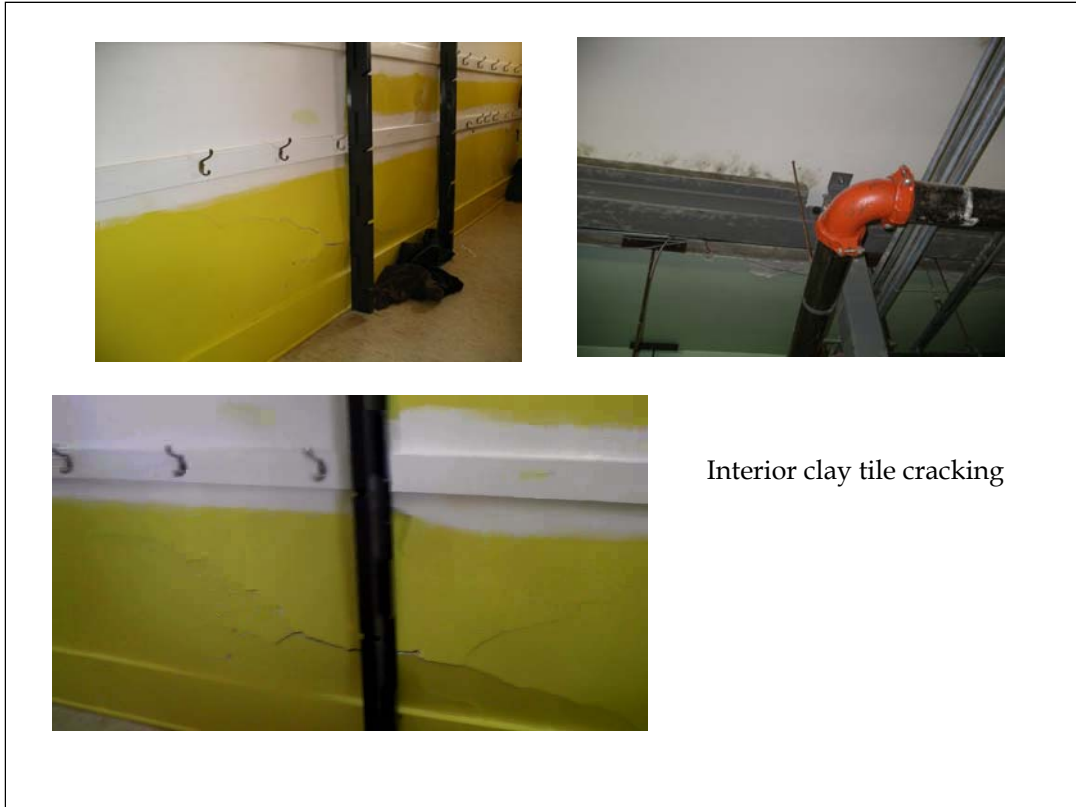


The interior masonry also shows evidence of efflorescence and in some cases spauling of the brick faces. This is caused by a few factors: 1) there is asphalt and concrete placed directly against the face of the building. This causes water to wick through these materials and into the more porous brick and limestone. This causes a condition called rising damp which means that water continues to travel through the porous materials, saturating the building envelop and appearing on the exterior as a white powdery substance. 2) I am guessing that the weeping tile system around the perimeter of the building has collapsed and is impacting moisture saturation and the movement observed around the building. 3) A portland mortar was used to selectively repoint the brick. Since this is a substantially stronger material than the soft brick, the brick has spaulted leaving piles on brick material at the base of the wall.



Concrete and asphalt placed directly against the exterior walls.





This is an example of good intentions gone wrong. This is the cloakroom in classroom 12. A rigid structural steel support system was installed in the basement directly below this area to prevent a sag in the floor. What you are seeing in these pictures are the pressure of the steel pushing up on the clay tile wall system basically crushing it. The wall is non structural according to the historical drawings and has a 24 inch space between it and the wall of the adjacent classroom. The cracking in this area was noted in the November 2012 structural engineers report where remedial work was recommended but not carried out. Then in December 2013 the room was evacuated due to the serious deterioration of the wall so that emergency repairs could be undertaken.



Photo 25: Floor Crack at Room 12



Photo 26: Floor Crack at Room 12

The non-structural clay tile wall has been removed from the cloakroom which revealed deflection between the floor slabs in this area. The problem is that since the structural steel framework directly below this area is not adjustable the damage and deflection to the floors and walls will continue. This is another example of an intervention that has caused damage and deterioration.



Photo 18: Beam Connection



Photo 19: Beam Connection

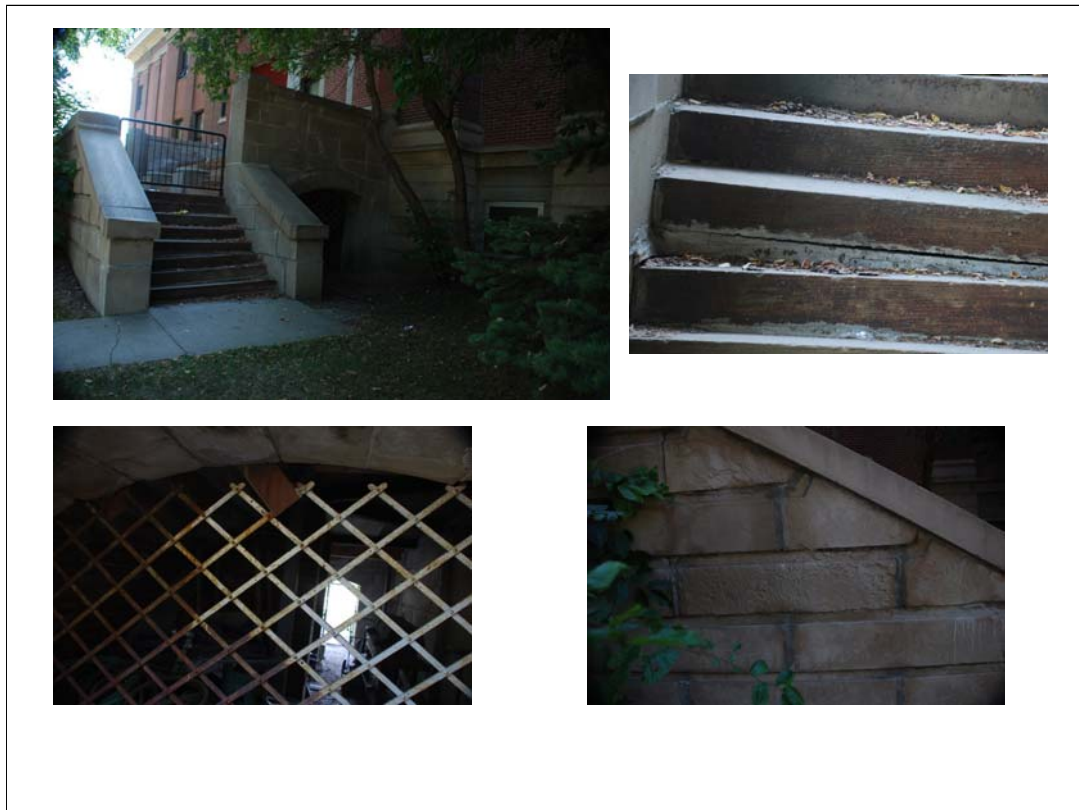


Photo 20: Beam Connection



Photo 21: Beam Connection

These are pictures from the February 2014 inspection report of a beam that shows cracking. However questions regarding how deep and wide the cracks are, including general dimensions and details is missing. How deep is the beam pocket and what is the condition of the beam in this area? How much deflection of the beam over its span is there? Is the beam going to collapse at its bearing point between the brick and the visible area of the exposed beam? So many questions and no answers!



These are photos of the front staircase with sagging **treads**. They also show completely inappropriate interventions to repair the situation. A portland based mortar was used to fill and repair the spaces between the treads and risers and also as a pointing mortar on the stair parapets which has caused efflorescence, spauling of the stone and general deterioration. Supporting the staircase is a brick pier system. It is my understanding that there was a broken water tap in this area that was not repaired for years. The water penetration and saturation of the soil would then cause the support system to sink causing the movement evident in the area.

In conclusion visual inspections with photographic comparisons have been on going at infrequent intervals since before August 2012. This has proven inadequate. A detailed structural survey should have been undertaken from the beginning. Cracks should have been measured and carefully noted on drawings for every level and every room. Movement and deflections should have been measured and fixed datum points throughout the building installed so that the movement of the building could be measured and quantified. But this was not the case. Throughout this presentation I have shown you example after example of interventions that caused damage and deterioration. That doesn't mean that all of these issues can't be corrected through a carefully researched and planned rehabilitation project. This rehabilitation I believe would cost less than the costs to build a new school and would meet the governments energy management and sustainability requirements. It would also provide a 21<sup>st</sup> century learning in an inspirational and creative historic setting.

Thank you for your  
time and attention

Now the parents, community and the school board are at a critical junction where life altering decisions must be made. The reports I have been referencing were not shared with the parents or the public and were only obtained through requests from the SCC. I believe at the very least the \$20,000 worth of structural repairs following accepted conservation practises should be undertaken so that everyone has time to develop appropriate responses to this crisis. The parents and the community deserve a year to prepare for whatever change may be forthcoming. It also will allow time for a thorough and complete structural evaluation of the school by an independent engineer and conservation team. The building, the parents and the community deserve this time. The Cathedral community loves it school and needs some sort of reassurance from this board and the ministry that a school will remain a part of this community for the next 100 years.