

Attn: Brian McKay, LKDSB Associate Director & Treasurer
Lambton Kent District School Board
200 Wellington Street
Sarnia, Ontario, N7T 7L2

Date: January 10, 2023

Re: **Brooke Central PS – Structural Upgrades Progress Update**
BGAI Project No: 222727

On November 16, 2022, BGAI issued a letter to LKDSB regarding the roof structure snow load concerns for the 1960s and 1967s sections of the Brooke Central Public School. Decisions were made to close these sections of the school and to evaluate the remaining sections of roof. This includes the raised roof portion of the 1960s section, and the 2007 section of the building, where the daycare and gymnasium are located. This letter is a progress update of the project status.

Progress Update:

LKDSB have engaged with Wellington Builders of Forest, Ontario to assist as a Construction Management Contractor for the required roof structure upgrades. This is the most time sensitive and economic approach for this situation. The Contractor will carry out the snow load monitoring program, prepare the building for site reviews, complete demolition work, participate in construction feasibility discussions, and help to phase construction as designs for the required upgrades are completed.

The 1960s and 1967s sections of the school have been vacated and are under the snow load monitoring program by the Contractor. DC Buck Engineering have updated the structural report regarding existing conditions for this section of the building. The first report issued was based on available documentation with limited site verifications. Reissuing this report involved further site investigations and data review to verify existing structural conditions. These further reviews did not change the result of the roof structure being required to be upgraded. In addition to this, the raised portion of the 1960s section of the roof was included in the revised report. The raised roof section was not evaluated in the initial report as it was not part of the original scope of work to replace roofing membranes.

Based on the findings of the first report, as a precaution, LKDSB requested a structural review of the remaining 2007 section of the school roof. This roof evaluation was completed with site verified data. Based on the available data, it is assumed that the construction of this portion of the school was designed under the 1997 Ontario Building Code; however, there is limited documentation to support this assumption. After reviewing the building under the 1997 Ontario Building Code, the structural engineer indicated that this roof does not meet the building code requirements of the day. Some snow loads are accounted for in the sizing of the roof structure, and there is no visible deterioration of structure, so the situation is not as concerning as the 1960s and 1967

sections of the school. It is still strongly recommended that these roof supports be upgraded soon. Considering this, LKDSB has requested that the Contractor engage a monitoring program for this 2007 roof section until the summer of 2023. At that point, the roof structure of the 2007 section will be updated as well.

The Project Team is working with the County of Lambton to obtain a Building Permit for the upgrades. The building permit application has been submitted and is under review with the County.

Current Actions:

The Project Team is meeting weekly to discuss the project and progress. The investigations and reports of the existing structural condition have been completed. The design for structural upgrades has begun.

Currently the Contractor is working under a snow load monitoring program for the entire roof at Brooke Central Public School.

The design Consultants are reviewing the expected scope of work to outline required demolitions for the project. Demolitions are expected to start January 2023.

As part of this project, the sprinkler system is required to be upgraded under the Ontario Building Code 2012 and Building Permit process. Western Fire Protection has been engaged to design this system. The existing building is only partially sprinklered, the finished design will include sprinklers for the remaining building areas.

DC Buck Engineering is working on the structural upgrade design, we expect to be looking at preliminary designs mid-January 2023 to start reviewing site conditions for installation.

Next Steps:

BGAI has engaged Collins Frazer Engineering to assist with mechanical, electrical, and plumbing engineering related design. It is expected that some systems will need to be reworked to get structural elements installed. These reviews are expected to start mid-January 2023, after preliminary structural designs are prepared.

We want to assure LKDSB and the families of Brooke Central that, as far as it depends on us, we are prioritizing this project to remedy the problem and to restore the Brooke Central families back to this school in the shortest time possible.

Best Regards,



Ruth Burkhart
Architect | OAA | RAIC | M.Arch. | LEED AP