



June 16, 2021

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3 Robert Speck Parkway
Mississauga, Ontario
L4Z 3Z9

Preliminary Engineering Assessment of Fire Damage to a Building

Date of Loss:	June 13, 2021
Owner:	Elizabeth Bosman and Eyal Reingold
Location:	1183 Mississauga Road, Mississauga, Ontario
Our Client File No.:	Q5995750
Our File No.:	2104-1405-MD

Per your request, Element Forensic Engineering attended the building at the above noted address on June 15, 2021. The purpose of the attendance was to assess the damage to the building following a fire. For the purpose of directional references within this report, the building was assumed to face west towards the road.

The incident building was a detached, one storey commercial building, which appeared to have been originally designed for residential use. The footprint of the building included an attached inset 2 car garage accessed from the west elevation, and an inset 1 car garage accessed from the north elevation basement level. There was an attached raised deck along the east elevation, aligning with level 1. Along the east elevation, the grade was lower, aligning with the basement level.

It was reported the building was used as a business and personal services (Group D) major occupancy. It is inferred that the original building was constructed under the requirements of Part 9 of the Ontario Building Code¹.

¹ The building code uses the building area, height and occupancy (use) to determine the parts of the building code applicable in the construction. Small and Large buildings being the major distinction. Buildings meeting each of the below restrictions are classified as Small buildings (where they don't, they are classified as Large buildings).

- Three or fewer stories;
- A building area less than 600m², and
- An occupancy of either residential (other than retirement home), business and personal services, mercantile or low/medium hazard occupancy.

The building was reported to be approximately 14 years old, having been constructed in 2007.

The building superstructure² comprised conventional wood frame construction supported on a cast in place concrete foundation.

The exterior face of the perimeter walls was sheathed in oriented strand board (OSB) and clad with stone veneer. The interior surfaces (walls and ceiling) were predominantly finished with gypsum board.

The roof was constructed with prefabricated wood trusses in a hip configuration with gable projections extending from the west and east pitches. The roof was sheathed in plywood and surfaced with a pitched asphalt shingle roofing application.

The fire resulted in widespread structural damage to the level 1 floor frame, exterior level 1 walls and roof assembly. Smoke contamination and water damage (from fire suppression effort) was evident throughout the building.

The structural stability of the building was compromised by loss, and as a result may be prone to additional damage, including a sudden and catastrophic collapse. Due to the compromised stability, our office was unable to enter the building to complete a more comprehensive assessment. To safeguard the health and welfare of the public, we recommend it be immediately demolished down to the level 1 floor frame, maintaining, where undamaged, the floor frame and subfloor.

We recommend the demolition be conducted using a deconstruction approach. The intent of the deconstruction approach is to prevent an outward collapse of the walls and prevent secondary damage to the remaining building components.

It is our understanding that the Office of the Fire Marshal (OFM) will be conducting selective demolition under their direction and that engineering support of their effort is outside of our scope of assignment.

The building shall be cordoned off with no access until the above referenced demolition is complete and the remaining structure has been inspected by our office.

Upon completion of the demolition, access to the site should be limited to personnel, trained, experienced and alerted to the general and site-specific risks, and equipped with proper personal protective equipment. Personnel accessing the site shall conduct themselves in conformance with the OHSA.

² Superstructure – the above grade component of the building

Following completion of the demolition, we recommend our office re-attend the building to assess the underlying framing. The contractor shall co-ordinate the re-assessment, 48 hours advance notice is appreciated for scheduling purposes. Prior to, or in conjunction with the re-assessment, the contractor shall ensure an unobstructed view of the remaining building elements is possible, removing any temporary coverings, as necessary.

Although subject to further assessment, to restore the building to a pre-loss condition, we anticipate the following repairs:

1. Removal and replacement of the structural components, inclusive of, but not limited to the following:
 - a. The roof;
 - b. The level 1 perimeter walls;
 - c. Partial basement level wood framed walls along the south elevation;
 - d. Partial level 1 floor frame.
2. Removal and replacement of damaged exterior finishes, inclusive of, but not limited to the following:
 - a. The stone veneer;
 - b. The shingles atop the roof;
 - c. Flashing, soffits, gutters, downspouts, etc.
3. Removal and replacement of damaged interior finishes throughout the building.
4. Reinstatement of the existing fire rated assemblies.

A building permit will be required by the local municipal building department prior to conducting any loss related repairs. In support of this requirement, our office will be working with the insured to prepare the necessary documents, inclusive of restoration drawings and a summary report. Upon completion of the necessary documents, our office will make the associated application with the municipality.

We trust you will find everything in order with our assessment. Should you have any questions or wish to discuss the above content, please feel free to contact us.

Sincerely,



Jeff Martin, P. Eng.
Report 1 – 1183 Mississauga



cc Jeff Gaucher
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