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Memorandum

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To: Will Johnston, Chief Building Official
Mark Sraga, Director Municipal Licensing Services

cc: Chris Murray, City Manager
Tracey Cook, Deputy City Manager – Infrastructure & Development
Heather Taylor, Chief Financial Officer

Re: **Crescent Town Pedestrian Bridge Review**

Attached is the final report pertaining to our Pedestrian Bridge Review. The report outlines our findings and recommendations and includes your responses to address each recommendation.

The Internal Audit Division reports to the Enterprise Risk Assurance Committee (ERAC) on the adequacy and effectiveness of city processes, including recommendations for improvement, on a quarterly basis. All memos and reports issued by Internal Audit will be tabled at these quarterly meetings.

Please extend our thanks to your staff for their assistance and cooperation throughout the review.

If you have any questions, please contact Gifford Chu at 397-0301.

A handwritten signature in black ink that reads "Stuart Campbell".

Stuart Campbell
Director, Internal Audit



Internal Audit Report: Crescent Town Pedestrian Bridge Review

Toronto Building
Municipal Licensing and Standards

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Background

On November 17, 2018, a pedestrian bridge in the City's Crescent Town neighbourhood partially collapsed. The bridge is jointly owned by the Toronto District School Board (TDSB) and Bleeman Holdings (Bleeman). The collapse occurred on the side of the bridge owned by Bleeman.

In a letter to Mayor Tory and the City Manager dated November 21, 2018, former Councillor Janet Davis requested that an independent third-party investigation be undertaken to determine the circumstances related to the pedestrian bridge collapse.

The Councillor indicated that the City, the TDSB and Bleeman's property manager, Pinedale Properties (Pinedale), were all aware that the bridge was in need of repairs and questioned why Toronto Building (TB) and Municipal Licensing and Standards (MLS) did not take enforcement action.

At its meeting on December 13, 2018, City Council recommended that an independent review be conducted by Internal Audit regarding how the City carried out its responsibilities with respect to the Crescent Town pedestrian bridge and to make recommendations for any City policy and procedures changes.

Objectives

The objectives of the review were to:

- Determine the circumstances related to the collapse of the pedestrian bridge.
- Determine whether complaints were investigated on a timely basis and inspections were completed in accordance with legislative requirements and internal procedures.
- Assess the adequacy of existing processes and procedures in identifying and mitigating such exposures.

The review focused on complaints handling and inspection processes within TB and MLS, as well as communication and coordination between the two divisions.

Methodology

The review included the following:

- A review of relevant legislation (Ontario Building Code Act, 1992), by-laws (Property Standards By-law) and internal policies and procedures to obtain an understanding of requirements, including roles and responsibilities.
- Discussions with Toronto Building and MLS staff who had performed inspections of the Crescent Town pedestrian bridge.
- Discussions with TDSB staff involved in bridge repairs.

- An examination of relevant documents and records, including orders issued, building permits, inspection reports and engineer reports.
- A review of correspondences between Toronto Building, MLS, TDSB, Pinedale and external engineers.
- Compiling a timeline of events and activities relating to the bridge to identify gaps and process improvements (refer to Appendix A).

Findings and Recommendations

The following factors contributed to the lack of timely action on the part of the City and the property owners with regards to the Crescent Town bridge:

- Complexities associated with co-ownership and the lack of cooperation between the Toronto District School Board and Pinedale Properties.
- Absence of clear guidelines and procedures regarding roles and responsibilities between Toronto Building and MLS.
- Lack of enforcement of due dates on Orders issued for completion of repairs.
- No guidelines indicating when and what type of Order should be issued.
- No regulations in place requiring property owners to conduct periodic building condition evaluations.

Our findings along with recommendations are outlined below.

1. Clarity on Process, Roles and Responsibilities

Toronto Building enforces compliance with the Ontario Building Code through the review of building permit applications, issuing building permits and conducting mandatory inspections during construction.

MLS ensures that property standards are maintained across the City, by investigating issues pertaining to property standards and other maintenance related by-laws. MLS also administers the Apartment Building Standards program which proactively inspects the general maintenance and upkeep of buildings, including building vital services, elevators, garbage management, lighting, and may initiate remedial action should any By-law contraventions be found.

Property owners are responsible for ensuring that their properties are properly constructed in accordance with the Ontario Building Code and adequately maintained as per Municipal Property Standards, and are required to take immediate action to eliminate any unsafe conditions.

In general, Toronto Building's involvement occurs during new construction or renovation, while MLS assumes responsibility for enforcement of maintenance issues pertaining to existing buildings and structures. With respect to structural issues

subsequent to completion of construction, there is some overlap of responsibilities between the two divisions.

While senior management of Toronto Building and MLS indicated that responsibility for structural issues reside with Toronto Building, this understanding was not consistent amongst all Toronto Building staff. As a result, no order was issued to Bleeman to address the issues identified with respect to the condition of the bridge.

Recommendation #1:

To improve service delivery and harmonize procedures between Toronto Building and MLS, the Chief Building Official in collaboration with the Executive Director, Municipal Licensing & Standards should develop standard operating procedures and guidelines clarifying:

- **roles and responsibilities between MLS and Toronto Building with respect to inspection and enforcement activities regarding structural sufficiency.**
- **the process for the handover and/or transfer of inspections between the two divisions relating to structural matters.**

2. Issuance of Orders

In accordance with the Building Code Act, 1992:

"A building is unsafe if the building is,

(a) structurally inadequate or faulty for the purpose for which it is used; or

(b) in a condition that could be hazardous to the health or safety of persons in the normal use of the building..."

The statute further states that,

"An inspector who finds that a building is unsafe may make an order setting out the reasons why the building is unsafe and the remedial steps necessary to render the building safe and may require the order to be carried out within the time specified in the order."

MLS issued an Order to the TDSB on November 13, 2015, requiring repairs to address concrete deterioration and exposed rebar. In May 2017, during the course of TDSB's planned repair work, an engineer report identified concerns with Bleeman's side of the bridge, noting that,

"Span 2 (Bleeman-owned portion of the bridge) shows some signs of structural disrepair. Most notably, the "rib" panel shows signs of excessive downward deflection.

Some cracking in the full width panels was observed. The cracking appears to have started near the grout joints."

Toronto Building staff were aware of these findings but indicated that the engineer's report fell short of declaring that the bridge was unsafe, and did not feel that they had sufficient grounds or authority to issue an "unsafe" Order. No further action was taken to follow up on the findings contained in the engineer's report.

While it may be debatable as to whether the criteria for issuing an "Unsafe" Order was met, there were other remedies (Orders) available. Given the concerns noted by the TDSB's engineer, it would have been prudent for Toronto Building to issue an Order requiring Bleeman to provide an engineer's assessment on the condition of their section of the bridge.

Recommendation #2:

To ensure that structural integrity concerns are adequately investigated, the Chief Building Official, in collaboration with the Executive Director MLS should establish guidelines and procedures identifying potential red flags and conditions that may warrant the issuance of an Order, as well as the type of Order to be issued.

3. Monitoring and Enforcing Due Dates on Orders

An Order to Comply was issued by MLS in November 2015 to TDSB to address structural issues, specifying that the required repairs were to be carried out by April 30, 2016. TDSB had obtained two permits to undertake the repair work. The first was to shore and stabilize their side of the bridge to prepare for construction, and the other permit was to perform the actual bridge repairs.

The shoring of the TDSB side of the bridge was completed in September 2016. However, the bridge repair work could not commence as engineers advised the TDSB in May 2017, that there were signs of structural disrepair on Bleeman's side of the bridge, which would need shoring, to secure the bridge during construction.

MLS had a discussion with Bleeman's property manager (Pinedale) in August 2017 regarding shoring work to be done on their side of the bridge. Pinedale indicated that shoring would not be possible as it would block fire, emergency and solid waste vehicles from accessing the property and advised that the TDSB's engineers would need to find an alternative solution.

From August 2017 until the partial bridge collapse in November 2018, there was no progress made on the bridge repairs. While Toronto Building and MLS made periodic site visits to monitor the status of the repairs, no further enforcement action was taken to ensure that the required repairs specified in the Order were completed within a reasonable time period.

Recommendation #3:

To ensure that orders are complied with on a timely basis, the Chief Building Official and the Executive Director MLS should:

- (a) develop procedures and guidelines for enforcement of overdue Orders, with varying levels of escalation, including:**
 - Notice to property owner that deadline for corrective action has passed**
 - Establishing an updated timeline with the property owner**
 - Laying charges and imposing administrative penalties**
- (b) consider a structure in its entirety as opposed to individual segments based on ownership and include the names of all owners of a property in any Order issued.**

4. Lack of Proactive Building Condition Evaluations

In general, inspections conducted by Toronto Building and MLS are reactive in nature. As per the Building Code Act, 1992 and the Ontario Building Code, the onus is on builders/owners to give notice to the Chief Building Official when their building being constructed pursuant to a building permit is ready for inspections at each critical stage of construction. Similarly, MLS' inspections and investigations of property standards issues are complaint or request based. In addition, there currently is no inventory of pedestrian bridges across the City to allow for a proactive inspection process.

The maintenance and inspection of roadway (vehicle) bridges are governed by the Public Transportation and Highway Improvement Act, R.S.O. 1990 and Ontario Regulation 104/97 Standards for Bridges established by the Ministry of Transportation. The legislation and regulation requires bridge owners to have biennial inspections performed by a professional engineer to assess the structural integrity, safety and condition of all roadway bridges.

The Ministry of Municipal Affairs issued a consultation paper in 2017, outlining potential regulatory amendments to the Ontario Building Code to establish a Building Condition Evaluation Program for buildings with rooftop parking and exposed, multi-storey, above ground parking structures built before 1988. The proposed amendments are intended to address the recommendations that were made by the Elliot Lake Commission of Inquiry following the collapse of the Algo Centre Mall in 2012.

To date, the Province has not yet drafted the necessary amendments and it is unclear at this point whether the proposed amendments will extend to pedestrian bridges. City Legal advised that until such amendments are in place, the City does not have the

authority to require property owners to have periodic structural inspections performed by an engineer.

Recommendation #4:

To ensure that pedestrian bridges are properly maintained, the Chief Building Official in collaboration with the Executive Director MLS should:

- (a) request the Ministry of Municipal Affairs to expedite the drafting of the regulations pertaining to establishing a Building Condition Evaluation program and that pedestrian bridges be subject to such regulations; and**
- (b) in the interim, develop an inventory of privately owned pedestrian bridges across the City for the purposes of establishing a proactive pedestrian bridge inspection program.**

Approved by:



Stuart Campbell
Director, Internal Audit



Gifford Chu
Manager, Internal Audit

Appendix A: Timeline of Events

Date	Event
2015	
Nov 13	Order to Comply issued by MLS to TDSB to repair concrete deterioration and exposed rebar.
2016	
Jan 12	TDSB submits permit application for shoring work
June 3	Bridge closed off due to ongoing shoring work
Early Sept	Shoring work completed and bridge opened for the school year
Dec 14	Engineer confirms that shoring work is completed in accordance with plans
Dec 19	TB conducts a site visit to confirm that shoring work is complete
2017	
Jan 11	Permit issued to TDSB for localized concrete repairs
May 5	TB Inspector attends job site: <ul style="list-style-type: none"> • Discovers that the engineering firm advised that the bridge is not repairable and had to be demolished and replaced. • Engineer report received from demolition contractor identified signs of structural disrepair on Span 2 - Bleeman's side of the bridge, which had to be shored before construction.
May 9	TB Inspector discusses engineer report with District Manager and is directed to find out who owns the other portion of the bridge and liaise with them for repair work.
End of June	Bridge closed to proceed with preparatory work for construction (replacement of the TDSB portion of the bridge)
Aug 23	Pinedale informs TDSB that they would not be able to shore up their side of the bridge as it would block access for fire and emergency vehicles and that TDSB had to find an alternative solution.
Between Aug 26 and Sept 4	The bridge is re-opened as repair work was deferred until an alternative solution became available.
Oct 6	MLS issues a property standards order to Pinedale Properties to repair drainage and uneven steps on the bridge.
Nov 23	Bleeman completes drainage repairs and uneven steps in the bridge. MLS conducts a site visit on December 4 th and closes the Order.
2018	
May 3	Councillor Davis expresses concerns to TB regarding the safety of the bridge.
May 22	TB advises the Councillor that the engineer's report fell short of stating that the bridge was unsafe.
May 23	TB attends the site and did not note anything that warrants taking any further action.

Date	Event
June 18	MLS attends the site and notes that no progress was made with respect to repairs relating to the November 2015 Order issued to TDSB.
Nov 17	A portion of the bridge collapses.

Appendix B: Management Action Plan

Recommendation	Management Response and Action Plan	Responsibility	Timeline for Implementation
<p>Recommendation #1: To improve service delivery and harmonize procedures between Toronto Building and MLS, the Chief Building Official in collaboration with the Executive Director, Municipal Licensing & Standards should develop standard operating procedures and guidelines clarifying:</p> <ul style="list-style-type: none"> • roles and responsibilities between MLS and Toronto Building with respect to inspection and enforcement activities regarding structural sufficiency. • the process for the handover and/or transfer of inspections between the two divisions relating to structural matters. 	<p>Toronto Building is in agreement with and supports the recommendation. Toronto Building, in collaboration with MLS, has initiated steps to develop standard operating procedures that will clearly identify roles and responsibilities for both Divisions as well as processes for addressing inspection and enforcement activities related to building maintenance, including structural sufficiency.</p>	<p>Toronto Building in collaboration with MLS.</p>	<p>Q3 2019</p>
<p>Recommendation #2: To ensure that structural integrity concerns are adequately investigated, the Chief Building Official, in collaboration with the Executive Director MLS should establish guidelines and procedures identifying potential red flags and conditions that may warrant the issuance of an Order, as well as the type of Order to be issued.</p>	<p>Toronto Building is in agreement with and supports the recommendation. Toronto Building will work with MLS to develop guidelines and key criteria and factors that will assist inspectors in determining whether further investigation of a structure by a professional engineer is required. Once this criteria is developed, Toronto</p>	<p>Toronto Building in collaboration with MLS</p>	<p>Q1 2020</p>

Recommendation	Management Response and Action Plan	Responsibility	Timeline for Implementation
	<p>owners. However, where a property is owned by more than one owner, the body of the Order will make reference to all property owners. The Provincial legislation further supports making this information available to the public, where City inspections identify issues.</p>		
<p>Recommendation #4: To ensure that pedestrian bridges are properly maintained, the Chief Building Official in collaboration with the Executive Director MLS should:</p> <p>(a) request the Ministry of Municipal Affairs to expedite the drafting of the regulations pertaining to establishing a Building Condition Evaluation program and that pedestrian bridges be subject to such regulations; and</p> <p>(b) in the interim, develop an inventory of privately owned pedestrian bridges across the City for the purposes of establishing a proactive pedestrian bridge inspection program.</p>	<p>a) Toronto Building is in agreement with and supports the recommendation. Through the Elliot Lake Inquiry Policy Roundtables in 2013, the Chief Building Official at the time supported the development of Provincial regulations for a Building Condition Evaluation program that would compel property owners to carry out scheduled inspections of their buildings. The Province of Ontario has established the framework for this requirement through the legislation, <i>Building Code Act, 1992</i>; however, the Province has not yet developed the regulation. The Chief Building Official will write to the</p>	Toronto Building	Q2 2019

Recommendation	Management Response and Action Plan	Responsibility	Timeline for Implementation
	<p>Ministry of Municipal Affairs and Housing and request that they move expeditiously to develop these recommendations and to include pedestrian bridges in the regulation.</p> <p>b) Toronto Building is in agreement with and supports the recommendation. In early 2019, Toronto Building identified a dedicated team to initiate the development of an proactive program to investigate pedestrian bridges across the city in collaboration with other divisions. To date, this dedicated Toronto Building team has established a City-wide data base of pedestrian bridges and initiated inspections of these structures.</p>	Toronto Building	Q4 2020