



10376 Yonge Street • Suite 307 • Richmond Hill • Ontario • L4C 3B8 • T: 905•237•5410, F: 905•237•5413, E:ssoscia@sosciaeng.ca

BUILDING CONDITION ASSESSMENT

1577 Major Mackenzie Drive East

Richmond Hill, Ontario

Prepared for -- Treasure Hill Homes -

SOSCIA ENGINEERING LTD.

Project number 20 – 101

May 18, 2021.



10376 Yonge Street • Suite 307 • Richmond Hill • Ontario • L4C 3B8 • T: 905•237•5410, F: 905•237•5413, E:ssoscia@sosciaeng.ca

TABLE OF CONTENTS

EXECUTIVE SUMMARY

1.0 INTRODUCTION

- 1.1 Terms of References
- 1.2 Scope of Work
- 1.3 Brief Description of Building

2.0 METHODOLOGY

3.0 STRUCTURE

- 3.1 Building
 - 3.1.2 Observations

4.0 BUILDING ENVELOPE

- 4.1 Exterior Walls / Roof
 - 4.1.1 Description
 - 4.1.2 Observations

5. CONCLUSION

PHOTOGRAPHIC APPENDIX



10376 Yonge Street • Suite 307 • Richmond Hill • Ontario • L4C 3B8 • T: 905•237•5410, F: 905•237•5413, E:ssoscia@sosciaeng.ca

Executive Summary

Soscia Professional Engineers Inc. visited 1577 Major Mackenzie Drive in the City of Richmond Hill, Ontario for the purpose of determining whether the existing dwelling is structurally stable and whether the dwelling is suitable for habitation.

The study was limited to a visual inspection of the building components and as found conditions. Destructive testing was not performed. The Ontario Building Code and the Occupation Health and Safety Act are used in assessing the building condition.

The subject building is a 2 storey structure and appears to have been abandoned for many years. The building was placed on the structural platform in 2013 and was not maintained in a manner conducive to preservation. The building and roof were not properly sealed which allowed water to pour in the building over 8 years.

The lifting operation and placing of the building on cribs has compromised the structure. The structure has been elevated from its stone foundation and bears upon an HSS structural platform. The existing walls are of load bearing masonry and exhibit signs of structural damage at high stress locations. The ground and 2nd floors are significantly out of level and pose a structural hazard. The roof rafters bear both on the exterior walls and a centrally located masonry chimney, the chimney has no fixity at the base and is unstable. This structure has undergone significant deterioration and does not meet the structural requirements of a dwelling as defined in the Ontario Building Code. Furthermore, we are of the firm opinion that the structure will not be capable of withstanding centrifugal forces during the transportation of the building. Transportation of this building will pose a safety hazard to the general public.

The exterior walls are a face sealed envelope assembly. They do not provide the required resistance for vapor diffusion, they do not provide the necessary resistance to air transfer and do not provide the required resistance to heat transfer. In consequence of no air barrier, no vapor barrier and no thermal insulation the building assemblies and materials have deteriorated. The deterioration has led to the development of mold, rot and corrosion, all of which are detrimental to an individual's health and is in strict contravention of both the Ontario Building Code and the Occupation Health and Safety Act.

Based on our findings we are of the opinion that this building is not habitable. It does not meet the minimum acceptable standards for public health and public safety, structural sufficiency, environmental integrity and energy conservation.



10376 Yonge Street • Suite 307 • Richmond Hill • Ontario • L4C 3B8 • T: 905•237•5410, F: 905•237•5413, E:ssoscia@sosciaeng.ca

BUILDING CONDITION ASSESSMENT

1577 Major Mackenzie Drive East

Richmond Hill, Ontario

1.0 INTRODUCTION

1.1 Terms of References

Soscia Engineering Ltd. was authorized by Mr. Matthew Creador of Treasure Hill Homes, to conduct a building condition survey of the building and property located at 1577 Major Mackenzie Drive East. Soscia Engineering Ltd. personnel were to carry out a visual walk-through survey of the building and property to review various elements and services of the building. The purpose of the building survey was to determine whether the existing dwelling is structurally stable and whether the dwelling is suitable for habitation.

1.2 Scope of Work

Our scope of work was to include visual assessment and review of:

- Review of the roof and building envelope (visual only),
- Review of the building structural components,

The work was to be conducted in accordance with Soscia Engineering Ltd's verbal agreement with Mr. Creador. The objective of the survey was to review the condition of the various building elements and components to assess their present condition in reference to compliance with the latest edition of the Ontario Building Code and Occupation Health and Safety Act.



1.3 Brief Description of Building

The building at 1577 Major Mackenzie Drive East is a 2 storey structure and appears to have been abandoned for many years. The structure is a wood framed building with wood floor joist, wood planking and conventional wood framed roof members. The exterior walls are load bearing. The structure has been elevated from its stone foundation and bears upon an HSS structural platform.

The exterior walls are a face sealed envelope assembly and does not provide the required resistance for vapour diffusion, does not provide the necessary resistance to air transfer nor provide the required resistance to heat transfer.

The building utilities have been decommissioned.

2.0 METHODOLOGY

The survey of the building components was carried out on April 16th and April 18th, 2021. Soscia Engineering Ltd. personnel were on-site to review the components outlined in the Scope of Work (report Section 1.2). Access was provided throughout the building. Our general approach to the project consisted of the following:

- Discussions with the client.
- Visual examination of accessible components.
- Preparation of a report summarizing our findings.

The observations of exterior cladding and structural framing were made from ground level by unaided visual observation. The visual review was conducted to evaluate each item specified in the report format outline, in an effort to determine obvious areas of concern with respect to the general characteristics of the building.

For each item under review, the report describes:

- Description,
- observations of existing conditions
- Compliance with OBC and OHS of Ontario.

Representative photographs were taken of typical deficiencies.



3.0 STRUCTURE

3.1 Building

3.1.1 Description

The building at 1577 Major Mackenzie Drive East is a 2 storey structure and appears to have been abandoned for many years. The structure is a wood framed building with wood floor joist, wood planking and conventional wood framed roof members. The exterior walls are load bearing. The structure has been elevated from its stone foundation and bears upon an HSS structural platform.

The building was placed on the structural platform in 2013 and was not maintained in a manner conducive to preservation. The building and roof were not properly sealed which allowed water to pour in the building over 8 years. In general this structure is in a very poor good condition and is in **non compliance** of both the Ontario Building Code and the Occupational Health and Safety Act of Ontario.

3.1.2 Observations

1. The two storey structure has been lifted from its stone rubble foundation onto an HSS structural steel frame.

The lifting operations comprised the structural integrity of the building structural system.

2. Cracking of the exterior load bearing wall is apparent at high stress locations.

3. The perimeter 3"x3"x3/16" angle at the base of the exterior carries a the entire load of the 8" exterior wall and part of the ground floor, second floor framing and the part of the roof framing as well. The angles are tack welded together. The angle is an unsafe condition.

4. The ground floor joist are not provided with full support / bearing. In some areas the joists have been wedged to provide suitable bearing and allow leveling of the floor.

5. The connection of the ground floor framing to the exterior walls has been structurally compromised.



10376 Yonge Street • Suite 307 • Richmond Hill • Ontario • L4C 3B8 • T: 905•237•5410, F: 905•237•5413, E:ssoscia@sosciaeng.ca

6. The existing framing connections are poor; in general the floor framing is in very poor condition.

7. The roof rafters are in a good condition, they are supported by the outside walls with the main ridge tied into a centrally located chimney. The chimney does not have adequate support at the base. The existing conditions are unsafe.

Furthermore, we are advising that transportation of this structure is not a consideration as the structure is not adequate to resist centrifugal forces which will be imposed during transportation.

4.0 BUILDING ENVELOPE

4.1 Exterior Walls / Roof

4.1.1 Description

The exterior walls are a face sealed envelope assembly. They do not provide the required resistance for vapour diffusion, they do not provide the necessary resistance to air transfer and do not provide the required resistance to heat transfer. The inside envelope surface is comprised of lath and plaster.

The roof shingles and sheathing is in poor condition allowing precipitation to enter the building.

In general this envelope is in a very poor good condition and is in **non compliance** of both the Ontario Building Code and the Occupational Health and Safety Act of Ontario.



10376 Yonge Street • Suite 307 • Richmond Hill • Ontario • L4C 3B8 • T: 905•237•5410, F: 905•237•5413, E:ssoscia@sosciaeng.ca

4.1.2 Observations

1. In consequence of no air barrier, no vapour barrier and no thermal insulation the building assemblies and materials have deteriorated. The deterioration has led to the development of mould, rot and corrosion, all of which are detrimental to an individual’s health and is in strict contravention of both the Ontario Building Code and the Occupation Health and Safety Act.
2. The roof shingles and sheathing allows water to enter the building. Daylight is visible through the roof sheathing. Roof sheathing shows signs of water damage.
3. The inside surface exhibit mould, rot and corrosion.

5. Conclusion

The building structure at 1577 Major Mackenzie Drive East was placed on the platform in 2013 and was not maintained in a manner conducive to preservation.

The structure contains many structural unsafe conditions. The structure does not comply with the structural requirements of the Ontario Code. We are of the firm opinion that this structure is unsafe and not habitable.

The building envelope at 1577 Major Mackenzie Drive East does not provide the protection necessary to prevent the development of mould, rot and corrosion, all of which are detrimental to an individual’s health and is in strict contravention of both the Ontario Building Code and the Occupation Health and Safety Act. On this basis we conclude that the building is also not habitable.

Yours truly,

Sandro Soscia, P. Eng.
SOSCIA Professional Engineers Inc.



Yours Truly,

Henry Ma, OAA
 SOSCIA Professional Engineers Inc.





PHOTOGRAPHIC APPENDIX



2 storey building.

Exterior walls are of load bearing masonry.

Face sealed wall system allow water diffusion and moisture into the building.

Cracking at high stress corner apparent.



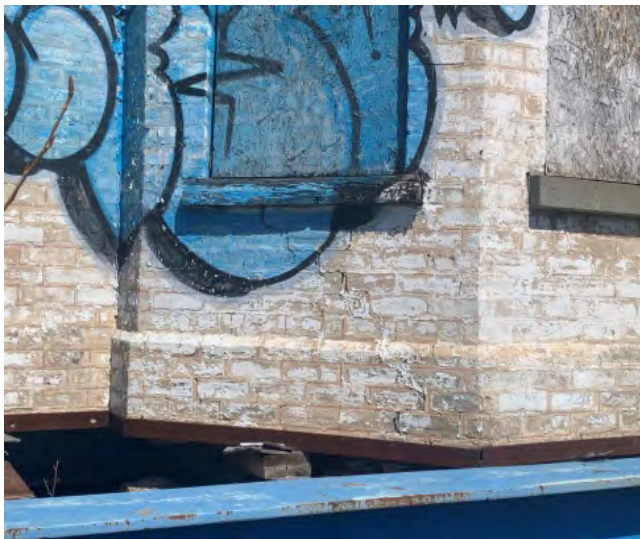
Roof, soffit and eave damage is apparent.

Deteriorated shingles and sheathing allows precipitation in the building.



Damaged soffit

Fallen eave trough



Cracked masonry at high stress location

The perimeter 3"x3"x3/16" angle which carries the outside wall is in adequate and unsafe.



Rotting and deteriorating soffit and eaves.



Lifting operation significantly damaged the structural integrity of the load bearing walls around the entire perimeter of the building.



The structure is not being fully supported, contravention of both the OBC and OHSA.



The exterior load bearing wall is not fully supported. The existing support is comprised of a 3"x3"x3"/16" angle which carries the 8" outside wall.

There is in adequate connection of the ground floor framing to the exterior wall. There are no sill plate or anchor and the perimeter walls are structurally comprised.



Where full bearing is not provided wedges are used to provide full bearing and floor leveling.



Ground floor framing, unsafe condition. Planking above has no partial structural support.



Conventional roof framing. Framing member are stained due to water migration into the building.



Roof rafters are tied into the existing chimney. Rafter and roof sheathing contain signs of water damage.

The chimney is tied at the top and has no support at the base level and will not be capable of resisting centrifugal forces during transportation. Contravention of OHSA and the OBC.



Building decommissioned services



Ground floor framing has no bearing and no connection.



Face sealed load bearing exterior wall assembly comprised of 2 Wythe of masonry brick finished on the inside with lath and plaster.

No air barrier, no moisture barrier and no thermal insulation.

Wall provides no protection against thermal transmission, vapor diffusion and air transmission.

Energy efficiency resistance as required through SB12 is not provided.

Structural integrity of the load bearing is compromised.

Exterior wall is in strict contravention of Part 5 of the OBC and OHSA.



Water migration into the building has resulted in damage to all entire walls. Note that mold and water damage is throughout the building.



Water migration into the building has resulted in damage to all entire walls. Note that mold and water damage is throughout the building.



Water migration into the building has resulted in damage to all entire walls. Note that mold and water damage is throughout the building.



Damaged interior surface.



Deteriorated Interior finishes.



Existing wood sub floor with in adequate framing below.



Water damage and build up of mold.



Mold and water damage on ceiling and walls