

## COMMITTEE OF THE WHOLE – APRIL 24, 2012

### REQUEST FOR DEMOLITION OF THE GARAGE/CARRIAGE HOUSE STRUCTURE, 197 WOODBRIDGE AVENUE – WARD 2

#### Recommendation

The Commissioner of Community Services, in consultation with the Director of Recreation and Culture, provides the following recommendation:

1. That the peer review report of Remy Consulting Engineers conducted by Ojdrovic Engineering Inc., be received; and,
2. That Council approve the demolition of the garage/carriage house structure at 197 Woodbridge Avenue, located in the Woodbridge Heritage Conservation District, due to the deteriorated condition detailed in the engineering report by Remy Consulting Engineers and confirmed by Ojdrovic Engineering Inc. in its peer review.

#### Contribution to Sustainability

This report is consistent with the priorities previously set by Council in the Green Directions, Vaughan, Community Sustainability Environmental Master Plan, Goal 4, and Objective 4.1:

- To foster a city with strong social cohesion, an engaging arts scene, and a clear sense of its culture and heritage.

#### Economic Impact

N/A

#### Communications Plan

The decision of Council will be communicated to the owner/applicant.

#### Purpose

The purpose of this report is for Council to consider the peer report prepared by Nebojsa Ojdrovic of Ojdrovic Engineering Inc. pertaining to the structural condition of the garage/carriage house building at 197 Woodbridge Avenue located in the Woodbridge Heritage Conservation District and designated under Part V of the Ontario Heritage Act.

#### Background - Analysis and Options

At its Council meeting of December 13, 2011, Council considered a request for demolition of a garage/carriage house structure located at 197 Woodbridge Avenue, designated under Part V of the Ontario Heritage Act and located within the Woodbridge Heritage Conservation District.

At that meeting, Council passed a motion asking the owner/applicant to pay for the cost of a peer review of the engineering report prepared by Remy Consulting Engineers submitted by the owner/applicant on the property to support the demolition. This report stated that the garage/carriage structure at 197 Woodbridge Avenue was beyond repair and constituted a public safety hazard. This was also confirmed by the City's Building Standards Department.

Council's direction to the owner was to retain a peer engineer (subject to the approval of staff) to review the report by Remy Consulting Engineers. The peer review report was to be brought back to Council for consideration on the matter.

The 2011 Remy report identified the following deficiencies to the garage carriage house structure:

- Severe displacement of building.
- Building rotating off its stone foundation.
- Stone foundations- unreinforced - unable to resist rotation - essentially foundation has failed.
- Displacement has caused building to be very unstable and unsafe.
- Main floor has become unsupported in several areas and thus unstable.
- Intermediate piers beneath main floor are inadequately constructed and unstable.
- Wood rot evident in the structural framing.
- Extensive water penetration & mould on sheathing making structural framing suspect.
- Brick masonry cladding – literally tearing apart from the displacement of the building.
- Extensive deterioration readily visible in the stone foundation & brick masonry.
- Shifting of building has lead to openings to become out of true/as built.
- Existing building does not meet current occupancy and safety standards.

Remy Consulting Engineers concluded that the “most probable cause of the building’s failure is soil and hydrostatic load acting against the unreinforced west and north foundation walls of the building, in combination with frost action. Wind loading and seismic activity may have had some negative effect on the building as well.”

It should also be noted that the Building Standards Department issued an “Order Prohibiting Occupancy/Use” and an “Order to Remedy an Unsafe Building” to the property owner regarding the subject building due to building’s unsafe conditions.

*Peer Review by Ojdrovic Engineering Inc.*

The owner and architect chose Nebojsa Ojdrovic of Ojdrovic Engineering Inc to conduct the peer review of the structural assessment report prepared by Remy Consulting Engineers. Nebojsa Ojdrovic is a member of the Canadian Association of Heritage Professionals in the category of “building specialist” and on a list of conservation engineers provided by the Ontario Heritage Trust. They are considered qualified to conduct the peer review and approved by staff.

Ojdrovic Engineering in its peer review stated they are in support of Remy Engineer’s recommendations on the garage/carriage house and note the following:

- The extent of the structural damage (to the garage/carriage house) is accurately discussed and the “repair in situ in accordance with the heritage restoration practices is very difficult to impossible”.
- The brick veneer walls are unstable; parts of the wood framing are substantially deteriorated.
- There is no connection between the brick veneer and wood framing.
- The rebuilding of the building could be undertaken either at the same location or elsewhere. In both cases, it would be necessary to construct new footings and foundation walls. Approximately 20% of the brick would have to be replaced with new and an unknown percentage of wood framing would have to be remanufactured.

- The deconstruction and rebuilding of the structure would not properly address issues relating to heritage and historical conservation.
- The reconstructed building will have to be done with a disproportioned amount of new materials. The exterior envelope appearance will also be seriously compromised since it would be difficult to match existing brick.
- The report concludes that due to the extent of the building's deterioration, no part of the structure could be preserved in its original position without completely dismantling and reconstructing. Due to the extent of the complexity of deconstruction and rebuilding, the building should be demolished.

#### *Heritage Status of Property*

- The subject property at located at 197 Woodbridge Avenue is designated Part V of the Ontario Heritage Act, as it is part of the Woodbridge Heritage Conservation District.
- The property is identified as a Contributing building in the Woodbridge Heritage Conservation District Inventory.
- The subject property is also listed in the City's *Register of Buildings of Architectural and Historical Value*.
- The subject structure is a Victorian carriage house style, built circa 1893, by Dr. Peter Douglas McLean, a local doctor and elected Member of Parliament in 1907. Two generations of McLean doctors served the community after their father - Dr. Garnet Douglas and Dr. Charles McLean.
- Doctors McLean District Park in Woodbridge was named in honour of their service to the community.
- Peter McLean owned the first automobile in Woodbridge and in 1910 the structure was converted from a stable for use as an automobile garage.
- Summary of architectural character defining elements of carriage/garage:
  - Rough timber post and beam structure, as confirmed in the engineer's letter.
  - East elevation: Gabled roof with one central gothic gable with rectangular masonry opening for wood louvered vent.
  - Two door urban barn/garage at gable end. Depressed elliptical arch of front left door bricked in when wood lintels installed for two (single) swinging garage doors for automobile c. 1910.
  - Painted rough sawn lintels on north elevation.
  - Swing door (vertical paneling) on west side.
  - Gothic central gable.
  - Window openings with wood louvered shutters.
  - Rectangular window openings.
  - Clad in red brick with segmental and depressed elliptical brick arches.
  - Wood vertical board hinged hay loft access doors on north elevation and on west elevation.

#### **Relationship to Vaughan Vision 2020/Strategic Plan**

In consideration of the strategic priorities related to Vaughan Vision 2020, the report will provide:

- STRATEGIC GOAL:  
Service Excellence - Providing service excellence to citizens.
- STRATEGIC OBJECTIVES:  
Preserve our heritage and support diversity, arts and culture.

This report is consistent with the priorities previously set by Council, and the necessary resources to implement this program have been allocated and approved.

### **Regional Implications**

N/A

### **Conclusion**

A peer review of the structural report on the garage/carriage house at 197 Woodbridge Avenue by Ojdrovic Engineering Inc. has re-affirmed the deteriorated condition of the structure and building parts. A reconstruction of most of the building parts would be required for its restoration which would significantly impact the heritage integrity as the reconstruction would essentially be a new building. Based on this information, it is recommended that the structure be approved for demolition.

### **Attachments**

1. Letter from Nebojsa Ojdrovic with findings/review of Remy Consulting Engineer's Assessment – peer review report.
2. 2011 Remy Consulting Engineer and Nino Rico Architect's evaluation of structure.

### **Report Prepared By**

Mary Reali, Director of Recreation and Culture, ext. 8234  
Angela Palermo, Manager of Culture, ext 8139

Respectfully submitted,

Marlon Kallideen  
Commissioner of Community Services

February 3, 2012

**Nino Rico Architect Inc.**  
201 Spinnaker Way  
Concord, ON, L4K 4J5

OEI File: M014-001

Attention:

**Mr. Nino Rico, B.Arch., M.Arch., OAA**

Dear Mr. Rico,

**RE: Peer Review of the Report  
“Doctor McLean Carriage House, 197 Woodbridge Ave., Vaughan”  
Prepared by Nino Rico Architect and REMY Consulting Eng.**

Based on your authorisation to proceed with this assignment, we notified Mr. Don Cooper, P.Eng. that we would be performing a peer review of his work, and proceeded with the site visit and review of the report.

In general, we agree with the findings and recommendations of the report.

The carriage house is in a state of substantial disrepair. It appears that years of neglect brought the building to the current condition where the only two reasonable options are demolition or deconstruction and complete rebuilding.

As heritage engineers with highest regard for the Canadian historic portfolio of buildings, it is not easy to recommend demolition of any designated building. Doctor McLean's carriage house represents part of local history, and as such, should be preserved. Unfortunately, the extent of structural damage as accurately discussed in Mr. Cooper's report, is such that repair in situ in accordance with the heritage restoration practices is very difficult to impossible. As the building is unsafe now, and poses risk to the general public due to the structural failure, demolition is the most logical option.

The only option to demolition is complete deconstruction with detailed recording of elements and rebuilding of the whole carriage house. Possible retention or relocation of the building in its current state is impossible. The brick veneer walls are unstable; parts of the wood framing are substantially deteriorated; the condition of the wood floors and connections between the floors and walls is questionable; and there is certainly no connection between the brick veneer and the wood framing. The deconstruction would include measuring and recording of the architectural features of the brick facades, dismantling and salvaging of the brick veneer, recording of the wood sheathing and framing and careful dismantling, recording of the foundation walls and deconstruction. The rebuilding could be undertaken either at the same location or elsewhere. In both cases, it would be necessary to construct new footings and foundation walls. It should be noted that approximately 20% of the brick would have to be replaced with new, and an unknown percentage of wood framing would have to be remanufactured using either new or reclaimed wood. It is likely that some modifications to the building frame would have to be designed to

make it compliant with the current building code. The new foundations would probably be constructed using reinforced concrete with, perhaps, some above ground parts of the foundation walls rebuilt using some of the original foundation wall stone as an illustration of the original footings. The deconstruction and subsequent reconstruction of the project would need to address issues such as the use of original versus new materials, the level of accuracy in detailing of structural and architectural features, etc. Undoubtedly, the deconstruction and rebuilding of the carriage house would not be able to properly address issues related to heritage and historical conservation. The reconstructed building will have to be done with a disproportioned amount of new materials, from the foundation to the wall, floor and roof structure – the exterior envelope appearance will also be seriously compromised since it would be very difficult to find period bricks to match the colour and shape of the deteriorated ones.

## CONCLUSION AND RECOMMENDATION

We reviewed the report “Doctor McLean Carriage House, 197 Woodbridge Ave., Vaughan”, prepared by Nino Rico Architect and REMY Consulting Eng., visited the building, and performed our own visual inspection.

We agree with the report’s recommendation that:

- due to the extent of the building’s deterioration no part of the structure could be preserved in its original position without complete dismantling and reconstruction, and that
- due to the extent and complexity of deconstruction and rebuilding,

the building should be demolished.

We hope that this report meets your expectations. Please do not hesitate to call, should you require any clarifications.

Yours very truly,

**OJDROVIC ENGINEERING INC.**



Nebojsa Ojdrovic, Ph.D., P.Eng.



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February 7, 2012

by electronic email

City of Vaughan Recreation & Culture Department  
2141 Major Mackenzie Drive,  
Vaughan, ON, L6A 1T1

Attention: Ms. Angela Palermo  
Manager of Cultural Services

**Re: Peer Review of Assessment  
Doctor McLean Carriage House  
197 Woodbridge Avenue, Vaughan  
Our Project No. 1109**

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Further to your message of December 7, 2011, enclosed please find a Peer Review Assessment to the report on the above structure prepared by our firm in conjunction with Remy Consulting Engineering. This Review assessment, dated February 3, 2012 has been prepared by Mr. Nebojsa Ojdrovic, Ph.D. P. Eng, of **Ojdrovic Engineering Inc.**, a member of the Canadian Association of Heritage Professionals (CAHP) with an accredited specialization in the category of "building specialist". This firm is in the list of conservation engineers issued by the Ontario Heritage Trust that you kindly sent us for our reference.

After a detailed analysis of the building and potential options, the enclosed peer review conclusions concur with our previous recommendations, specifically stating the following:

*" Due to the extent of the building's deterioration no part of the structure could be preserved in its original position without complete dismantling and reconstruction, and that, due to the prohibitive cost of deconstruction and rebuilding, the building should be demolished."*

The issue of heritage preservation is made also more problematic by the fact that, as mentioned in my previous report and confirmed by the peer review, the building cannot be restored in its present location nor sustain a possible relocation to another area of the site or to the adjacent public park due to its state of substantial disrepair.

In order to further explore the option of relocating the carriage house, we have invited Mr. Vince Johnston of **Johnston House Raising and Moving**, a family company specialized in moving heritage structures, to give us his opinion. On December 28, 2011, Mr. Johnson wrote to us an electronic note, hereby attached, stating the following:

*"After examining the out building on the property of 197 Woodbridge Avenue, in Vaughan ON, on Thursday, December 22nd, it is in my opinion that the structure is unsafe to move with the brick intact as it sits today. The integrity of the brick has been compromised due to the noticeable years of deterioration, and the support of which the brick was prepared years ago is no longer adequate to substantiate the ideas and / or intentions communicated to me.*

*In the years of moving and raising masonry historical buildings, this particular structure shows visible signs of instability, and is clearly unsafe to engage the task of moving the entire structure."*

In summary, we have gathered exhaustive evidence demonstrating that, regrettably, the carriage house structure cannot be saved by either restoring it in its present location or by moving it to a new location. It is also our opinion that the deconstruction of the structure, given the severe extent of the deterioration of its main building elements, foundation walls, wood structure and bricks, cannot be reasonably done without using a disproportionate amount of new materials whose appearance, texture, colour and patina will not correspond to the appearance that it is expected from a heritage structure. Any attempt at such a reconstruction would result at best in a modern version of a period building which will not adequately respond to the intention of the heritage preservation policy of area.

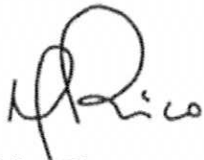
As a contribution to the heritage history of Woodbridge Avenue, our client is prepared to carefully dismantle the structure and save those original building materials that are still structurally and aesthetically sound, such as a portion of the face bricks. Such materials could be utilized by either restoring similar heritage building in the area or by incorporating them on a new structure that we intend to build in the subject property.

In conclusion, we are compelled to remind you that our application for demolition of the subject building has been prompted by a Notice of Violation issued by the building department of the City of Vaughan, whose concern for the safety of adjacent properties and the public in general we totally share.

Our client has presently barricaded the structure and fenced off its surrounding area. However, it is our professional opinion that further delays in allowing demolition of this structure may result in unwanted liability by endangering the safety of the local population and adjacent properties.

Yours very truly,

**NINO RICO INC. ARCHITECT**



Nino Rico

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OAA, MRAIC, LEED AP

- cc. Mayor Maurizio Bevilacqua
- Regional Councillor Gino Rosati
- Regional Councillor Michael Di Biase
- Regional Councillor Deb Shulte
- Councillor Marilyn Iafrate
- Councillor Tony Carella
- Councillor Rosanna DeFrancesca
- Councillor Sandra Yeung Racco
- Councillor Alan Shefman
- Marlon Kallideen, Commissioner of Community Services
- Remo Commisso, Old Market Lane Inc.



### Building History

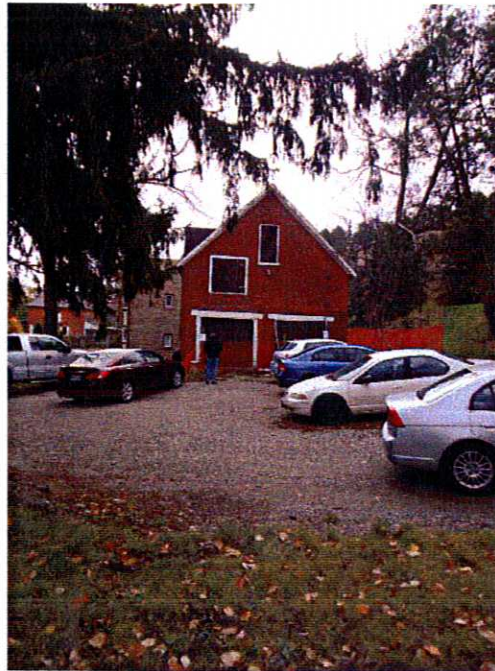
Built circa 1893 by Dr. Peter Douglas McLean.

Rough timber and post structure, originally built in wood cladding .

Structure converted in 1910 as a car garage. Probably at the same time the structure was clad in clay bricks.

Exterior presents modifications to the front and side facades with the introduction of an additional front door and wood lintels probably in the 1950s' or 60s'.

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REMY Consulting eng.



### Building Characteristics

Hip roof with gothic gable on east side.

One original door and one added door at front gable end.

Red brick cladding with segmental and depressed brick arches.

Swing door (vertical panelling) on west side

Plain rear elevation.



North Elevation



North West Elevation



South West Elevation



South East Elevation

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Doctor McLean Carriage House  
197 Woodbridge Ave., Vaughan

### Building Construction

- Shale Stone with Cement Mortar **Foundation Walls**
- Rough Cut Timber **Structural Framing**
- Wood Plank Sheathing & Burned Clay Brick Masonry **Wall Cladding**
- Gable Pitched **Roof** with Wood Plank Sheathing and Asphalt Shingles



West Elevation



Roof Rafters

- Main Floor:** Wide Timber planking resting on Rough cut 2"x8" timber joists @ 2' (600mm) centres supported upon foundation walls & intermediate beams and piled stone piers.
- Upper Floor:** Timber Planking resting on rough cut 2"x8" timber joists @ 2' (600mm) centres, spanning the width (~24'- 7200mm) of the structure.
- Roof Structure:** Rough Cut 2"x8" timber rafters @ 2' (600mm)centres extending between Central Peak and the East and West Wall Framing.

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Doctor McLean Carriage House  
197 Woodbridge Ave., Vaughan

### Building Front

Considerable brick deterioration due to wall shifting and frost action.

NORTH ELEVATION - 197 WOODBRIDGE AVENUE

LEGEND  
MISSING BRICK COURSES  
SEVERE MORTAR LOSS  
VERY WIDE CRACKS IN BRICK MASONRY  
READILY VISIBLE DISTORTION OF WALL



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**Doctor McLean Carriage House**  
197 Woodbridge Ave., Vaughan

### East Elevation

Considerable deterioration of stone foundation wall and upper brick cladding due to wall shifting and frost action.

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**REMY Consulting eng.**

EAST ELEVATION - 197 WOODBRIDGE AVENUE

LEGEND  
 MISSING BRICK COURSE  
 BRICK MORTAR LOSS  
 UPEN HOLE CRACKS IN BRICK MASS  
 BRICK MASS LOSS  
 BRICK MASS LOSS  
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 BRICK MASS LOSS  
 BRICK MASS LOSS

**Doctor McLean Carriage House**  
197 Woodbridge Ave., Vaughan

### West Elevation

Considerable deterioration of brick cladding due to wall shifting and frost action.

Caving of roof structure due to the above and to wood structure decay.

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WEST ELEVATION - 197 WOODBRIDGE AVENUE

LEGEND  
 MISSING BRICK COURSE  
 BRICK MORTAR LOSS  
 UPEN HOLE CRACKS IN BRICK MASS  
 BRICK MASS LOSS  
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**South Elevation**

Similar evidence of stone and deterioration of brick cladding, consistent with the other walls.

**LEGEND**  
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 VERY POOR COND  
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 BRICK Y USBLE  
 DISTORTION OF A

**Doctor McLean Carriage House**  
 197 Woodbridge Ave., Vaughan

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**Shift of Building**

Note: Severe (180mm) displacement of the brick masonry and the stone foundation wall

**GENERAL PLAN - 197 WOODBRIDGE AVENUE**

**Doctor McLean Carriage House**  
 197 Woodbridge Ave., Vaughan

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### Wall Displacement

East Wall has been displaced at least 180mm from its original vertical line

NE corner of the building has been displaced 22mm over 1.2m or 84mm over the height (4.6m) of the building to the lower ridge.



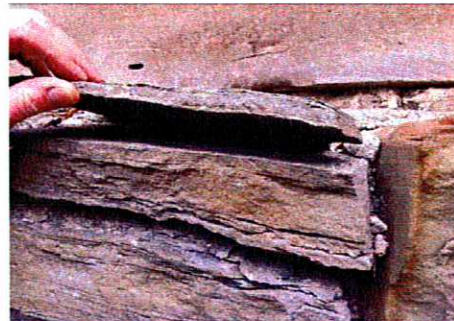
Structure along South Wall has been displaced by 20mm over 1.2m or 77 mm over the height of the structure to the overhang

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### Building Deterioration

#### Stone Masonry:

Deteriorated Shale  
Stone Masonry Unit  
Separating into Layers



#### Dry Rot in Wood Framing:

Framing member should be rough cut to 100mm (i.e. 50mm of member has rotted away).



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### Stone Foundation Wall

Completely deteriorated Mortar being removed from Wall.

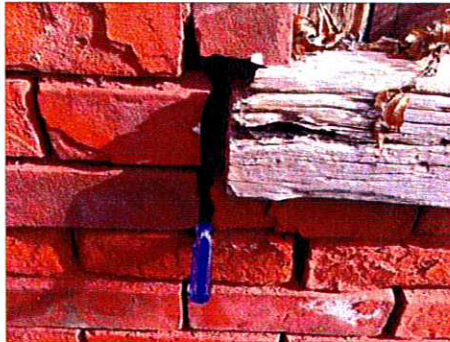
Note: Deteriorated mortar at least 250mm at south east corner



### Brick Deterioration

An example of the extent of the brick masonry deterioration (i.e. the full width of the brick).

Note:  
Deteriorated brick masonry mortar easily removed by hand




Doctor McLean Carriage House  
 197 Woodbridge Ave., Vaughan

### Brick Deterioration


**West Wall:**

Note: Severe displacement of brick masonry and failed brick header above window on west side of building



**East Wall:**

Note: Severe (180mm) displacement of the brick masonry and the stone foundation wall






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Doctor McLean Carriage House  
 197 Woodbridge Ave., Vaughan

### Building Interiors

Severely Water Stained Sheathing at outer walls.

Note: Extensive water damage  
 Deterioration the wood cladding and structure and extensive presence of mould.

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## Building Interiors

Doctor McLean Carriage House

197 Woodbridge Ave., Vaughan

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## Rotted Wall Sheathing

Severely Water Stained Sheathing

Note: Dry Rot in Wall Sheathing at second floor level- West Elevation

Note:  
Severe Water Stained Sheathing in direct contact with structural framing



Doctor McLean Carriage House

197 Woodbridge Ave., Vaughan

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197 Woodbridge Ave. Vaughan

### Sagging structure of Main Floor

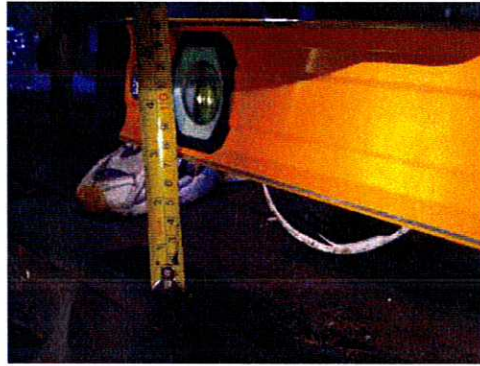
#### Sagging Floor in SE Quadrant

Note: Sections of Wood Flooring added to fill in sagged areas of the flooring



#### Sagging of Failed Floor Joists at NE Quadrant

Note: Sagging Floor Boards resulting from floor joists slipped off foundation wall- Measured deflections represent 75mm over 1.2m or 230mm between supported ends of joists.



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### Building Displacement

East Wall Wood Framing has been displaced approximately 175mm over the height of the building to the lower ridge



#### Intermediate Pier Construction

Poorly Constructed Intermediate Pier consisting of stacked single width brick and stone slabs without any mortar

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### Flooring Structural Condition

#### Main Floor:

Unsupported Flooring in SW Quadrant

Note: Unsupported condition present at the SW corner of the building



### Summary of Findings

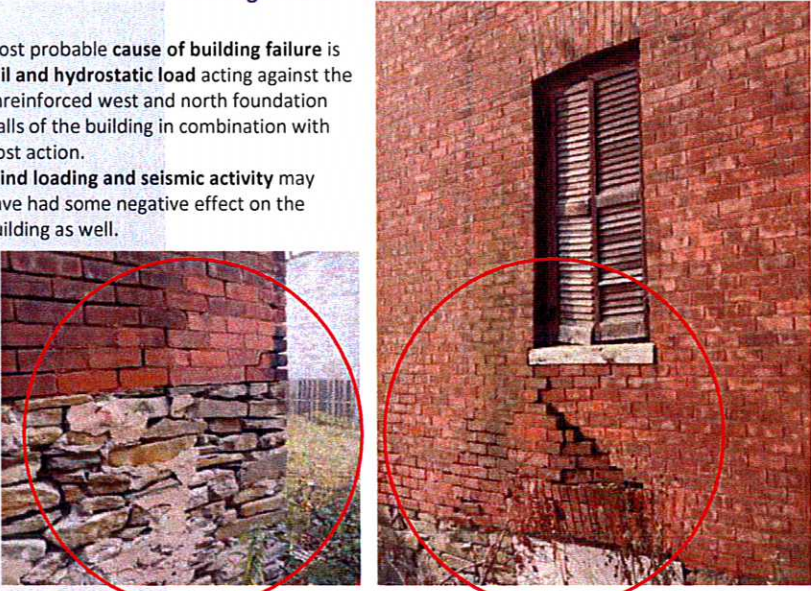
- Severe **Displacement** of building
- Building **Rotating** off its stone foundation
- Stone foundations- **Unreinforced**- Unable to resist rotation- essentially have failed
- Displacement has caused building to be Very **Unstable** and **Unsafe**
- Main floor has become **Unsupported** in Several Areas and thus Unstable
- Intermediate Piers beneath Main Floor are **inadequately** constructed and Unstable
- Wood Rot** Evident in the Structural Framing
- Extensive Water Penetration & **Mould** on Sheathing making structural framing suspect
- Brick Masonry Cladding –literally **tearing apart** from the displacement of the building
- Extensive **deterioration** readily visible in the stone foundation & brick masonry
- Shifting** of building has lead to openings to become out of true
- Existing building **does not meet current occupancy and safety standards**

**Doctor McLean Carriage House**  
197 Woodbridge Ave. Vaughan

### Probable causes of Building Failure

Most probable cause of building failure is soil and hydrostatic load acting against the unreinforced west and north foundation walls of the building in combination with frost action.

Wind loading and seismic activity may have had some negative effect on the building as well.



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**Doctor McLean Carriage House**  
197 Woodbridge Ave. Vaughan

### Recommendations

- Building is **very unstable** and thus **unsafe** to general public and users of the building.
- Rehabilitation of the building will require the **complete dismantling** of the building to re-construct and reinforce the foundation walls, intermediate piers, re-support & re-construct the main floor, re-construct the structural framing, sheathing, brick masonry, window and door framing and roof coverings.
- Given the extent of the building damages and the fact that no part of the structure, from the foundation walls to the roofing can be preserved, the **restoration** of the building and its rehabilitation to present standards is **not technically possible**. The substitution of the stone, bricks, wood walls and flooring and roof structure will defy the purpose of historical preservation and architectural conservation.
- Based on the above, it is our professional opinion that, for the safety of neighbours and the general public, the **building be demolished** in a timely manner.

nino rico architect  
REMY Consulting eng.