City of Mississauga
Agenda

MISSISSAUGA

Heritage Advisory Committee

Date
2017/02/14

Time
9:00 AM

Location
Civic Centre, Council Chamber,
300 City Centre Drive, Mississauga, Ontario, L5B 3C1 Ontario

Members
Councillor George Carlson, Ward 11 (Chair)
Rick Mateljan, Citizen Member (Vice-Chair)
Councillor Carolyn Parrish, Ward 5
Michael Battaglia, Citizen Member
Elizabeth Bjarnason, Citizen Member
Robert Cutmore, Citizen Member
David Dodaro, Citizen Member
Lindsay Graves, Citizen Member
James Holmes, Citizen Member
Cameron McCuaig, Citizen Member
Matthew N. Wilkinson, Citizen Member

Contact
Stephanie Smith, Legislative Coordinator, Legislative Services 905-615-3200 ext. 3795
stephanie.smith@mississauga.ca

NOTE: To support corporate waste reduction efforts the large appendices in this agenda can be viewed at:
http://www.mississauga.ca/portal/cityhall/ heritageadvisory.ca

Find it Online

http://www.mississauga.ca/portal/cityhall/heritageadvisory

1. CALL TO ORDER

2. APPROVAL OF AGENDA

3. DECLARATION OF CONFLICT OF INTEREST

4. MINUTES OF PREVIOUS MEETING

4.1. Heritage Advisory Committee Minutes of January 10, 2017

5. DEPUTATIONS

5.1. Clarkson Area Heritage Properties by Richard Collins, Resident

Recommendation
That the Presentation by Richard Collins, Resident, with respect to the Clarkson Area Heritage Properties to the Heritage Advisory Committee on February 14, 2017, be received for information.

6. PUBLIC QUESTION PERIOD - 15 Minute Limit (*In accordance with Section 43 of the City of Mississauga Procedure By-law 0139-2013, persons who wish to address the Heritage Advisory Committee about a matter on the Agenda may ask their question limiting it to 5 minutes, as the public question period total limit is 15 minutes.*)

7. MATTERS TO BE CONSIDERED

7.1. Request to Demolish a Heritage Listed Property: 181 Lakeshore Road West (Ward 1)

Recommendation
That the property at 181 Lakeshore Road West, which is listed on the City's Heritage Register, is not worthy of heritage designation, and consequently, that the owner's request to demolish proceed through the applicable process.

7.2. Request to Alter a Heritage Designated Property: Adaptive Reuse at 1352 Lakeshore Road East (Ward 1)

Recommendation
That the proposed alterations and conservation work as shown in the attachments to the Corporate Report dated January 24, 2017 from the Commissioner of Community Services, be approved for the property at 1352 Lakeshore Road East, which is designated under Part IV of the Ontario Heritage Act.

7.3. Removal or reduction of Cultural Landscape Properties from the City's Heritage Register

Recommendation
That the Cultural Landscape Inventory remain status quo, pending completion of Recommendation 6 of the Heritage Management Strategy (2016).

7.4. Name Change of Cenotaph Park (P-111), 29 Stavebank Road (Ward 1)

Recommendation
That the Corporate Report dated February 6, 2017 from the Commissioner of Community Services entitled "Name change of Cenotaph Park" be received for information.

8. SUBCOMMITTEE UPDATES

8.1. Heritage Designation Sub-Committee

8.2. Public Awareness Sub-Committee

9. INFORMATION ITEMS

9.1 Feasibility of Increasing the Designated Heritage Property Grant Envelope

Memorandum January 19, 2017 from Paul Damaso, Director, Culture Division.

9.2 Letter from MP Peter Van Loan to Support Bill C-323

10. OTHER BUSINESS

11. DATE OF NEXT MEETING – March 7, 2017 at 9:00 am

12. ADJOURNMENT

City of Mississauga
Minutes

MISSISSAUGA

Heritage Advisory Committee

Date
2017/01/10
Time
9:30 AM
Location
Civic Centre, Council Chamber,
300 City Centre Drive, Mississauga, Ontario, L5B 3C1 Ontario

Members Present
Councillor George Carlson, Ward 11 **(Chair)**
Rick Mateljan, Citizen Member **(Vice-Chair)**
Councillor Carolyn Parrish, Ward 5 (arr 9:55pm)
Michael Battaglia, Citizen Member
Elizabeth Bjarnason, Citizen Member
Lindsay Graves, Citizen Member
James Holmes, Citizen Member
Cameron McCuaig, Citizen Member

Members Absent
Robert Cutmore, Citizen Member
David Dodaro, Citizen Member
Matthew N. Wilkinson, Citizen Member

Staff Present
Mark Warrack, Manager, Culture and Heritage Planning
Paula Wubbenhorst, Senior Heritage Coordinator, Culture Division
Cecilia Nin Hernandez, Heritage Coordinator, Culture Division
Mumtaz Alikhan, Legislative Coordinator

Find it online
http://www.mississauga.ca/portal/cityhall/heritageadvisory

1. CALL TO ORDER -9:34 am

2. APPROVAL OF AGENDA
APPROVED (R. Mateljan)

3. DECLARATION OF CONFLICT OF INTEREST
Nil.

4. MINUTES OF PREVIOUS MEETING

4.1. Heritage Advisory Committee Minutes of November 15, 2016

Recommendation HAC-0056-2016, Item 1(b) was amended to read: "That the wording be revised as follows: *"Views of the building from Mississauga Road and from the corner of the lot at Mississauga Road and Barbertown Road, from the public realm (the sidewalk and road).*"

APPROVED AS AMENDED (L. Graves)

5. DEPUTATIONS

5.1. Credit River Bridge Pilot Project Strategic Conservation Plan - Winston L. Wong, Ministry of Tourism, Culture and Sport (MTCS)

Winston Wong, Environmental Planning Specialist, Ministry of Tourism, Culture and Sport (Ministry), and Joel Konrad, Cultural Heritage Specialist at ASI Heritage, provided an overview of the Province's Strategic Conservation Plan (SCP) Pilot Project and, as part of this project, the QEW Credit River Bridge Conservation Plan. Mr. Wong noted that the SCP plans will be consistent with related initiatives such as the Ontario Heritage Act and Ministry of Transportation (MTO) Heritage Guidelines. Mr. Konrad spoke to the QEW Credit River Bridge Project status which is currently at 60% completion including a draft Statement of Cultural Heritage Value and Heritage Attributes. He said that the SCP will identify Cultural Heritage Landscape attributes and specific views for conservation within MTO property boundaries. Mr. Konrad also noted that the Draft Preliminary Heritage Conservation Strategies will provide guidance for the technical conservation of individual Credit River Bridge Heritage Attributes. He outlined the next steps is to consider comments from HAC and Heritage Staff and present the SCP report in Spring 2017 to the City before submission to MTO and MTCS for approval.

The Committee made the following comments:

- Have end of life issues been considered as bridge life is about 70 years;
- If consideration has been given to remaining sympathetic to the architecture of the bridge given the fact that there is an end life of it;

- protection of the boundary vista when crossing the bridge;
- heritage design perspective for the pedestrian bridge;

Messrs. Wong and Konrad agreed that the life cycle of bridges is approximately seventy years, but noted case studies have shown there are bridges that have been in existence for hundreds of years and the SCP will provide guidelines. They noted that further opportunities for comments and discussions will be provided to the Committee, including the vistas to and from the bridge and its natural environment. Heritage staff noted that the Credit River Bridge itself is a cultural landscape.

RECOMMENDATION
HAC-001-2017
That the Power Point Presentation from Winston L. Wong, Ministry of Tourism, Culture and Sport; and Joel Konrad, Cultural Heritage Specialist at ASI Heritage, with respect to the Credit River Bridge Pilot Project Strategic Conservation Plan, to the Heritage Advisory Committee dated January 20, 2017, be received for information.

RECEIVED (J. Holmes)

6. PUBLIC QUESTION PERIOD – Nil.

7. MATTERS TO BE CONSIDERED

7.1. Proposed Heritage Designation Mary Fix Property, 25 Pinetree Way (Ward 1)

Corporate Report dated December 1, 2016, from the Commissioner of Community Services.

RECOMMENDATION
HAC-0002-2017
1. That the property at 25 Pinetree Way, known as the Mary Fix Property, be designated under the Ontario Heritage Act for its design, physical, historical, associative and contextual value and that the appropriate City officials be authorized and directed to take the necessary action to give effect thereto.

2. That if there are objections to the designation, City Council direct the City Clerk to refer the matter to the Conservation Review Board.

APPROVED (Councillor C. Parrish)

7.2. Request to Alter a Heritage Designated Property: Installation of public art at 4300 Riverwood Park Lane (Ward 6)

Corporate Report dated December 15, 2016, from the Commissioner of Community Services.

Mark Driedger, ATA Architects Inc., provided an overview of the proposed City public art installation.

The Committee expressed support for the art work.

RECOMMENDATION

HAC-0003-2017

1. That, the proposal for a new public art sculpture, concrete foundation slab with integrated steps and new public seating areas, with dimensions as described in the preliminary technical description, as shown in the attachments to the Corporate Report dated December 15, 2016 from the Commissioner of Community Services, be approved for the property at 4300 Riverwood Park Lane, which is designated under Part IV of the Ontario Heritage Act.

2. That, final drawings be submitted to heritage planning prior to issuance of the heritage permit.

3. That the PowerPoint Presentation to the Heritage Advisory Committee dated January 10, 2017 from Mark Driedger, ATA Architects Inc., be received.

APPROVED (Councillor C. Parrish)

7.3. Request to Alter a Heritage Designated Property: Landscaping work at 4300 Riverwood Park Lane (Ward 6)

Councillor Parrish said that it is important to ensure that the walkway will be in in keeping with the buildings. Mr. Driedger responded that it will be durable and the style will fit the house.

RECOMMENDATION

HAC-0004-2017

That, the rehabilitation of the circular drive, the adjacent stone path and the pedestrian path along the north of the Parker Estate house, concrete foundation slab with integrated steps and new public seating areas, as shown in the attachments to the Corporate Report dated December 15, 2016 from the Commissioner of Community Services, be approved for the property at 4300 Riverwood Park Lane, which is designated under Part IV of the Ontario Heritage Act.

APPROVED (R. Mateljan)

7.4. Request to Demolish a Heritage Listed Property: 1412 Birchwood Heights Drive (Ward 1)

Corporate Report dated December 15, 2016, from the Commissioner of Community Services.

RECOMMENDATION
HAC-0005-2017
That the property at 1412 Birchwood Heights Drive, which is listed on the City's Heritage Register, is not worthy of heritage designation, and consequently, that the owner's request to demolish proceed through the applicable process.

APPROVED (C. McCuaig)

7.5. Request to Demolish a Heritage Listed Property: 23 Plainsman Road (Ward 11)

Corporate Report dated December 15, 2016, from the Commissioner of Community Services.

RECOMMENDATION
HAC-0006-2017
That the property at 23 Plainsman Road, which is listed on the City's Heritage Register, is not worthy of heritage designation, and consequently, that the owner's request to demolish proceed through the applicable process.

APPROVED (J. Holmes)

7.6. Heritage Advisory Committee and Related Staff Milestones: 2016 Year in Review

Corporate Report dated December 15, 2016, from the Commissioner of Community Services.

RECOMMENDATION
HC-0007-2017
That the Corporate Report dated December 15, 2016 from the Commissioner of Community Services, entitled "Heritage Advisory Committee and Related Staff Milestones: 2016 Year in Review," be received for information.

RECEIVED (Councillor C. Parrish)

8. SUBCOMMITTEE UPDATES

8.1. Heritage Designation Sub-Committee

Mr. McCuaig spoke to his attendance at a recent presentation to the Mississauga South Historical Society summarizing the role of heritage along with the potential properties existing in the Clarkson area. The presentation was made by Resident Richard Collins. He suggested that Mr. Collins be invited to the February 14th meeting to make a 20 minute presentation to the Committee. The Committee Members agreed.

RECOMMENDTION
HAC-0008-2017
That Richard Collins, Resident, be invited to provide a 20 minute presentation of heritage properties in the Clarkson area to the Heritage Advisory Committee at its meeting to be held on February 14, 2017.

APPROVED (L. Graves)

8.2. Public Awareness Sub-Committee

Nil.

9. INFORMATION ITEMS

10. OTHER BUSINESS
In response to C. McCuaig's concern regarding the lack of maintenance priorities for the City's heritage properties, Mark Warrack, Manager, Heritage Planning advised that there is a meeting of stakeholders scheduled for later this month to address this issue and he will report back to a future meeting. Mr. Warrack further noted that there used to be a staff person who had an area of expertise in heritage structures, but now it is spread out over various departments of the City.

11. DATE OF NEXT MEETING
Ms. Mumtaz Alikhan, Legislative Coordinator, advised that the February 14, 2017 will start early at 9:00 am in order to accommodate a facilitated planning session to follow the business part of the meeting.

12. ADJOURNMENT – 10:47 am

City of Mississauga
Corporate Report

MISSISSAUGA

Date: 2017/01/19	Originator's files:
To: Chair and Members of Heritage Advisory Committee	
From: Paul Mitcham, P. Eng, MBA, Commissioner of Community Services	Meeting date: 2017/02/14

Subject
Request to Demolish a Heritage Listed Property: 181 Lakeshore Road West (Ward 1)

Recommendation
That the property at 181 Lakeshore Road West, which is listed on the City's Heritage Register, is not worthy of heritage designation, and consequently, that the owner's request to demolish proceed through the applicable process.

Background
Section 27.3 of the Ontario Heritage Act states that structures or buildings on property listed on the City's Heritage Register cannot be removed or demolished without at least 60 days' notice to Council. This legislation allows time for Council to review the property's cultural heritage value to determine if the property merits designation.

The owner of the subject property has submitted a heritage permit application to demolish the structures related to a gas station use. The subject property is listed on the City's Heritage Register as it forms part of the Mississauga Road Scenic Route cultural landscape. This cultural landscape is significant due to its scenic and visual quality as the road traverses a variety of topography and land use, from old established residential neighbourhoods to new industrial and commercial uses. Its landscape is of archaeological, design, technological interest as well as having historical interest and associations, illustrating important phases of Mississauga's history and displaying a consistent scale of built features.

The permit application does not include information on future planned redevelopment. The landscaping, urban design and conservation authority related aspects will be reviewed as part of the development review process, once an application is made to the City, to ensure the project respects the character of the surrounding community. A Heritage Impact Assessment addendum showing future plans for redevelopment will be required at the time that a development application is submitted to the City.

Comments

The owner of the subject property has requested permission to demolish the existing structure. The applicant has provided a Heritage Impact Assessment compiled by Chris Uchiyama Heritage. It is attached as Appendix 1. The consultant has concluded that the structure at 181 Lakeshore Road West is not worthy of designation. Staff concurs with this finding.

Financial Impact

There is no financial impact.

Conclusion

The owner of 181 Lakeshore Road West has requested permission to demolish a structure on a property that is listed on the City's Heritage Register. The applicant has submitted a documentation report which provides information which does not support the building's merit for designation under the Ontario Heritage Act. Staff concurs with this finding.

Attachment

Appendix 1: Heritage Impact Assessment

Paul Mitcham, P. Eng, MBA, Commissioner of Community Services

Prepared by: Cecilia Nin Hernandez, Heritage Coordinator

Appendix 1

JANUARY 5, 2017

HERITAGE IMPACT ASSESSMENT

181 LAKESHORE ROAD WEST, MISSISSAUGA ON

REPORT PREPARED FOR:
exp Energy Services Ltd.

220 Commerce Valley Drive West, Suite
500 Markham, ON L3T 0A8

REPORT PREPARED BY:

Chris Uchiyama Heritage
220-414 Willowdale Ave.,
North York ON M2N 5B2

EXECUTIVE SUMMARY

Chris Uchiyama Heritage was retained by exp Energy Services Ltd., on behalf of their client Imperial Oil Ltd., to prepare a Heritage Impact Assessment for the property at 181 Lakeshore Road West in Mississauga, Ontario. This HIA has been triggered by the City of Mississauga (the City) as a requirement for the application for a request for the issuance of a demolition permit, given that the property is a 'listed' property, included on the Heritage Register as part of the Mississauga Road Scenic Road Cultural Landscape. The property is also adjacent to the Old Port Credit Village Heritage Conservation District.

The purpose of this HIA is to determine the cultural heritage value or interest (CHVI) of the subject property and to assess whether the proposed demolition will have a negative impact on the cultural heritage of the property or the CHVI of its environs, which include the Mississauga Road Scenic Route Cultural Landscape and the Old Port Credit Village Heritage Conservation District (HCD). This HIA has been undertaken in accordance with the City of Mississauga's *Cultural Landscape Heritage Impact Statement Terms of Reference* (2013) and *Heritage Impact Assessment Terms of Reference* (2016).

The property was evaluated against criteria outlined under *Ontario Regulation 9/06 Criteria for Determining Cultural Heritage Value or Interest under the Ontario Heritage Act*. The property was also evaluated against the attributes that define the cultural heritage value of the Mississauga Road Scenic Route and the statement defining the heritage character of the Old Port Credit Village HCD as described in the HCD plan.

The subject property does not meet criteria for designation as outlined under O.Reg. 9/06, nor does it warrant conservation as per Provincial Policy Statement 2.6. Furthermore, the extant structures are not consistent with the attributes which characterize the Mississauga Road Scenic Route Cultural Landscape nor the Old Port Credit HCD; as such, it is not considered by this study to be a component which contributes to the heritage value of either cultural landscape.

Based on this evaluation, the property does not warrant designation under the Ontario Heritage Act, nor is retention warranted as per Provincial Policy Statement 2.6. It is recommended that the demolition of structures on the property will have no negative impact on any cultural heritage resources or landscapes.

It should be noted that this HIA has been limited to a review of impacts of the proposed demolition of extant structures. Any future development proposals will require an HIA to determine the potential for and extent of any negative impacts on both the Mississauga Road Scenic Route Cultural Landscape and the Old Port Credit Village HCD.

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1 INTRODUCTION

Chris Uchiyama Heritage was retained by exp Energy Services Ltd., on behalf of their client Imperial Oil Ltd., to prepare a Heritage Impact Assessment for the property at 181 Lakeshore Road West in Mississauga, Ontario. This HIA has been triggered by the City of Mississauga (the City) as a requirement for the application for a request for the issuance of a demolition permit, given that the property is 'listed' on the City's Heritage Register as part of the Mississauga Road Scenic Road Cultural Landscape. The property is also adjacent to the Old Port Credit Village Heritage Conservation District.

Imperial Oil Limited is applying for a demolition permit to remove the canopy structure over the former gas pumping station located at the southwest corner of Lakeshore Road West and Mississauga Road South. The location of the canopy is highlighted on Figure 1. Two additional buildings on the property – a carwash building and convenience store – will not be removed. An as-built site plan (showing conditions as of October 21, 2016) is presented as Figure 2.

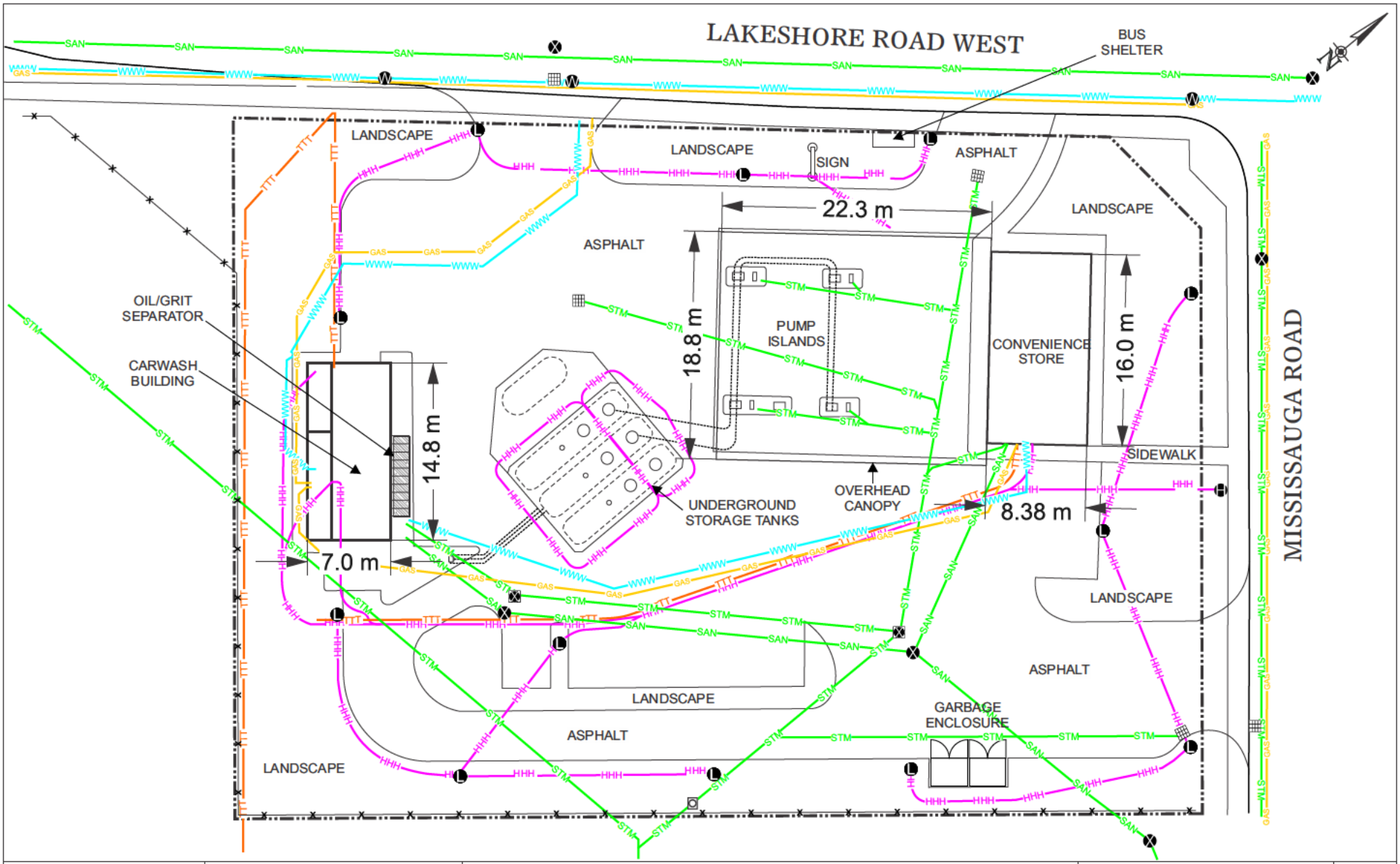
The purpose of this HIA is to determine the cultural heritage value or interest (CHVI) of the subject property and to assess whether the proposed demolition will have a negative impact on the cultural heritage of the property or the CHVI of its environs, which include the Mississauga Road Scenic Route Cultural Landscape and the Old Port Credit Village Heritage Conservation District (HCD). This HIA has been undertaken in accordance with the City of Mississauga's C*ultural Landscape Heritage Impact Statement Terms of Reference* (2013) and *Heritage Impact Assessment Terms of Reference* (2016).

The property comprises approximately 0.5 hectares at the southwest corner of Lakeshore Road West and Mississauga Road South (Figure 1). Structures on the property include a one-storey, rectangular plan gas station/convenience store building with storage and office space and a one-storey, rectangular plan drive-thru carwash building. Gas pumps, underground tanks, and an overhead canopy have been removed; but are clearly visible on Google Streetview images from as recently as July 2016.

The legal description is RANGE CIR PT LOT 9 RP 43R21173 PTS 6 & 7. The Roll number is 21-05-090-006-08500-0000. The property is included in the City's Heritage Register as part of the Mississauga Road Scenic Route. The subject property is not designated under Part IV of the Ontario Heritage Act.

A site visit was undertaken on December 8, 2016 by Chris Uchiyama, M.A. CAHP (P376). Ms. Uchiyama was escorted by an exp Energy Services Limited represented and was granted access to all interior and exterior portions of the property. The purpose of the site visit was to compile a documentary record of existing conditions and identify any heritage attributes, if applicable.

Figure 1: Project Location, Current Conditions (base map source: City of Mississauga, 2016). Property in red, canopy in yellow.



SCALE:

0 7.5 15m

(APPROXIMATE)

SOURCE:

BASED ON 'PROPOSED SITE PLAN' DRAWINGS BY IMPERIAL OIL 55A6069-02P DATED MARCH 25, 2010, 55A6069-03A DATED APRIL 03, 1997, FORMER FEATURES DATED APRIL 29, 1994 AND, AND FIELD OBSERVATIONS BY **exp** STAFF

NOTES:

UTILITIES ARE UNDERGROUND UNLESS OTHERWISE NOTED, LOCATIONS OF UTILITIES ARE APPROXIMATE

LEGEND:

- PROPERTY BOUNDARY
- FENCE
- FORMER FEATURES
- WATER VALUE
- MANHOLE
- MANHOLE & CATCH BASIN
- STORMCEPTOR
- PRODUCT (PIPE) LINE
- STORM SEWER
- SANITARY SEWER
- WATER
- HYDRO
- GAS
- TELEPHONE
- CATCH BASIN
- HYDRANT
- UTILITY POLE

DRAWN BY	CHECKED BY
J.D.H.	J.H.

SITE PLAN

FIGURE 2

IMPERIAL
181 LAKESHORE ROAD WEST
MISSISSAUGA, ONTARIO

PROJECT NUMBER: 10028 | DATE: JANUARY 2017

10028-SITE PLAN-PERMIT-JAN17

2 INTRODUCTION TO THE PROPERTY

The property is located at 181 Lakeshore Road West in the City of Mississauga, Ontario. It comprises approximately 0.5 hectares at the southwest corner of Lakeshore Road West and Mississauga Road South (Figure 1). The legal description is RANGE CIR PT LOT 9 RP 43R21173 PTS 6 & 7. The Roll number is 21-05-090-006-08500-0000. The property is an exception zone under zoning by-law 0225-2007, which permits such uses as gas bars and motor vehicle wash facilities (Figure 3).

The current owner is Imperial Oil Limited.

Structures on the property include:

- An approximately 8.4 x 16 metre (m), one-storey, flat-roof, rectangular plan convenience store building with storage and office space (Figures 4-10); and,

- An approximately 7 x 15 m, one storey, flat-roof, rectangular plan drive-thru carwash building (Figures 11-15).

Gas pumps, underground tanks, and an overhead canopy have been removed (Figures 16 and 17); but are clearly visible on Google Streetview images from as recently as July 2016 (Figures 18-22). Extant structures are surrounded by a paved parking surface which has been partially removed for tank removal and site remediation. Hard and soft landscaping elements are present throughout the site, consisting primarily of concrete curbs, paving stones, and tree and garden plantings around the perimeter of the property, flanking car access points, and along the carwash drive-thru land. A wooden fence runs along the southern and western property boundaries (Figure 23). All of the extant built and landscaping components on the property were constructed between 1992 and 1997 (Figures 24 and 25).

2.1 SURROUNDING CONTEXT

The subject property is located at the southwest corner of Lakeshore Road West and Mississauga Road South. To the south and west of the property lie the former oil refinery lands (1932-1978) which extend southward from Lakeshore Road West to the shore of Lake Ontario. The vacant property is zoned 'Development' under Zoning by-law 0225-2007 (Figure 3). The refinery was closed in 1978 following the construction of the Texaco refinery in Nanticoke, Ontario. The majority of the refinery was decommissioned in 1987 and aerial imagery from 1989 show very little remaining infrastructure (Figure 26). The history of the oil refinery will be described in more detail in Section 4. Today little evidence of the former oil refinery remains. With the exception of remnant paved access road, the property is an open field with tree lines along the roads and a mix of grass and scrub brush when viewed from the public right-of-way (Figure 27).

Properties along Lakeshore Road West, to the north, east, and west of the property are a mix of one and two-storey commercial buildings and residential buildings (Figures 1, 28 and 29).

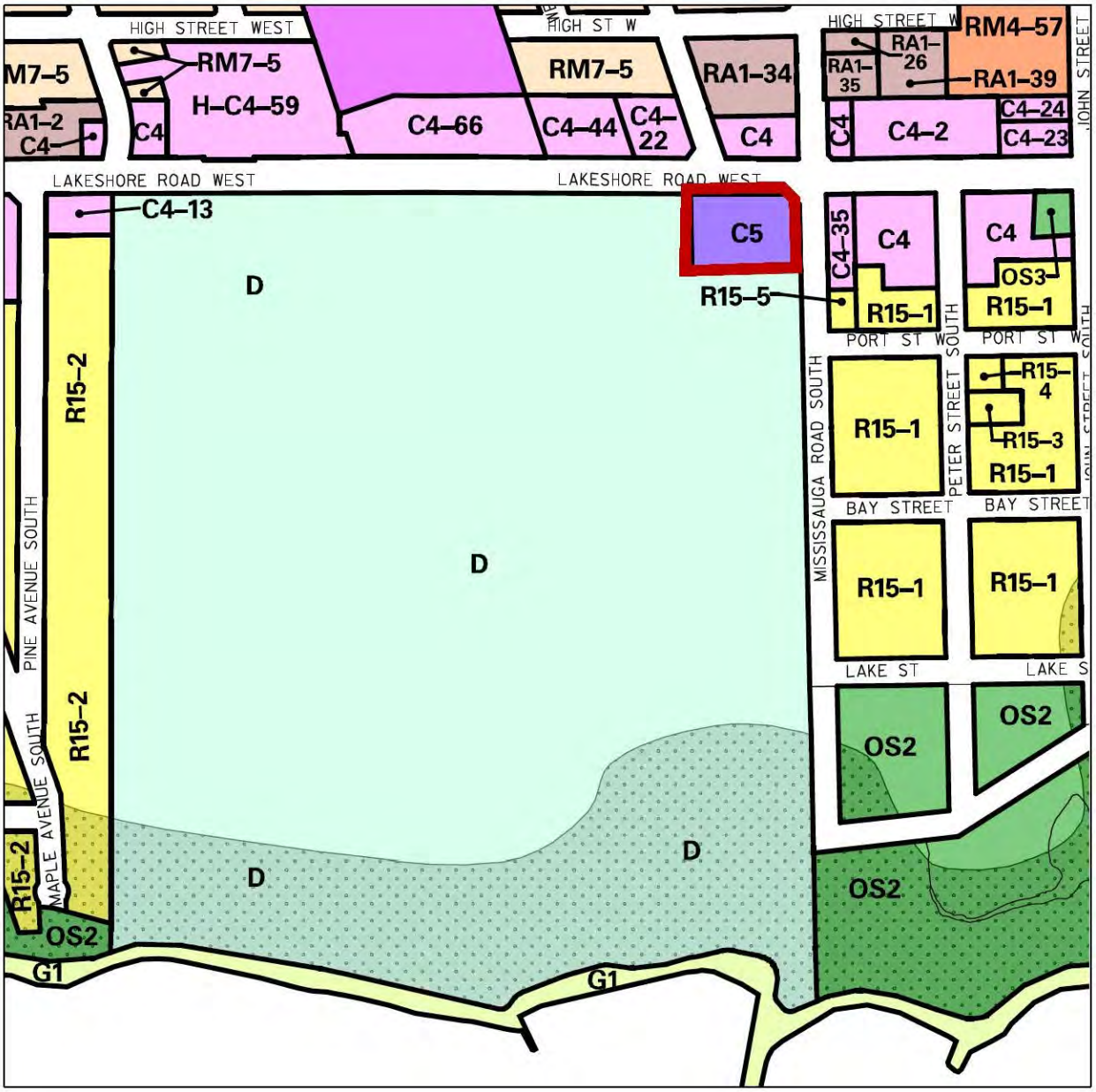


Figure 3: Zoning in and around Project Area (City of Mississauga, 2007, Zoning Map 8). 181 Lakeshore Road West is outlined in red.

Figure 4: Convenience Store building, east façade (CU 2016).

Figure 5: Convenience Store building, north facade (CU 2016).

Figure 6: Convenience Store building, west facade (CU 2016).

Figure 7: Convenience Store building, interior (CU 2016).

Figure 8: Convenience Store building, interior, washroom facility (CU 2016).

Figure 9: Convenience Store building, interior, storage (CU 2016).

Figure 10: Convenience Store building, interior, office (CU 2016).

Figure 11: Car wash building, east facade (CU 2016).

Figure 12: Car wash building, north facade (CU 2016).

Figure 13: Car wash building, south facade (CU 2016).

Figure 14: Car wash building, interior (CU 2016).

Figure 15: Car wash building, interior, storage (CU 2016).

Figure 16: Property overview, facing northeast (CU 2016).

Figure 17: Property overview, facing west (CU 2016).

Figure 18: Google Streetview, May 2016, facing southeast (Google Earth Pro 2016).

Figure 19: Google Streetview, July 2016, facing south (Google Earth Pro 2016).

Figure 20: Google Streetview, July 2016, facing west (Google Earth Pro 2016).

Figure 21: Google Streetview, June 2015, facing west (Google Earth Pro 2016).

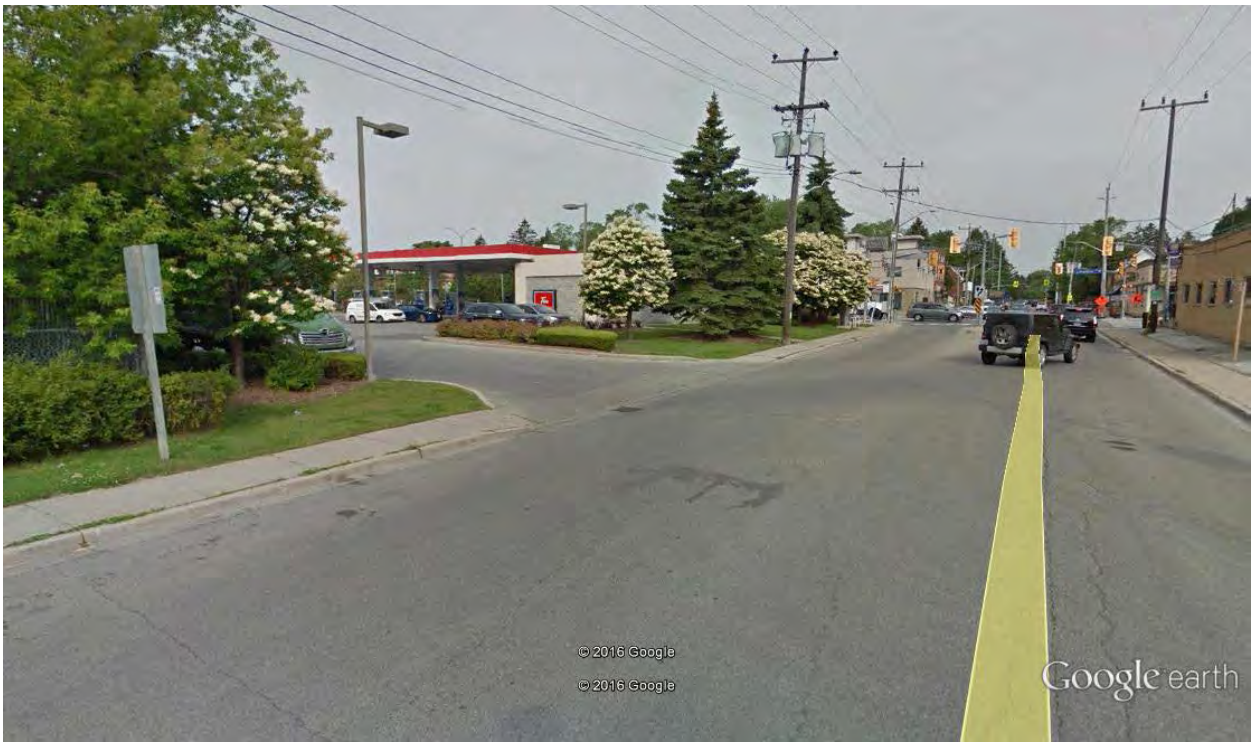


Figure 22: Google Streetview, June 2015, facing north (Google Earth Pro 2016).

Figure 23: Fence along south boundary of property, facing east (CU 2016).

Figure 24: Aerial image of property, 1992 (City of Mississauga, 1992 Aerial Image). 181 Lakeshore Road West in red.

Figure 25: Aerial image of property, 1997 (City of Mississauga, 1997 Aerial Image).

Figure 26: Aerial image of property, 1989 (City of Mississauga, 1989 Aerial Image).

Figure 27: View of former refinery lands from Mississauga Road South, south of project area (CU 2016).

Figure 28: View of Lakeshore Road West at Mississauga Road South, facing east (CU 2016).

Figure 29: View of Lakeshore Road West at Mississauga Road South, facing west (CU 2016).

2.1.1 Old Port Credit Heritage Conservation District

The Old Port Credit Village Heritage Conservation District (HCD) was designation under Part V of the *Ontario Heritage Act* in May 2004 (Bylaw 272-2004). The HCD is bounded by: Mississauga Road South to the west; Lakeshore Road West, to the north; and Lake Ontario and the mouth of the Credit River, to the south and east (Figure 30). The "Statement Defining the District's General Historical Character" is included as Appendix A.

Part IV Designation

Although not an adjacent property, as defined under the PPS,[1] the west and south facades of a property designated under Part IV of the *Ontario Heritage Act* is visible from the property, when looking east – Clarke Memorial Hall (Figure 31).

Clarke Memorial Hall at 161 Lakeshore Road West was designated under Part IV of the *Ontario Heritage Act* in January 1986 (bylaw 91-86). Its Designation Statement declares:

> It is recommended that the Alfred Russell Clarke Memorial Hall be recognized on the Mississauga Heritage inventory, and be considered for designation for its architectural, historical and contextual importance. Built in 1922, Clarke Hall is a fine vernacular example of a public building designed in the Spanish Colonial Revival Style popular during the early decades of the twentieth century. In addition to the stylistic characteristics, such as the mission-like curvilinear gable and clay tile, architectural details specifically mentioned for preservation include: six monumental pilasters and brackets, the classical frontispiece and the arched windows and commemorative plaque of the front facade. Historically, the Hall was given to the Port Credit Methodist Church (First United Church) by Mary Louise Clarke as a memorial to her husband with the proviso that it always be dedicated to community use. From 1941 until amalgamation with the City of Mississauga in 1974, Clarke Hall served as the municipal offices for the Village and Town of Port Credit. It continues to function as a community hall for the City of Mississauga and the Port Credit area. Contextually, Clarke Hall is an important architectural and historical element on Port Credit's historic west bank.[2]

2.1.2 Mississauga Road Scenic Route

The property is included as a 'listed' property on the City's Heritage Register as part of the Mississauga Road Scenic Route.

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[1] Under the PPS 2014, "Adjacent lands: means…for the purposes of policy 2.6.3, those lands contiguous to a protected heritage property or as otherwise defined in the municipal official plan." (Provincial Policy Statement, Section 6.0 Definitions, 2014: 38. Last accessed December 2016 at http://www.mah.gov.on.ca/AssetFactory.aspx?did=10463.

[2] City of Mississauga, *Property Information* "161 Lakeshore Road West," Accessed December 2016 at https://www.mississauga.ca/portal/services/property?paf_portalId=default&paf_communityId=200005&paf_pageId=2700006&paf_dm=shared&paf_gear_id=6500016&paf_gm=content&paf_gear_id=6500016&action=heritage&heritageTab=yes&propDetailsTab=no&id=130820&addressId=220686&pin=null&rollNumber=210509000608700000&redirectPage=1.

The Mississauga Road Scenic Route was identified in the City's 2005 *Cultural Landscape Inventory.* It is described as follows:

> Mississauga Road is one of the oldest roads in Mississauga. Its alignment varies from being part of the normal road grid in the north to a curvilinear alignment in the south following the top of bank of the Credit River. The scenic quality of the road is notable because it traverses a variety of topography and varying land use from old established residential neighbourhoods to new industrial and commercial areas. From Streetsville south the boulevards and adjacent landscapes are home to some of the oldest and most spectacular trees in the City. It is acknowledged as an important cultural landscape because of its role as a pioneer road and its scenic interest and quality.[3]

The Mississauga Road cultural landscape has been identified as having a number of cultural heritage attributes, as listed below.

Landscape Environment

Scenic and Visual Quality:

This quality may be both positive (resulting from such factors as a healthy environment or having recognized scenic value) or negative (having been degraded through some former use, such as a quarry or an abandoned, polluted or ruinous manufacturing plant). The identification is based on the consistent character of positive or negative aesthetic and visual quality. Landscapes can be visually attractive because of a special spatial organization, spatial definition, scale or visual integrity.

Horticultural Interest:

Landscapes with horticultural interest include all features of landscapes which may be unique or distinct to a specific location. It can include isolated specimen trees, hedge rows, wind rows or other compositions of trees, and specialized landscaped features. Tree plantations would also fall into this category.

Landscape Design, Type and Technological Interest:

This includes complete landscapes that were designed for a specific use or single purpose. These landscapes are characterized by their design intent or urban function i.e. stormwater management. These landscapes are valued in the community by association of use and/or contribution to the visual quality of the community.

Built Environment

Consistent Scale of Built Features:

Pleasing design usually is associated with a consistent scale of buildings and landscapes which complement each other visually. Other zones, although not visually pleasing, may have a consistent size

[3] Landplan Collaborative Ltd., *et.al.*, *Cultural Landscape Inventory*, prepared for the City of Mississauga January, 2005: Appendix 2, F-TC-4.

and shape of structures due to use or planning constraints. Such groupings may include housing, commercial and industrial collections of buildings with the key criteria being similarity of scale.

Historical Association

Illustrates a Style, Trend or Pattern:

Landscapes and buildings, as well as transportation and industrial features in any community, do not develop in isolation from the same forces elsewhere in the world. For each feature, whether a university campus, residential landscape, railway or highway bridge, building type or an industrial complex, each has a rich story. The degree to which a specific site is a representative example of a specific style, trend or pattern will require careful consideration in determining its relevance to the inventory.

Illustrates an Important Phase of Social or Physical Development:

A site may be evocative or representative of a phase or epoch in the development of the City. Such remnants provide context for an on-going understanding of the development of the community

Other

Historical or Archaeological Interest:

Cultural heritage resources associated with pre-historical and historical events.

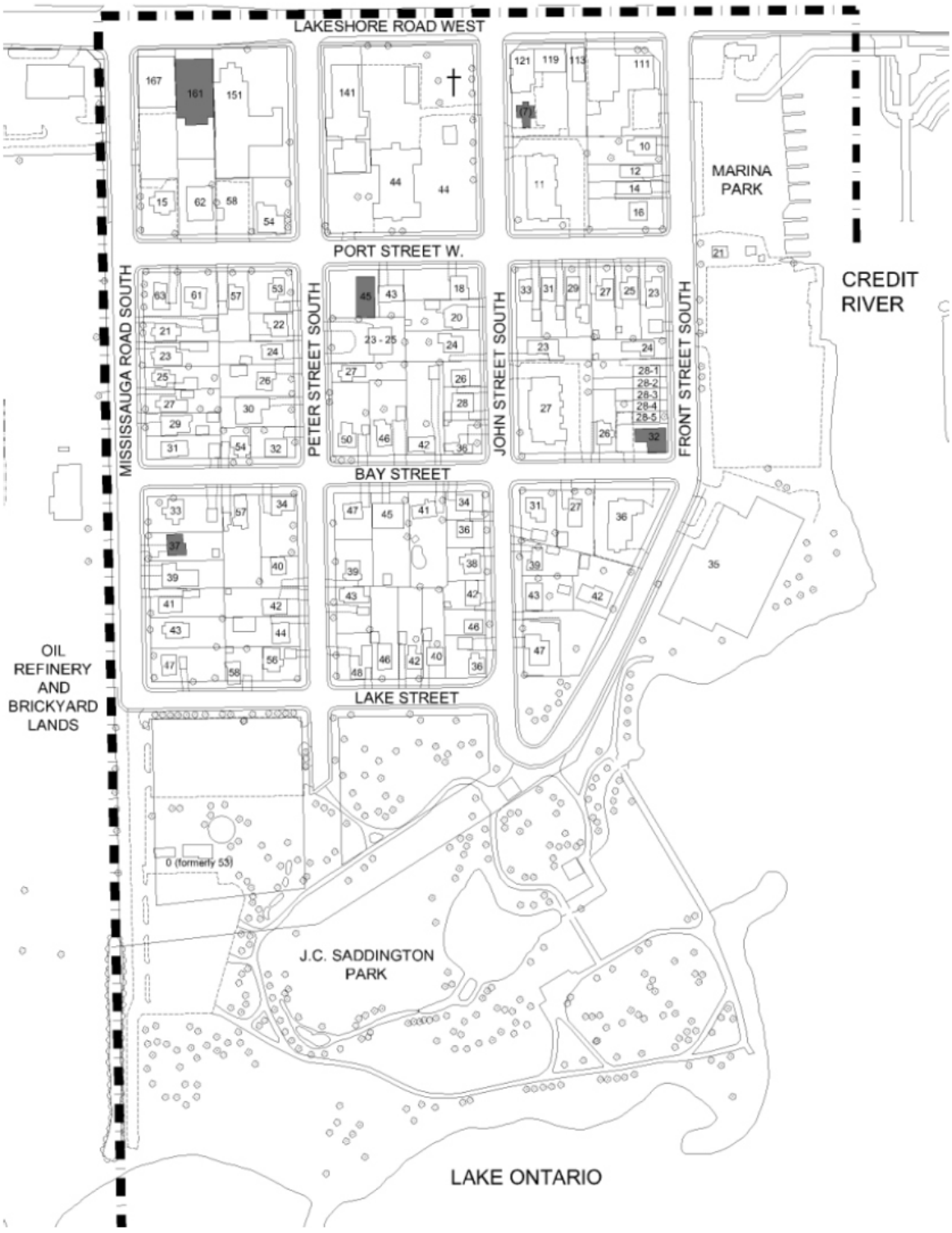

Figure 30: Boundaries of Old Port Credit Village HCD (George Robb Architect, 2004: 3).

Figure 31: Rear of Clarke Memorial Hall (redbrick building) from 181 Lakeshore Road West, facing east (CU 2016).

3 LEGISLATIVE AND POLICY FRAMEWORK

In Ontario, the *Provincial Policy Statement 2014* (PPS), issued under s. 3 of the Planning Act, provides policy direction on matters of provincial interest related to land use planning and development. When a municipality is undertaking land use planning decisions related to development or site alteration, decisions must be consistent with the PPS. Statements related to cultural heritage are included in policy 2.6, according to which "significant built heritage resources and significant cultural heritage landscapes shall be conserved." "Significant" is defined as "resources that have been determined to have cultural heritage value or interest for the important contribution they make to our understanding of the history of a place, an event, or a people."

In addition, policy 2.6.3 outlines, "Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property except where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved." With respect to poly 2.6.3, the definition of adjacent lands means "those lands contiguous to a protected heritage property or as otherwise defined in the municipal official plan."

The Ontario Heritage Act ("OHA") is the primary legislation used by municipalities to conserve cultural heritage resources. It enable municipalities to identified which permits municipalities to designate individual properties that are of cultural heritage value or interest through individual designations (Part IV) or heritage conservation districts (Part V) . The properties are evaluated against the criteria set out in Ont. Reg. 9/06 and include. Designation is done by by-law which outlines a description of the property, statement of significance explaining the cultural heritage value or interest of the property and a description of the heritage attributes.

The Mississauga Official Plan (OP) (2015) outlines Heritage Planning direction for the municipality in Section 7.4. Mississauga's heritage policies are based on two overarching principles:

a. heritage planning will be an integral part of the planning process; and,

b. cultural heritage resources of significant value will be identified, protected, and preserved.[4]

Under Sections 7.4.1.10 and 7.4.1.12 of the OP, development applications involving cultural heritage resources are required to include a Heritage Impact Assessment (HIA). *Heritage Impact Assessment Terms of Reference* have been prepared by the City of Mississauga. The most recent version of the document, dating to October 2016, were applied to this current study.

3.1 EVALUATION CRITERIA

Ontario Regulation 9/06 (O.Reg.9/06) outlines specific criteria for determining cultural heritage value or interest under Section 29 of the *Ontario Heritage Act*. These criteria are used to determine if an individual property is a cultural heritage resource.

[4] City of Mississauga, *Mississauga Official Plan*. Consolidated July 2016. Last accessed December 2016 at http://www.mississauga.ca/portal/residents/mississaugaofficialplan: Section 7.4.1.1: p.7-7.

The regulation has three criteria, each with three sub-criteria. These include:

1. The property has design value or physical value because it,
    i. is a rare, unique, representative or early example of a style, type, expression, material or construction method
    ii. displays a high degree of craftsmanship or artistic merit, or
    iii. demonstrates a high degree of technical or scientific achievement.
2. The property has historical value or associative value because it,
    i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,
    ii. yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or
    iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
3. The property has contextual value because it,
    i. is important in defining, maintaining or supporting the character of an area,
    ii. is physically, functionally, visually or historically linked to its surroundings, or
    iii. is a landmark.

Assessment of a property involves research, site assessment and evaluation. Historical research into the history of the property can include dates of construction of any structures; research into people, events, technologies or philosophies that may be associated with the property; or any other pertinent details about a property.

Results from site visits and research are evaluated against the criteria of O.Reg. 9/06. Only one of the criteria must be met for a property to have cultural heritage value or interest.

4 HISTORICAL CONTEXT

The crown patent for Lot 9, Concession 1 in the geographic township of Toronto, County of Peel was first granted to James R. Shaw in 1850.[5] The property was acquired by Frank C. Capreol in 1855. Capreol was the founder of the Peel Manufacturing Company. During the second half of the 19th century, he purchased a large number of lots around Port Credit as he grew his company and worked towards developing the Village into an industrial town.[6] The title to the property was transferred to William N. Alger in 1865 and John Crickmore in 1870 before being transferred to the Peel General Manufacturing Company in 1884.

The 1877 map of Toronto Township in the Walker and Miles historical atlas shows no development in the lot (Figure 32). The map indicates that the property was owned by the Peel Manufacturing Company;[7] which owned a vast amount of property west and north of the Village of Port Credit. Several buildings are indicated on the Peel Manufacturing Company lands, primarily along established roads. The nearest building, with respect to the subject property is located just north of present-day Lakeshore Road West, two lots west of 181 Lakeshore Road West (Figure 32).

In 1889 Lot 9 was purchased by Thomas Nightingale, who established the Nightingale Pressed Brick Company on the property.[8] The brickworks continued after Nightingale's death in 1891,[9] and the property was transferred to Francis S. Stuart in 1893, although it remained the location of the brickworks, which continued to expand; changing ownership several times. From 1894 to 1906, the property title was under Port Credit P.B. & T.C. Co., and from 1906 to 1931 it was under Port Credit Brick Company Limited (Figure 33). By 1909, the brickworks employed 250 full-time workers.[10] The success of the brickworks came to an end in 1927. At the time, the brickyard included "…a two-storey brick office, a frame workshop, six rectangular brick kilns, a five-storey frame pressed brick plant, a large brick and frame dryer and machine house, a two-and-a-half-storey brick house, a two-storey bunk house, outhouses and a water slip leading to Lake Ontario."[11]

The property title was transferred to Lloyd Refineries Limited in 1933, although the refinery appears to have been established in 1932.[12] Crude oil arrived via tanker at the water slip along the shore. The

[5] Amec Foster Wheeler, *Phase I Environmental Site Assessment, Port Credit Esso, 181 Lakeshore Road West, Mississauga, Ontario.* Report prepared for Imperial Oil Limited, June 2015 (last revised August 2015): 16 and Appendix C.
[6] Heritage Mississauga, *Old Port Credit Village Heritage Conservation District Walking Tour.* n.d.: 2.
[7] It is likely that the title transfers in 1865 and 1870 were business arrangements, given the information reflected in the 1877 atlas and the transfer of the title back to the Peel Manufacturing Company in 1884.
[8] Verna Mae Weeks, *Port Credit: A Glimpse of Other Days*. Mississauga, Ontario: Verna Mae Weeks, 1995: 79-89 as cited in George Robb Architect *et.al*. *Heritage Conservation Feasibility Study of Old Port Credit Village Stage 1 Report*. Report prepared for the City of Mississauga, November 2003: 15.
[9] Archives of Ontario; Toronto, Ontario, Canada; "Registrations of Deaths, 1869-1938." Series: MS935; Reel: 66.
[10] George Robb Architect *et.al.*, *Heritage Conservation Feasibility Study of Old Port Credit Village Stage 1 Report*. Report prepared for the City of Mississauga, November 2003: 15.
[11] George Robb Architect *et.al.*, *Heritage Conservation Feasibility Study of Old Port Credit Village Stage 1 Report*. Report prepared for the City of Mississauga, November 2003: 15.
[12] Al Yarnell, *A History of Texaco in Port Credit*, manuscript on file at the Mississauga Central Library [1965] as cited in George Robb Architect *et.al.*, *Heritage Conservation Feasibility Study of Old Port Credit Village Stage 1 Report*. Report prepared for the City of Mississauga, November 2003: 20.

volume of crude oil processed at the site increased from 300 barrels a day in 1932 to 3,000 barrels a day in 1935.[13] The Good Rich Refining Company Limited purchased the refinery and in 1937[14] and the property title was transferred in 1944.[15] The refinery was purchased by Trinidad Leaseholds in 1946. The following year a steam plant was added.[16] The property was transferred to Kathleen and Leo Pickard in 1956. The same year, Regent Refining (Canada) Limited purchased the property. The title was transferred to Texaco Canada Limited in 1960.[17] The refinery continued to develop under Texaco ownership, until the construction of a new Texaco facility in Nanticoke, Ontario along Lake Erie. The Port Credit refinery was closed in 1978 when the Nanticoke facility began operations.[18]

Throughout the history of the overall property, the small parcel comprising 181 Lakeshore Road West appears to have been subject to limited development. An aerial image showing the property in 1954 indicates that, at the time, the subject property was cleared but did not include any structures (Figure 34). By 1966 two small rectangular buildings, and an exposed gas pump, had been constructed in the southwest corner of the parcel (Figure 35). The buildings were replaced by a larger rectangular structure and two pump islands by 1975 (Figure 36). A photo, dated 1980, shows the Texaco Service Station at 181 Lakeshore Road West (Figure 37). The refinery, south of the service station, is visible in the background. By 1985, the pumps appear to have been covered by a small rectangular canopy (Figures 26 and 38). In the mid-1990s the property underwent a significant reconfiguration. The earlier pump stands, canopy and service centre buildings were removed and the layout of the property was reorganized. A car wash and associated drive-thru were constructed in the southwest corner of the property and the pumps and convenience store were constructed in the northeast corner of the property (Figure 25). The property operated as a gas station and car wash until earlier this year (2016).

A summary of property ownership is presented in Table 1, below.

[13] Ibid, 2003: 20.
[14] Ibid, 2003: 20.
[15] Amec Foster Wheeler, *Phase I Environmental Site Assessment, Port Credit Esso, 181 Lakeshore Road West, Mississauga, Ontario.* Report prepared for Imperial Oil Limited, June 2015 (last revised August 2015): 16 and Appendix C.
[16]George Robb Architect *et.al.*, *Heritage Conservation Feasibility Study of Old Port Credit Village Stage 1 Report*. Report prepared for the City of Mississauga, November 2003: 20.
[17] Amec Foster Wheeler, *Phase I Environmental Site Assessment, Port Credit Esso, 181 Lakeshore Road West, Mississauga, Ontario.* Report prepared for Imperial Oil Limited, June 2015 (last revised August 2015): 16 and Appendix C.
[18] George Robb Architect *et.al.*, *Heritage Conservation Feasibility Study of Old Port Credit Village Stage 1 Report*. Report prepared for the City of Mississauga, November 2003: 20.

Table 1: Record of Ownership

Dates of Ownership	Owner(s)
1850 - 1855	James R Shaw
1855 - 1865	Frank C. Capreol
1865 - 1870	William N. Alger
1870 - 1884	John Crickmore
1884 - 1889	Peel General Manufacturing Co.
1889 - 1893	Thomas Nightingale
1893 - 1894	Francis F Stuart
1894 - 1906	Port Credit P.B. & T.C. Co.
1906 - 1931	Port Credit Brick Co. Ltd.
1931 - 1932 (Pt Lot 10 ConBF)	M.J. Haney Realty Co.
1933 - 1944 Pt lts 9-10, Con BF)	Lloyd Refineries Ltd.
1916 - 1947 (pt lot 9, Con BF)	Margaret Naish
1944 - 1947	Good Rich Refining Co. Ltd.
1956	Kathleen Pickard & Leo Pickard
1956 - 1960	Regent Refining (Canada) Ltd.
1960 - 1990	Texaco Canada Limited
1990 - present	172965 Canada Limited (current owner)

Figure 32: Detail of 1877 map of Toronto Township from Walker & Miles illustrated altas of the county of Peel (Walker & Miles, 1877).

Figure 33: The Port Credit Brick Co. Ltd. c.1907 from Ida Lynd Bradley, "Some Early Families of Port Credit," 1966 (George Robb Architect, 2003: 15).

Figure 34: Aerial image of property, 1954 (City of Mississauga, 1954 Aerial Image).

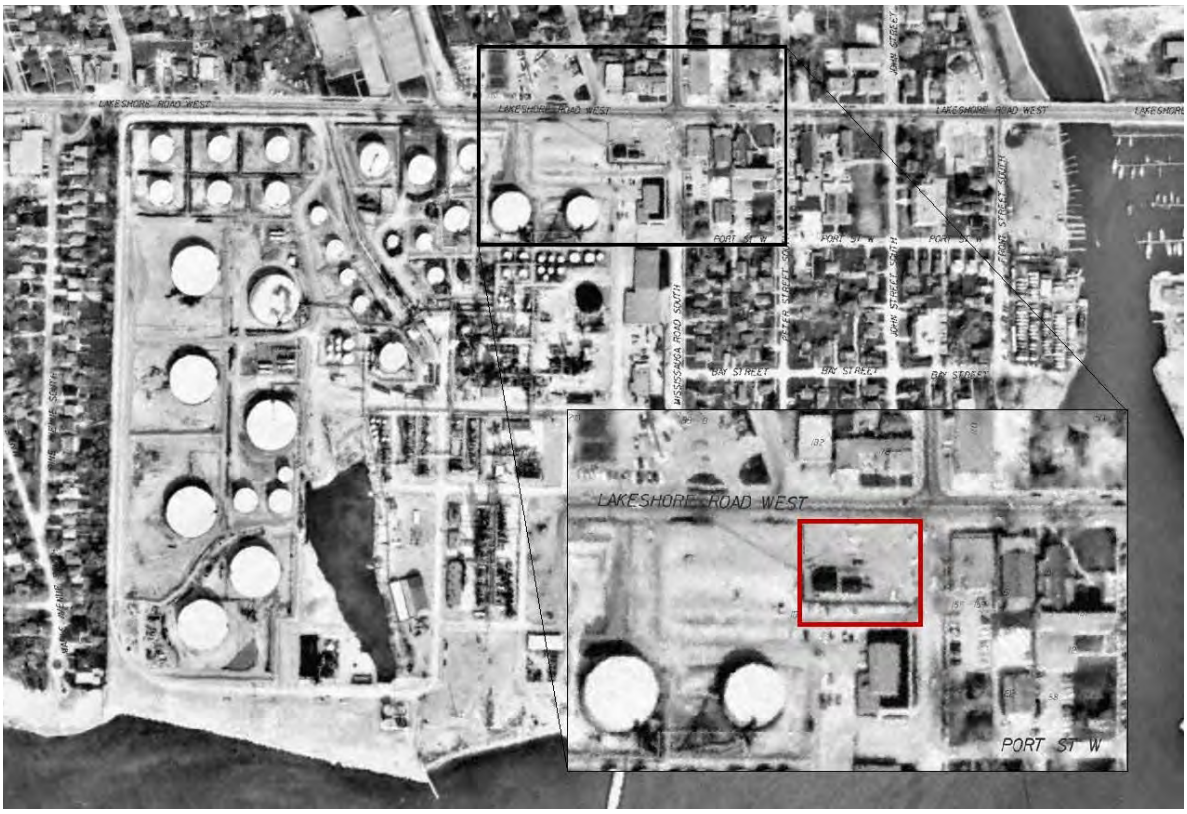

Figure 35: Aerial image of property, 1966 (City of Mississauga, 1966 Aerial Image).

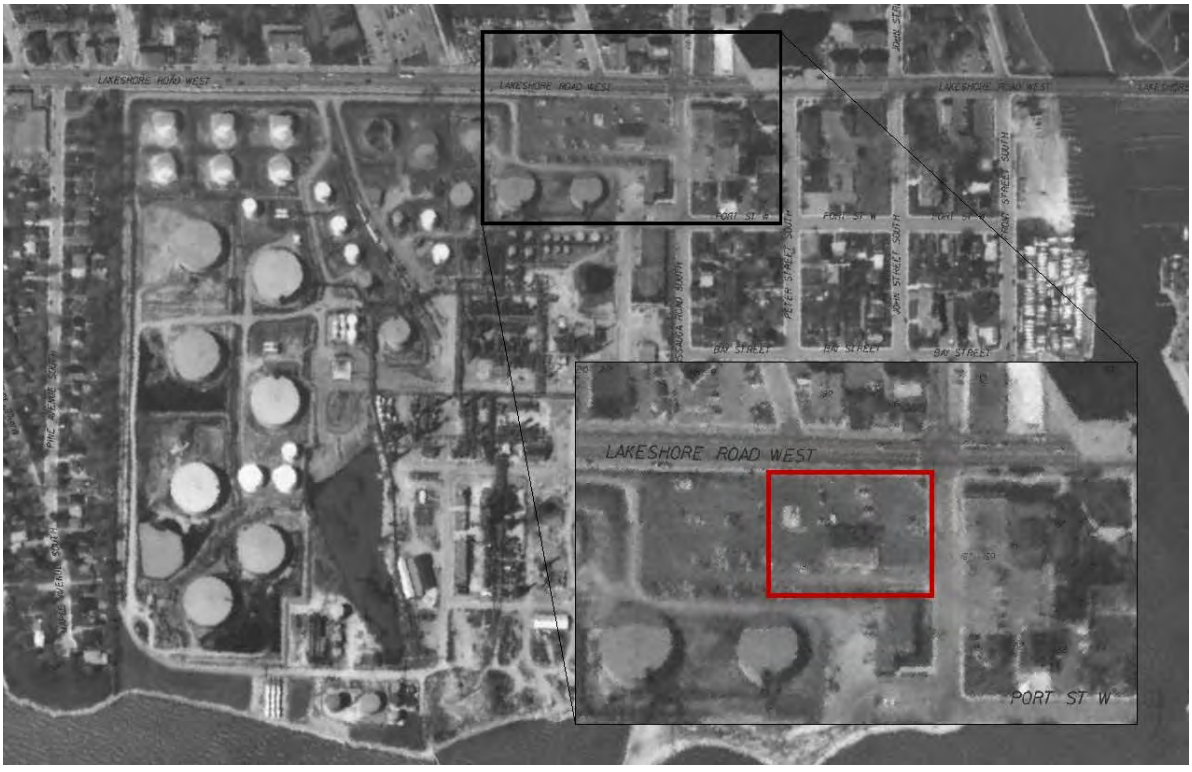

Figure 36: Aerial image of property, 1975 (City of Mississauga, 1975 Aerial Image).

Figure 37: 1980 photo of Texaco Service Station (City of Mississauga, Historic Images Gallery, Port Credit Gallery, "Texaco Service Station, Port Credit," G598).

Figure 38: Aerial image of property, 1985 (City of Mississauga, 1985 Aerial Image).

5 EVALUATION OF CULTURAL HERITAGE VALUE OR INTEREST

Evaluation of the cultural heritage value of interest (CHVI) of 181 Lakeshore Road West considered involved background research and a site assessment to document current conditions. Results from the site visit and research are evaluated against the criteria of O.Reg. 9/06. Only one of the criteria must be met for a property to have cultural heritage value or interest. An overview of the evaluation is presented in Table 2. Due to the location of the property within the Mississauga Road Scenic Route, the property has also been evaluated against the value-defining attributes of the Mississauga Road Scenic Route to determine its contribution to the overall landscape (Table 3).

Table 2: O.Reg.9/06 evaluation of 181 Lakeshore Road West

O.Reg. 9/06 Criteria	Criteria Met (y/n)	Justification
1. The property has design value or physical value because it,		
i. is a rare, unique, representative or early example of a style, type, expression, material, or construction method,	N	The structures and associated landscaping at 181 Lakeshore Road West were completed in the mid-1990s and follow a formulaic plan which is ubiquitous among late 20th and early 21st century Imperial Oil Limited gas station architecture.
ii. displays a high degree of craftsmanship or artistic merit, or	N	The property at 181 Lakeshore Road West has no components which display a high degree of craftsmanship or artistic merit. There were designed and constructed *en masse*. New constructions still follow essentially the same model.
iii. demonstrates a high degree of technical or scientific achievement.	N	There are no components of the property that demonstrate a high degree of technical or scientific achievement.
2. The property has historical value or associative value because it,		
i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,	N	The property and associated 1990s structures at 181 Lakeshore Road West are not directly associated with any theme, event, belief, person, activity, organization or institution that is significant to the community. The indirect association of the property and its components with the former refinery lands (which had a significant influence on the evolution of the surrounding community) was considered; however, the extant structures and layout include **no features** that reflect the property's association with the former refinery lands or the earlier iteration of the Texaco Service Station. All components of the earlier service station were removed in the 1990s when the current structures were completed.
ii. yields, or has the potential to yield information that contributes to an understanding of a community or culture, or	N	The property has been subject to extensive development and disturbance as a result of the redevelopment of the service station in the 1990s. The built components have no potential to yield information that contributes to an understanding of any community or culture. There is a very low likelihood that the property yields, or has the potential to yield information that contributes to an understanding of any community or culture; however, it should be cautioned that this analysis does not represent a complete Stage 1 Archaeological Assessment under the *OHA.*

O.Reg. 9/06 Criteria	Criteria Met (y/n)	Justification
iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.	N	The structures and associated landscaping at 181 Lakeshore Road West were completed in the mid-1990s and follow a formulaic plan which is ubiquitous among late 20th and early 21st century Imperial Oil Limited gas station architecture.
3. The property has contextual value because it,		
i. is important in defining, maintaining or supporting the character of an area,	N	The property at 181 Lakeshore Road does not include any pre-1990 components and the extant structures, layout and landscaping are not important in defining, maintaining or supporting the character of the surrounding area. In particular, the property does not reflect the heritage character of the Mississauga Road Scenic Route or the Old Port Credit Village HCD.
ii. is physically, functionally, visually or historically linked to its surroundings, or	N	The existing property and 1990s layout and structures located at 181 Lakeshore Road West are not physically, functionally, visually or historically linked to its surroundings.
iii. is a landmark.	N	The property at 181 Lakeshore Road West is not a landmark.

Table 3: Evaluation of Property as it compares to Mississauga Road Scenic Route Features

Value-Defining Attribute	Attribute Satisfied (Y/N)	Justification
Landscape Environment		
Scenic and Visual Quality	N	The property does not contribute to the scenic and visual quality of the Mississauga Road Scenic Route. The Mississauga Road Scenic Route is described as traversing a variety of topography and varying land use from old established residential neighbourhoods to new industrial and commercial areas. The subject property is not a good representation of that description.
Horticultural Interest	N	Much of the property comprises paved surfaces and generic hard and soft landscaping elements. The overall property does not lend to the horticultural interest of the Mississauga Road Scenic Route.
Landscape Design, Type and Technological Interest	N	The subject property was not designed as a landscape for a specific use or single purpose.
Historical Associations		
Illustrates Style, Trend or Pattern	N	The property and its components were constructed in the mid-1990s. It does not representative any style, trend or pattern which contributes to an understanding of the immediate surroundings or the overall Mississauga Road Scenic Route.
Illustrates Important Phase in Mississauga's Social or Physical Development	N	The property and its components were constructed in the mid-1990s. It does not represent any important phase in Mississauga's social or physical development.
Built Environment		
Consistent Scale of Built Features	N	The scale and setback of the property is not consistent with the surrounding properties.
Other		

Value-Defining Attribute	Attribute Satisfied (Y/N)	Justification
Historical or Archaeological Interest	N	The subject property does not contain any known cultural resources associated with any pre-contact or historic period events. The property has been subject to extensive below-grade disturbances for installation and operation of the gas stand and car wash; however, no archaeological assessment has been completed.

5.1 FINDINGS

The property **does not meet** criteria for determining CHVI as per O.Reg.9/06.

The property **does not** contribute to the cultural heritage value of the Mississauga Road Scenic Route Cultural Landscape.

6 IMPACT ASSESSMENT AND RECOMMENDED MITIGATION

The assessment of potential impacts involved a review of proposed project activities and design in as they relate to cultural heritage resources on and abutting the property.

Potential project-related negative impacts that were considered as part of this HIA include the following:

> **Destruction or removal** of any, or part of, a heritage building, structure, or identified heritage attribute.
>
> **Alteration** of a building, structure or landscape in a manner that is not sympathetic, or is incompatible with the historic fabric and appearance.
>
> **Isolation** of a building, structure, or feature from its surrounding environment.
>
> **Obstruction** of views from or of a cultural heritage resource, landscape or attribute, where the view has been identified as a heritage attribute.
>
> **Change in Use** that results in the loss or deterioration of a heritage resource, landscape, or attribute.
>
> **Land disturbances** that result in damage to below-grade archaeological resources or alteration of historical patterns or topography.

Given that no CHVI has been identified with respect to the subject property, no negative impacts on CHVI or heritage attributes will be experienced within the property as a result of the removal of the canopy.

In accordance with PPS 2014 2.6.2, assessment of potential impacts on the CHVI of adjacent properties will be considered below.

6.1 MISSISSAUGA ROAD SCENIC CORRIDOR

The Mississauga Road Scenic Corridor's cultural heritage attributes (as described in Section 2.1.2), include:

- Landscape Environment;
  - Scenic and Visual Quality;
  - Horticultural Interest;
  - Landscape Design, Type and Technological Interest;
- Built Environment;
  - Consistent Scale of Built Features;
- Historical Association;
  - Illustrates a Style, Trend or Pattern;
- Illustrates an Important Phase of Social or Physical Development; and
- Other;
  - Historical or Archaeological Interest.

Given that the property does not reflect, or contribute to, the heritage attributes of the Mississauga Road Scenic Route (see Table 2), the removal of the canopy at 181 Lakeshore Road West will not result in any negative impacts on the cultural heritage attributes of the Mississauga Road Scenic Corridor with respect to destruction, removal, or alteration. Furthermore, the removal of the canopy will result in the obstruction of any significant views or isolation of any heritage attributes. The removal of the canopy at 181 Lakeshore Road West will not result in a change in land use or land disturbance related to the heritage attributes of the Mississauga Road Scenic Corridor.

6.2 Old Port Credit Village Heritage Conservation District

The cultural heritage value of the Old Port Credit Village HCD is based on its layout and extant structures which reflect the original town plan and include a number of key civic buildings which represent the development of Port Credit.

Given that the property does not include any components that are directly related to the settlement and development of Port Credit (see Table 1), the removal of the canopy at 181 Lakeshore Road West will not result in any negative impacts on the cultural heritage attributes of the Old Port Credit Village HCD or the Part IV designated property, Clarke Memorial Hall, at 161 Lakeshore Road West.

The removal of the canopy at 181 Lakeshore Road West will not result in any negative impacts related to:

- destruction or removal of any, or part of, a heritage building, structure, or identified heritage attribute within the HCD;
- alteration of a building, structure or landscape in a manner that is not sympathetic, or is incompatible with the historic fabric and appearance of the HCD;
- isolation of any building, structure, or feature of the HCD from its surrounding environment;
- obstruction of significant views from or of the HCD;
- change in use that would result in the loss or deterioration of a heritage resource, landscape, or attribute that contributes to the CHVI of the HCD; or,
- land disturbances within the HCD which may result in damage to below-grade archaeological resources or alteration of historical patterns or topography.

7 ANALYSIS AND CONCLUSIONS

The property at 181 Lakeshore Road West was evaluated against criteria outlined under *Ontario Regulation 9/06 Criteria for Determining Cultural Heritage Value or Interest under the Ontario Heritage Act*. The property was also evaluated against the attributes that define the cultural heritage value of the Mississauga Road Scenic Route and the statement defining the heritage character of the Old Port Credit Village HCD as described in the HCD plan.

The subject property **does not meet** criteria for determining CHVI as outlined under O.Reg. 9/06, nor does it warrant conservation as per Provincial Policy Statement 2.6. Furthermore, the extant structures are not consistent with the attributes which characterize the Mississauga Road Scenic Route Cultural Landscape nor do they reflect the heritage character of the Old Port Credit HCD; as such, it is not considered by this study to be a component which contributes to the heritage value of either cultural landscape.

Potential impacts on adjacent cultural resources and landscapes were considered (Section 6.1 and 6.2) no negative impacts on adjacent cultural resources or their heritage attributes have been identified.

It is recommended that the demolition of the canopy on the property will have no negative impact on the CHVI of any cultural heritage resources or landscapes.

It should be noted that this HIA has been limited to a review of impacts of the proposed demolition of extant structures. Any future development proposals will require an HIA to determine the potential for and extent of any negative impacts on both the Mississauga Road Scenic Route Cultural Landscape and the Old Port Credit Village HCD.

8 RECOMMENDATIONS

Chris Uchiyama Heritage was retained by exp Energy Services Ltd., on behalf of their client Imperial Oil Ltd., to prepare a Heritage Impact Assessment for the property at 181 Lakeshore Road West in Mississauga, Ontario. This HIA was triggered by the City of Mississauga (the City) as a requirement for the application for a request for the issuance of a demolition permit, given that the property is a 'listed' property, included on the Heritage Register as part of the Mississauga Road Scenic Road Cultural Landscape. The property is also adjacent to the Old Port Credit Village Heritage Conservation District.

The property was evaluated against criteria outlined under *Ontario Regulation 9/06 Criteria for Determining Cultural Heritage Value or Interest under the Ontario Heritage Act*. The property was also evaluated against the attributes that define the cultural heritage value of the Mississauga Road Scenic Route and the statement defining the heritage character of the Old Port Credit Village HCD as described in the HCD plan.

The subject property **does not meet** criteria for determining CHVI as outlined under O.Reg. 9/06, nor does it warrant conservation as per Provincial Policy Statement 2.6. Furthermore, the extant structures are not consistent with the attributes which characterize the Mississauga Road Scenic Route Cultural Landscape nor the Old Port Credit HCD; as such, it is not considered by this study to be a component which contributes to the heritage value of either cultural landscape.

As such, it is recommended that the demolition of the canopy on the property will have no negative impact on the CHVI of any cultural heritage resources or landscapes.

It should be noted that this HIA has been limited to a review of impacts of the proposed demolition of extant structures. Any future development proposals will require an HIA to determine the potential for and extent of any negative impacts on both the Mississauga Road Scenic Route Cultural Landscape and the Old Port Credit Village HCD.

9 CLOSURE

This report has been prepared by Chris Uchiyama Heritage for exp Energy Services Ltd. and their client, Imperial Oil Limited. Any use of this report by a third party is the responsibility of said third party.

This report and its findings are based on available information at the time of writing. The undersigned would be pleased to provide guidance should changes to project design or additional information received result in possible reassessment of the report's findings.

Christienne Uchiyama, M.A., CAHP (P376)

Heritage Consultant and Archaeologist
Chris Uchiyama Heritage

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1975 Aerial

1977 Aerial

1980 Aerial

1985 Aerial

1989 Aerial

1992 Aerial

1997 Aerial

2000 Aerial

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2003 *Heritage Conservation Feasibility Study of Old Port Credit Village Stage 1 Report*. Report prepared for the City of Mississauga.

2004 *Old Port Credit Village Heritage Conservation District Plan*. Report prepared for the City of Mississauga.

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n.d. *Old Port Credit Village Heritage Conservation District Walking Tour*.

Landplan Collaborative Ltd., Goldsmith Borgal & Company Ltd. Architects, North South Environmental Inc., and Geodata Resources Inc.

2005 *Cultural Landscape Inventory*, prepared for the City of Mississauga.

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Legislation and Regulation

- Ontario Heritage Act
- Ontario Heritage Act Regulation 9/06
- Provincial Policy Statement (2014)

APPENDICES

APPENDIX A: OLD PORT CREDIT HERITAGE CONSERVATION DISTRICT: STATEMENT DEFINING THE DISTRICT'S GENERAL CHARACTER

The following text is an excerpt from the Old Port Credit Village Heritage Conservation District Plan (Section 1.5 Statement Defining the District's General Character)

The district generally conforms on its east, south and west sides to the boundaries of government's planned village plot of 1835. The district's northern boundary, Lakeshore Road West (originally, Toronto Street), became the village's main east-west street; and evolved into a major provincial traffic artery, the Lakeshore Highway (Highway No. 2). Because of extensive redevelopment north of Lakeshore Road West, the district contains almost all of the features associated with old Port Credit village.

Human use and activity in the district predate the government's village survey by many thousands of years. The settlement of the Native Mississauga at the mouth of the Credit River for over a century, their resettlement upriver in 1826 and their significant investment in the Credit Harbour Company in 1834 especially affected the formation of old Port Credit. Peter and John Streets are named after Peter and John Jones, directors in the Credit Harbour Company and Mississauga chiefs. Peter Jones (Kahkewaquonaby), missionary, translator and author, is provincially important as a leading figure in the conversion of the Mississauga and other Ojibway people to the Methodist branch of Christianity and their adoption of a sedentary way of life – farming and trades. Mississauga Road South, originally called Joseph Street after Misssissauga chief and Credit Harbour Company director Joseph Sawyer, preserves in its name the legacy of the Mississauga people in Port Credit.

Urban form in old Port Credit village is defined by the original grid of streets laid out by surveyor Robert Lynn, by the Credit River and by J.C. Saddington Park fronting on Lake Ontario. There is a progression from high traffic activity on Lakeshore Road West, through quiet residential streets that dead-end in the park, to the sounds and sights of Lake Ontario.

Important open spaces exist in the district: (1) J.C. Saddington Park, a good example of park planning in Canada from the 1970s; (2) Marina Park on the west bank of the Credit River, which has a long record of human use – from Native fishing in canoes, to wharves and warehouses before the 1855 fire, later to the favorite spot for swimming in the 1930s and 40s and finally to recreational boating; and (3) St. Mary's Roman Catholic Cemetery opened in the 1870s. J.C. Saddington Park provides lakefront access, and Marina Park provides riverside access. Open spaces associated with the district's institutional landmarks also have historic value.

Single-family houses, a few of which have been converted to commercial use, are typical in the district. Two out of the three blocks facing Lakeshore Road West are in institutional use and are of historic interest, while the third block has recently been developed commercially. Multiple-unit housing – four apartment buildings and one block of townhouses – is located in the eastern third of the district and does not incur into the low-density residential fabric of the district west of John Street South.

A number of institutional landmarks important to Port Credit's history stand in the district. The Mississauga Masonic Temple of 1926 incorporates within its walls the Wesleyan Methodist Church of

1849, the first church in Port Credit. On the site where the Wesleyan Methodist Church originally stood is the Port Credit Methodist Church of 1894, now part of First United Church (1950-51). Next door to First United Church is Alfred Russell Clarke Memorial Hall of 1922, a community hall that served as the Port Credit council chambers from 1941 to 1974. Two brick buildings and a concrete base remain from the village waterworks, built at the same time as Clarke Memorial Hall. St. Mary's Separate School of 1953 complements St. Mary's Cemetery and St. Mary's Church, altogether creating a religious compound in the district's middle block along Lakeshore Road West. The Port Credit Village Fire Hall and Police Station, opened in 1955, is the oldest surviving fire hall in Mississauga.

A number of historic buildings, built as houses and converted to commercial use or built with a public function in mind but now used as houses, are also found in the district. The Wilcox Inn, the oldest surviving building in the district, is now a house. The small building at 24 Front Street South, used as a house, stands on former Credit Harbour Company lands. The first place of worship for Roman Catholics in Port Credit, moved to 32 Peter Street South, has been a house for many years. The Emma Peer House at 7 John Street South has become a restaurant. The Ida and Benjamin Lynd House at 15 Mississauga Road South has been turned into a spa. Adaptive reuse has been a long-established practice in the district.

Other houses of historic interest, dating from the nineteenth and early twentieth centuries, are modest vernacular dwellings: frame with siding or with a veneer of locally manufactured brick, usually 1½ storeys tall and gable roofed. Many were built by those who made their living on the water – mariner, sailor, fisherman and wharfinger – by tradesmen or by labourers. Infill houses of the mid-twentieth century were also modest. Houses that in terms of size and height complement houses of historic interest provide an appropriate architectural context for the district's houses of historic interest.

The front yards of houses are predominately landscaped, contain a diversity of deciduous and some conifer tree species, and usually provide access to the street by means of a single driveway situated to one side of the lot.

Opportunities exist for greater appreciation, reinforcement and protection of the district which embodies the spirit of old Port Credit village.

APPENDIX B: QUALIFICATIONS

Chris Uchiyama, M.A., CAHP

Chris Uchiyama, M.A., CAHP, is a heritage consultant and licensed professional archaeologist (P376). She is a member of the Canadian Association of Heritage Professionals. Ms. Uchiyama received her B.A. in archaeology from Wilfrid Laurier University in 2002. She completed the Heritage Conservation Masters program at Carleton University in 2012; her thesis focused on the identification and assessment of impacts on cultural heritage resources in the context of Environmental Assessment.

Ms. Uchiyama has written or co-authored more than 100 technical cultural heritage reports, including archaeological license reports, collections management materials, inventories, cultural heritage evaluation reports, and heritage impact assessments. Throughout the course of these project, she has developed a thorough understanding of provincial evaluation and assessment methodologies, cultural landscapes, provincial regulatory processes, historical research, and archaeology.

City of Mississauga
Corporate Report

MISSISSAUGA

Date: 2017/01/24

To: Chair and Members of Heritage Advisory Committee

From: Paul Mitcham, P. Eng, MBA, Commissioner of Community Services

Originator's files:

Meeting date: 2017/02/14

Subject
Request to Alter a Heritage Designated Property: Adaptive Reuse at 1352 Lakeshore Road East (Ward 1)

Recommendation
That the proposed alterations and conservation work as shown in the attachments to the Corporate Report dated January 24, 2017 from the Commissioner of Community Services, be approved for the property at 1352 Lakeshore Road East, which is designated under Part IV of the Ontario Heritage Act.

Background
Section 33 of the Ontario Heritage Act requires permission from Council in order to make alterations to a Part IV property. The property, known as the Small Arms Limited Building and Water Tower and Arsenal Lands, is designated under Part IV of the Ontario Heritage Act, as well as recognized as a Cultural Landscape in the City's Cultural Landscape Inventory (Arsenal Lands L-IND-3). The property holds physical, design, historical, associative and contextual cultural heritage value. The property is associated with the World War I and II efforts, associated industry and development of Lakeview.

The work is proposed in the main building's south portion and bridge as labelled in the attached drawings. The designation by-law identifies a clear list of heritage attributes supporting the building's high degree of craftsmanship and artistic merit. Refer to Appendix 1. The materials and methods of construction are heritage attributes of the building, as are the features that reflect its industrial modernist design influences, such as the windows and flat roof in the south portion of the building.

Staff from the City's Facilities and Property Management Division has submitted a heritage permit application, Heritage Conservation Plan by heritage consultants (ERA Architects Inc.) and drawings by LGA Architectural Partners to make the necessary alterations and conservation work to complete Phase 1 of the adaptive re-use of the south portion of the building. The proposal includes conservation work related to heritage attributes such as window rehabilitation, and work related to the adaptive reuse of the building, designated substances

abatement, replacement of selected doors for accessibility purposes, demolition of interior partitions, construction of new partitions, plumbing and electrical work.

The City's Building and Facilities Property Management staff will be coordinating the execution of the work.

Comments

Staff at the City's Building and Facilities Property Management Division has requested permission to do conservation work to heritage attributes and work in order to accommodate the sensitive adaptive re-use of the heritage building. The applicant has submitted an application, and a Conservation Plan, including design drawings that will enable the adaptive re-use of this significant heritage building. Refer to the appendix.

The conservation and adaptive reuse related work mainly includes: conservation and rehabilitation work of the windows and skylights, provide an accessible door to east courtyard, modify one window into a door to provide access to west courtyard, rehabilitation of concrete floor and interior masonry walls, replace damaged concrete window sill, removal of interior partition walls, construction of new partition walls, installation of plumbing, mechanical, sprinklers, ventilation and electrical work including new fixtures, designated substance abatement, finish work such as painting.

ERA Architects Inc. has prepared a Conservation Plan which describes in detail the methodology that will be followed when doing work that affects the building's materials and methods of construction that are heritage attributes. The proposal is based on a thorough condition assessment and guided by the Standards and Guidelines for the Conservation of Historic Places (Parks Canada), including the principle of minimal intervention in order to conserve the heritage attributes and unique architectural atmosphere of the space.

Of particular note is the proposed conservation work and alteration to the existing windows. The windows require conservation work to address rust, missing and broken window panes and designated substance abatement. They are composed of a steel frame with true divided lites and single pane glass held in place by window putty. The original window frames will be retained and the window panes will be replaced. The need to replace the glass panes is due to the required abatement of designated substances currently adhered to the glass, the amount of broken or missing glass panes and the prohibitive cost of abatement and reinstallation of each glass unit. Three panes of glass will be archived for future reference if possible. In addition, a window on the east wall of the west courtyard is proposed to be converted into a door. The existing window at that location will be re-used and installed in place of an unsympathetic window existing in an adjacent window opening. The proposed new door opening constitutes a controlled removal of a small portion of original building fabric, which will enable greater connectivity between types of spaces and will add flexibility to the building's re-use. Measured drawings have recorded the existing conditions to inform future projects.

The sensitive contemporary alterations to the interior are appropriate in heritage sites if they are found to be complementary and do not negatively affect the cultural heritage attributes. This is the case with the proposed interior alterations which are designed to keep the impact to the original building fabric at a minimum while being distinct but sympathetic in their minimal design detailing. Heritage Planning finds that the proposal is sympathetic to the cultural significance of the property as a whole and the work has been compiled with the careful consideration of best conservation practices

Financial Impact

The budget to rehabilitate the Small Arms Building has been approved by Council.

Conclusion

The applicant has submitted a proposal for conservation work and design drawings supporting the request to enable the Small Arms Building to be adapted to a new use. Staff finds that the proposal depicted in the appendix of this report is sympathetic to the heritage attributes of the Small Arms property and should be approved.

Attachments

Appendix 1: Heritage Conservation Plan Phase 1
Appendix 2: Proposed Drawings (Appendix to Conservation Plan)
Appendix 3: Proposed Drawings (Appendix to Conservation Plan)
Appendix 4: Specifications (Appendix to Conservation Plan)

Paul Mitcham, P. Eng, MBA, Commissioner of Community Services

Prepared by: Cecilia Nin Hernandez, Heritage Coordinator

SMALL ARMS BUILDING

Heritage Conservation Plan

Phase I

1352 Lakeshore Road East
Toronto, Ontario

Project # 16-163-01
Prepared by PE / MY

COVER PAGE: Small Arms Limited, Administration Building, c. 1945
ABOVE: Small Arms Limited, Munitions Assembly Line, c. 1943

PREPARED FOR:

L. Laila Gabiazon
Facilities & Property Management
Corporate Services, City of Massasauga
c/o LGA Architectural Partners
533 College St, Suite 301
Toronto, ON M6G 1A8

PREPARED BY:

ERA Architects Inc.
10 St. Mary Street, Suite 801
Toronto, Ontario M4Y 1P9
416-963-4497

CONTENTS

EXECUTIVE SUMMARY

The purpose of this Heritage Conservation Plan (CP) is to identify and describe the scope of work required to conserve the heritage attributes identified in the Reasons for Designation. This Conservation Plan includes a description of the scope of conservation work and measures that will be taken to protect the heritage resources throughout Phase I construction.

Constructed in 1941, the modern industrial building was part of the former Small Arms Ltd. munitions factory complex that once operated on a parcel of land located on the eastern border of the Mississauga waterfront known as the Arsenal Lands. The Small Arms Building and Arsenal Lands were acquired by Toronto and Region Conservation Authority (TRCA) in 1992 and were conveyed to the City of Mississauga in 2016. The Small Arms Building was designated with By-law No. 258-2009 under the Ontario Heritage Act.

The South Building, formerly the inspection area, is a single-storey structure of red brick and wood frame construction characterized by double wythe structural masonry walls, continuous single glazed steel framed windows that wrap around the perimeter, wood columns and beams that create an open floor-plan and high ceilings, and three triangular skylights that puncture the roof. The South Building, along with select portions of the Bridge (the section which links the North and South Buildings) are the subject of this Heritage Conservation Plan.

The proposed interventions in the Small Arms Building will enable the now dis-used building to become a focal point for community engagement in Mississauga.

The renovated Small Arms Building intends to support a mixed-use space, with a combination of office, studio, and community uses.

The proposed upgrade strategy will conserve the heritage value of the site by:

- Rehabilitating the original steel windows;
- Rehabilitating the interior masonry walls, concrete floors, and wood structure; and
- Minimally impacting the heritage masonry facade while accommodating AODA accessibility requirements

OPPOSITE PAGE: Small Arms Limited munitions factory, Lakeview, c 1950

1 INTRODUCTION

1.1 Scope of the Report

ERA Architects has prepared this Heritage Conservation Plan (CP) on behalf of the City of Mississauga, Facilities & Property Management and has developed the conservation approach with reference to the Parks Canada Standards and Guidelines for the Conservation of Historic Places and the Ministry of Culture's Ontario Heritage Tool Kit Procedures.

The purpose of this CP is to identify and describe the scope of work required to conserve the heritage attributes identified in the Reasons for Designation. This Conservation Plan includes a description of the scope of conservation work and measures that will be taken to protect the heritage resources throughout Phase I construction.

The comments and recommendations provided herein are based on heritage best practices. Two field reviews were conducted to assess and document the condition of the building.

This report should be read in conjunction with the following:

- City of Mississauga By-law No. 258-2009
- Standards and Guidelines for the Conservation of Historic Places in Canada (Park's Canada)
- Architectural drawings prepared by LGA Architectural Partners (dated January 16, 2017)
- Architectural Specifications prepared by LGA Architectural Partners (dated January 16, 2017)
- Structural Reinforcement Detail Sketches by Blackwell Bowick Partnership Ltd (dated January 13, 2017)
- Replacement Steel Window Details by Bliss Nor-Am Windows and Doors
- Heritage Specifications prepared by ERA (dated January 16, 2017)
- Martech Group Inc.'s Abatement Specifications (dated January 16, 2016)
- Read Jones Christoffersen's (RJC) Window Rehabilitation Feasibility Study (dated October 25, 2016)
- RJC's Physical Building Condition Assessment Report (dated January 19, 2016)
- Archaeological Assessment Report, Hanlan Shaft 2 Monitoring, Lot 5 Concession III SD (dated January 3, 2017)

FIG 1: Axonometic diagram illustrating 1352 Lakeshore Road East building location and overview (ERA).

1.2 Site Location and Description

The property at 1352 Lakeshore Road East is situated on a 15.7 hectare parcel of land known as the Arsenal Lands located on the eastern border of the Mississauga waterfront. The property is bounded to the north by Lakeshore Road East, to the east by Marie Curtis Park West (Toronto), to the south by the Lake Ontario waterfront and to the west by the Waterfront Trail and greenspace owned by the Region of Peel.

The property includes the Small Arms Building, a designated building under the Ontario Heritage Act. The building fronts onto Lakeshore Road East, at the junction of Dixie Road.

1.3 Background and Supporting Information

Constructed in 1941, the Small Arms Building is a one to two-storey industrial building that was part of the former Small Arms Ltd. munitions factory complex that once operated on the Arsenal Lands.

The Small Arms Building and Arsenal Lands were acquired by Toronto and Region Conservation Authority (TRCA) in 1992 and were conveyed to the City of Mississauga in 2016. The Small Arms Building was designated with By-law No. 258-2009 under the Ontario Heritage Act.

The building, erected in 1941, is a large low-lying H-shaped structure that was used historically as the inspection building for the munitions factory that operated on the site during World War II. The building comprises three distinct components: a two-storey front former administration wing, a bridging section with one- and two-storey components, and a rear one-storey former inspection plant.

The South (rear) Building, formerly the inspection area, is a single-storey structure of red brick and wood frame construction characterized by double wythe structural masonry walls, continuous single glazed steel framed windows that wrap around the perimeter, wood columns and beams that create an open floor-plan and high ceilings, and three triangular skylights that puncture the roof. The South Building, along with select portions of the Bridge (the section which links the North and South Buildings) are the subject of this CP.

None of the interior features of the property are included in the designation by-law, with the exception of certain structural elements detailed in the following section of this report.

1.4 City of Mississauga By-law No. 258-2009

Designation Statement

The Small Arms Limited Building & Water Tower:

The Small Arms Limited Building, a large low-lying H-shaped facility &Water Tower, are located at the foot of Dixie Road on the south side of Lakeshore Road East.

Statement of Cultural Heritage Value or Interest:

The Small Arms Limited Building & Water Tower have direct associations with the federal government, World War II, the corresponding Canadian war industry and the World War II influx of working women. The water tower also has direct associations with World War I rifle training. The property yields information that contributes to an understanding of the World War home front and is associated with the development of Lakeview. The Small Arms Building has direct associations with Allward and Gouinlock Architects.

The Small Arms Limited Building & Water Tower define, maintain and support the character of the area, both the industrial character and the community of Lakeview itself. The water tower is a landmark.

The Small Arms Limited Building displays a high degree of craftsmanship and artistic merit. The water tower is rare in Mississauga.

Description of Heritage Attributes:

Key attributes that reflect the Small Arms Limited Building and Water

Tower's historical/associative value:

- the Modern and Modern Classical elements of the building, consistent with the World War II period
- the shape and form of the water tower, consistent with the World War I period
- the location of the structures in Lakeview, on former rifle training grounds and near rifle range remnants, including baffles, concrete backstop, indoor rifle range and parade square, at 1300 Lakeshore Road East
- the building's economic materials and construction methods
- the two skylights, within a flat roof, and expansive wraparound glazing, of the rear portion of the building, which allow for an abundance of natural light required for work therein

Key attributes that reflect the Small Arms Limited Building & Water Tower's contextual value:

- their location in Lakeview
- their location on the south side of Lakeshore Road, site of the former Long Branch Rifle Ranges, and alongside other industrial buildings
- the height and distinctive shape and form of the water tower
- the water tower's visibility from the surrounding area, including both Lakeview and Long Branch
- the row of deciduous trees along the west side of the building, which are suggested in historical aerial photography
- the generous setback and open space which allows for full visibility of the building from Lakeshore Road West
- the woodlot to the rear of the property, which is suggested in historical photography

Key attributes that reflect the Small Arms Limited Building's physical/design value:

- the overall shape and form of the entire structure
- the rectilinear shape and form of the component parts
- the projecting pavilions of the front component
- the flat roofs
- the two skylights of the rear component and their shape and form
- the chimney, its shape, form, with setback upper portion, concrete trim, and placement in the bridge section that connects the front and rear components
- the steel fascia and steel framed windows
- the rectilinear shape and form of the windows
- the sash windows on the front component
- the wraparound full glazing that comprises the upper three quarters of the rear component, and its continuous concrete sill
- the multiple window panes in each window, 12 panes on the front component and 25 panes on the rear component (except where there are doors), and their consistent shape and form
- the light fixtures on the exterior of the rear component
- the common bond brick sheathing with sixth course headers
- the symmetrical arrangement of the facade
- the entryway with mortared stone pilasters and concrete slab canopy
- the single simple light fixture that hangs from the main door canopy
- the shape and form of the entryway with a tall transom window
- the concrete banding that connects the windows and extends slightly beyond them
- the concrete lintels and sills that extend slightly beyond the windows
- the concrete mortared jambs that flank the window over the main entrance
- the concrete slab foundation
- the Modern font of the building address

1.5 Report Methodology

The scope of work for related to this report includes:

- Review of the heritage designation by-law;
- The undertaking of two site visits to determine all heritage attributes that must be conserved and those that are not required, but would be preferred or desirable from a heritage conservation perspective (e.g. interior lighting fixtures, boiler, etc.);
- Assessment of interior elements to be conserved – e.g. lighting fixtures, concrete floors, any interior finishes such as the exposed brick or concrete block, determine finish for ceiling in the large space;
- Assessment of interior masonry in the South Building and recommendations for abatement/cleaning;
- Assessment of all windows in the South Building and select Bridge section windows and recommendations for abatement/restoration and replacement (where required);
- Assessment of skylights and recommendations for abatement/restoration;
- Assessment of select exterior masonry elements and recommendations for restoration;
- Meetings/consultation with the City staff for SPA and permit application;
- The provision of detailed specifications for the conservation work to be undertaken on the South Building:
    - Heritage General Requirements;
    - Heritage Procedures and Submittals;
    - Heritage Hazardous Materials;
    - Heritage Protection, Demolition & Salvage;
    - Heritage Masonry Restoration;
    - Heritage Sealants;
    - Heritage Steel Window Repair;
    - Heritage Glass and Glazing;
    - Heritage Preparation and Painting
- Preparation of the heritage report for SPA and permit application.

1.6 Accompanying Documents

Included within the appendices of this report are:

- Standards and Guidelines for the Conservation of Historic Places in Canada (Park's Canada, excerpts from the 2nd Edition)
- Architectural drawings prepared by LGA Architectural Partners (dated January 16, 2017)
- Architectural Specifications prepared by LGA Architectural Partners (dated January 16, 2017)
- Structural Reinforcement Detail Sketches by Blackwell Bowick Partnership Ltd (dated January 13, 2017)
- Replacement Steel Window Details by Bliss Nor-Am Windows and Doors
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- RJC's Physical Building Condition Assessment Report (dated January 19, 2016)
- Archaeological Assessment Report, Hanlan Shaft 2 Monitoring, Lot 5 Concession III SD (dated January 3, 2017)

1.7 Present Owner(s) Contact

L. Laila Gabiazon, Project Manager
Facilities & Property Management
Corporate Services, City of Massasauga
905-615-3200 Ext 3072

FIG 2

FIG 3

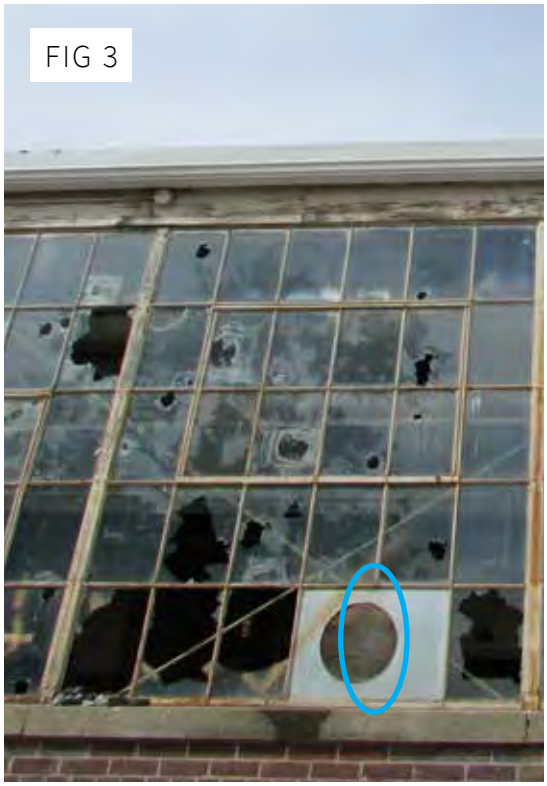
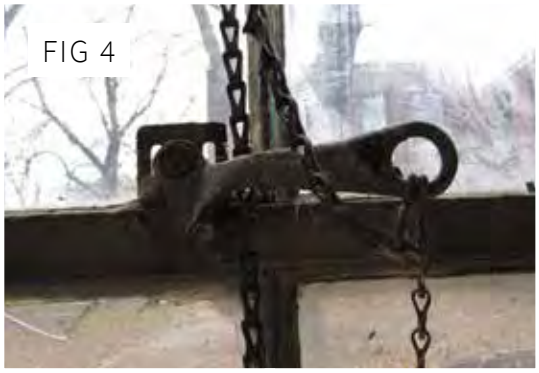


FIG 4



2 CONDITION ASSESSMENT

2.1 Methodology

Select portions of the Small Arms Building were assessed for necessary repairs and rehabilitation. This condition assessment includes select heritage attributes such as: the continuous steel perimeter windows of the South Building, select steel framed punched windows in the Bridge section, the three skylights on the roof of the South Building, and two cast concrete lintels on in the east courtyard. In addition, select interior features were assessed, including: the concrete floors, interior masonry walls and sills, the interior wood structure, interior lighting, and the original cast-iron boiler. With the exception of certain structural elements, none of the interior features of the property are included in the designation by-law.

2.2 Exterior Envelope

The exterior envelop is generally in fair to good condition. However, several aspects of the building have fallen into disrepair, likely due to the building being left unoccupied over the past number of years.

2.2.1 Windows

There are two window types under assessment for Phase I: the window continuous steel windows that wrap around the perimeter of the South Building (Figs 2-7) and select steel framed punched windows in the Bridge section (Figs 8-11). A detailed condition assessment of the windows and skylights that are to be rehabilitated during Phase I is including in the following sections. Annotated building elevations (pages 12-15) provide a breakdown of the condition of the window and skylight glazing.

FIG 2 (OPPOSITE PAGE, TOP): Annotated image of interior condition of south elevation windows. Horizontal pivots vents are outlined in red to highlight their variable sizes, pattern, and occurrence (ERA, 2016).

FIG 3 (OPPOSITE PAGE, BOTTOM LEFT): Continuous steel window condition of one bay on the south elevation, showing extent of damage to panes and missing steel frame muntin (circled in blue) (ERA, 2016).

FIG 4 (OPPOSITE PAGE, BOTTOM RIGHT): Details of continuous steel window operator hardware, including: lock (top); pulley and chain (bottom left); and hook and chain (bottom right) (ERA, 2016).

FIG 5: Continuous steel window condition on east elevation, showing horizontal pivot vent (ERA, 2016).

FIG 6: Detail continuous steel window on south elevation with missing pane, corrosion, and replacement silicone sealant (ERA, 2016).

FIG 7: Detail of wood lintel with peeling paint and steel frame with corrosion at south-east corner of South Building (ERA, 2016).

FIG 8

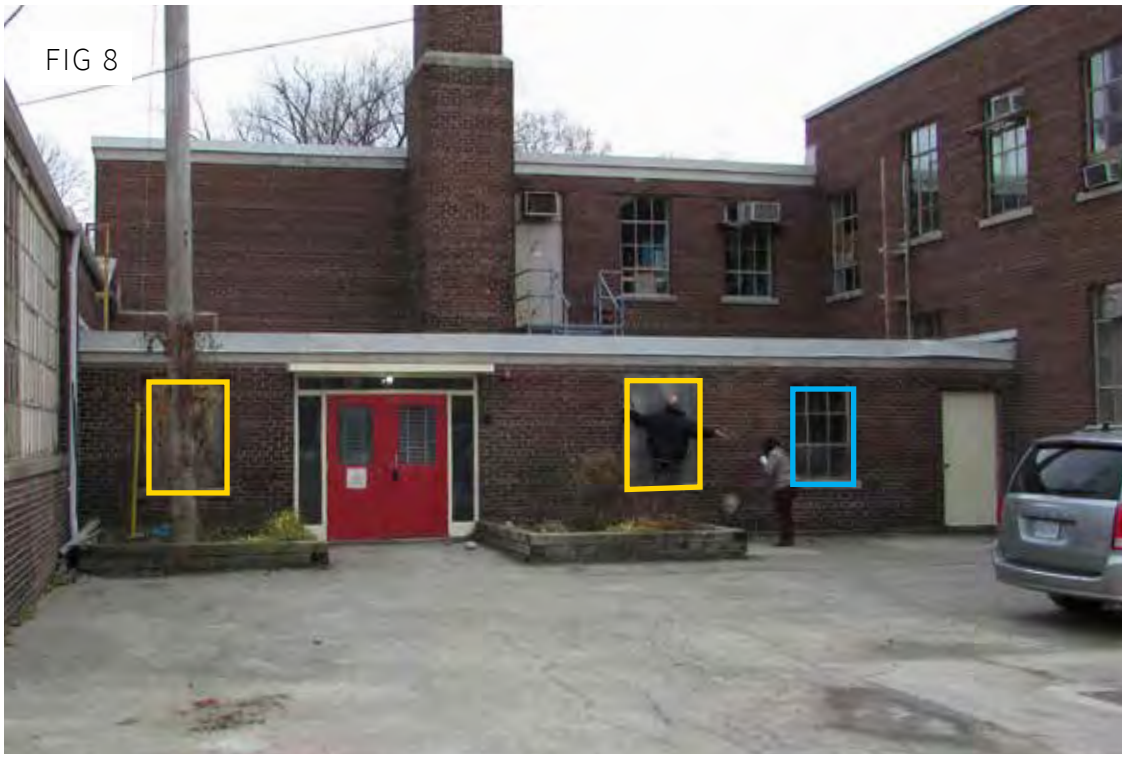


FIG 9

The continuous steel windows are divided into bays with either 25 or 30 panes of glass. With the exception of the windows above entrances, each bay has a central horizontal pivot vent of 6 or 8 panes (Figs 2&5). The continuous steel windows are in fair to good condition. All pivot vents have their original locks and the majority of them have their original operator chains, pulleys, and hooks (Fig 4). In select areas there is corrosion to the frames and missing or broken window panes. In general, most elevations have approximately 2-12% missing, broken or replacements panes (pages 12-15). However, the east section of south facade of the building is has approximately 55% missing, broken or replacements panes (pages 12-15). The steel frames on the south elevation are in the worst condition as there is significant corrosion to the steel (Figs 3&6). In several areas, components of the steel frame have been cut out to accommodate mechanical equipment (Fig 3 & pages 12-15). All windows on the South Building contain designated hazardous substances: lead paint and asbestos putty.

FIG 10: Original punched steel window on east elevation at east courtyard with plexiglass panes (ERA, 2016).

In accordance with the scope laid out in Phase I, select steel framed punched windows in the Bridge section were assessed. On the ground floor of the east elevation at the east courtyard (Fig 8), there are three original masonry openings. One steel framed window remains of the three original (Fig 8, blue outline). The steel frame is in fair to good condition but the majority of the panes have been replaced with plexiglass units (Fig 10 & page 12). The other two masonry openings have been boarded up (Fig 8, yellow windows). The three small windows on the 2nd floor were also assessed to be in fair to good condition (Page 12).

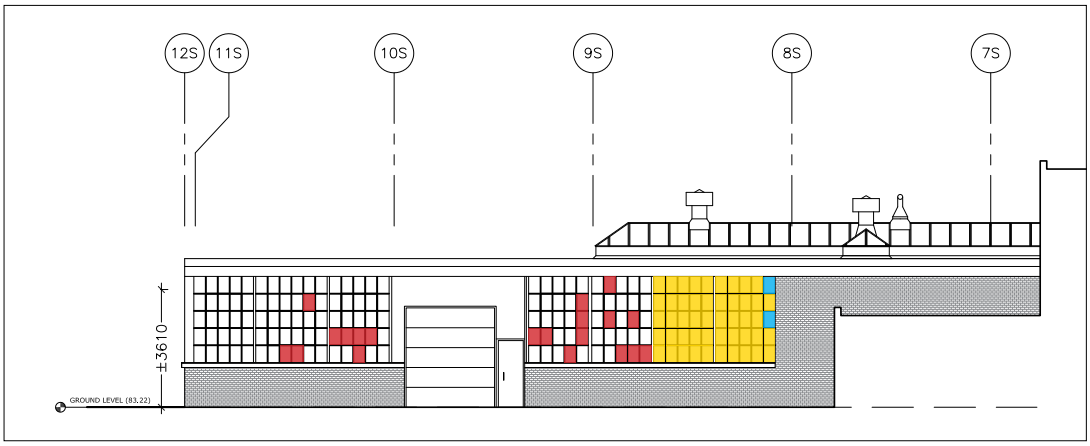
On the ground floor of the west elevation at the west courtyard there are six original masonry openings (Fig 9). Three steel framed windows remain of the six original (Fig 9, blue outlines). The steel frames are in fair to good condition. Some of the original glass panes are missing or broken and the windows have been boarded up from the interior (Fig 11 & page 13). The other two windows are unsympathetic non-original windows (Fig 9, yellow outlines). Additionally, one of the masonry openings on this elevation has been modified to accommodate a

FIG 11: Original punched steel window on west elevation at west courtyard with missing/broken panes and boarding (ERA, 2016).

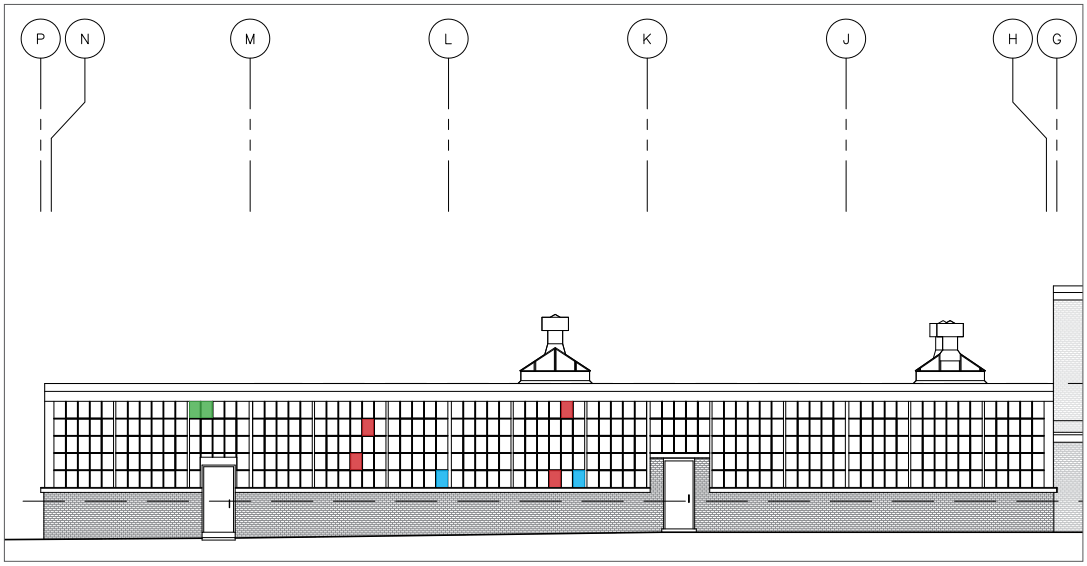
FIG 8 (OPPOSITE PAGE, TOP): Annotated east elevation at east courtyard showing original steel window (blue outline), and boarded-up masonry openings (yellow outline) (ERA, 2016).

FIG 9 (OPPOSITE PAGE, BOTTOM): Annotated west elevation at west courtyard showing original steel windows (blue outline), non-original windows (yellow outline), and non-original door / modification to the masonry exterior facade (green outline) (ERA, 2016)

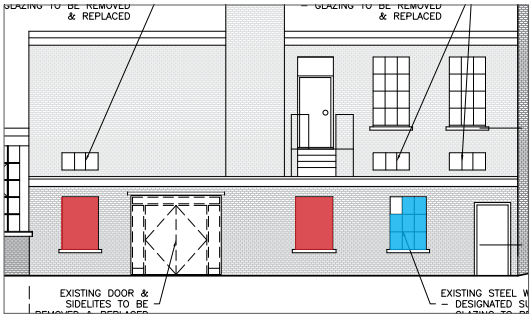
Detailed Window and Skylight Window Condition Assessment



North Elevation at East Courtyard — Missing/broken/acrylic = 13%; Painted = 28%

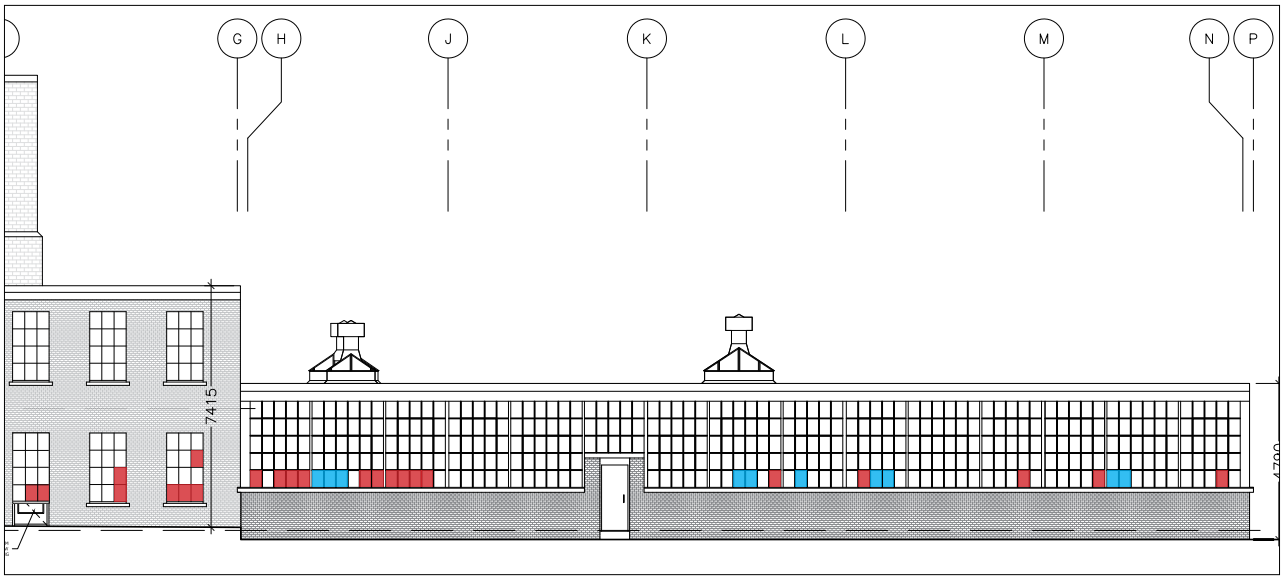


Partial East Elevation (South Section) — Missing/broken/acrylic = 2%



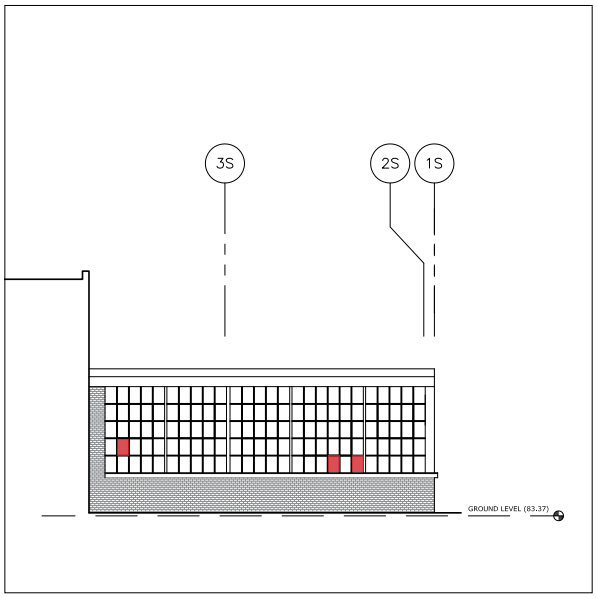
East Elevation at West Couryard

- Missing/broken window pane
- Replacement acrylic window pane
- Window pane painted with lead paint
- Missing steel muntin



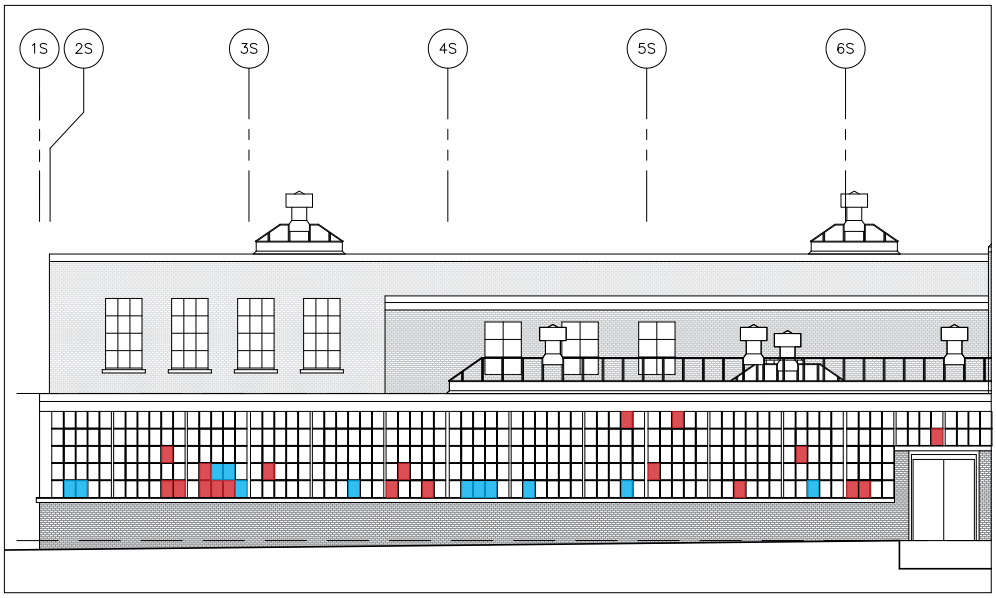
Partial West Elevation

Missing/broken/acrylic = 5%



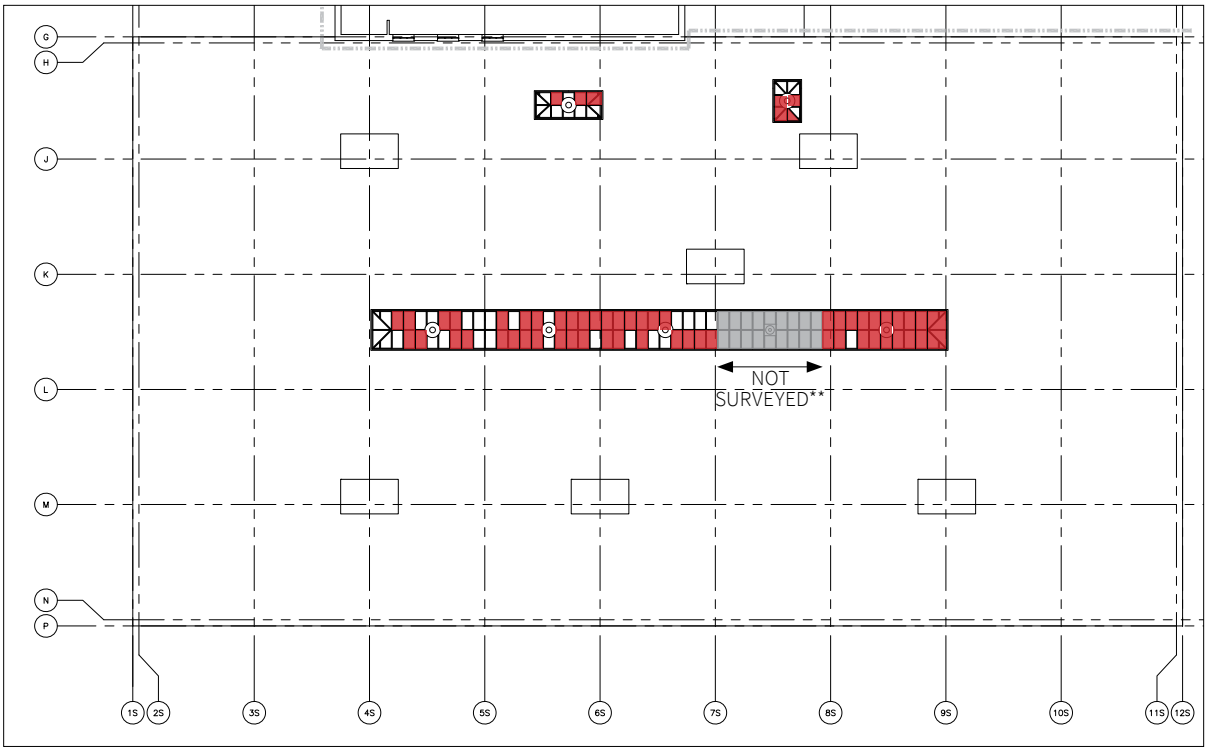
North Elevation at West Courtyard

Missing/broken/acrylic = 2%



Partial South Elevation (West Section) Missing/broken/acrylic = 10%

Partial South Elevation (East Section) Missing/broken/acrylic = 55%; Painted = 9%



Roof Plan

**Section of skylight not surveyed due to the fact that it was not accessible at the time of assessment

Missing/broken (large skylight) = 82%

Missing/broken (small north-west skylight) = 28%

Missing/broken (small north-east skylight) = 50%


FIG 12

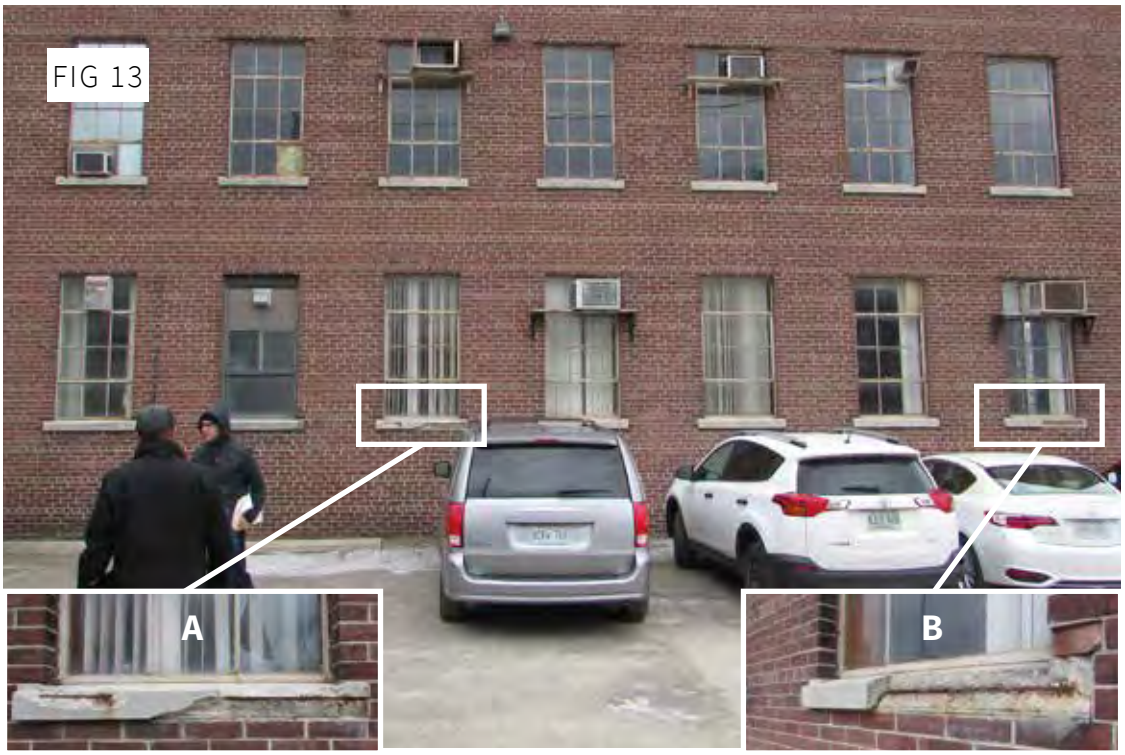


FIG 13

person door (Fig 9, green outline). All steel punched windows under assessment contain designated hazardous substances: lead paint and asbestos putty.

2.2.2 Skylights

There are three steel-framed skylights with wire glass lights on the roof of the South Building (Figs 12, 14-16). These skylights are in fair to good condition. The two smaller skylights that are situated on the north portion of the roof are in good condition (Figs 12&14). However, both small skylights are missing several original wire glass panels (Figs 12&14, & page 15). The large skylight that spans east-west the length of the South Building is boarded up due to the fact that approximately 82% of the glazing has been lost (Figs 15&16, & page 15). All steel skylight frames show signs of corrosion. All three skylights have new flashings, which were likely added when the South Building roof system was replaced in 2012/2013. The flashings are in good condition. The rust on the flashings is surface staining caused by the corroded steel frames above.

2.2.3 Doors

There are a number of exterior doors on the South Building and Bridge sections. Many of these doors are non-original and none are listed as attributes. The doors are in poor to fair condition. On the east elevation at the east courtyard there is a hollow metal and wire glass double-door with side lights and a hollow metal single door (Fig 8). The double-door, which serves as the principle entrance to the building, does not meet current accessibility requirements.

2.2.4 Masonry

The exterior masonry comprises structural red brick and cast concrete sills. A comprehensive assessment of the condition of the exterior masonry is not within the scope of Phase I of this project and therefore will not be part this report. However, two cast concrete sills on the south elevation at the east courtyard were assessed due to their advanced

FIG 14: Condition of north-east skylight showing destructive penetration of skylight by plumbing venting stack (ERA, 2016).

FIG 15: Large skylight showing boarding, wrapped vents, and new flashings (ERA, 2016).

FIG 16: Detail of interior condition of large skylight showing missing lights and boarding (ERA, 2016).

FIG 17: Existing original exterior lighting unit on the west facade (ERA, 2016).

Fig 12 (OPPOSITE PAGE, TOP): North-west small skylight with corroded steel frame and vent, wire glass panes, and new metal flashings with surface stains (ERA, 2016).

FIG 13 (OPPOSITE PAGE, BOTTOM): Annotated south elevation at east courtyard indicating damaged cast concrete sills (ERA, 2016).

FIG 18 (TOP): Interior view of the South Building showing cast-in-place concrete floor in good condition, wood structural system, and industrial lighting (ERA, 2016).

FIG 19 (BOTTOM): Interior view of north-west corner of the South Building showing peeling paint on masonry perimeter wall (ERA, 2016).

state of deterioration (Fig 13). Both sills are in poor condition. The sills show spalling to the extent that the structural rebar is exposed and corroded. In addition, one brick unit above sill "B" is spalled.

2.2.5 Exterior Lighting

There are two original exterior lighting units on the South Building. One is mounted on the south elevation and the other on the west (Fig 17). These units are not longer functional but the housing is in fair to good condition.

2.2.6 Exterior Landscape Features

The woodlot to the rear of the property, which is suggested in historical photography is a designated attribute.

2.3 Interior Heritage Fabric

The interior is generally in sound condition. The following is an assessment of the interior features to be conserved.

2.3.1 Concrete Floor

The ground floor of the South Building consists of a concrete slab-on-grade that stops at the interior face of the perimeter wall. The concrete slab foundation is a listed heritage attribute in the designation bylaw. RJC noted several cracks in the concrete floor that they stated were not structural concerns (refer to Section 3.2 of their Building Condition Assessment Report). The appearance of the existing cast-in-place concrete floor on the ground floor and partial basement (boiler room) is in fair to good condition. The majority of the floor area is exposed CIP concrete that is in good condition and is generally smooth and free from unwanted finishes, mastics, etc (Fig 18). Approximately 30% of the total floor area is covered in tiling, old adhesive or mastic with contain designated hazardous substances (asbestos), or is concealed under interior partition wall (Fig 20).

2.3.2 Interior Masonry Walls

The interior of the perimeter walls of the South Building are exposed brick with concrete sills. The surface of the brick and concrete has been painted and some of this paint is lead-based (Figs 19, 21-22). The paint is in poor condition and is flaking off the masonry over the majority of surfaces.

FIG 20: Interior view showing condition of cast-in-place concrete floor with linoleum tiling (ERA, 2016).

FIG 21: Painted interior masonry sill on west wall (ERA, 2016).

FIG 22: Hallway from main entrance to South Building showing paint peeling on interior clay brick walls (ERA, 2016).

FIG 23: Condition of wood structural elements showing minor paint peeling (ERA, 2016).

Fig 24: Condition of wood structural elements showing severe paint peeling (ERA, 2016).

FIG 25: Steel cross-bracing between columns on the interior west elevation (ERA, 2016).

FIG 26: Bolted steel connections to beams at top of columns (ERA, 2016).

FIG 27: Bolted steel connections and cross-bracing at bottom of perimeter columns (ERA, 2016).

The interior partition walls of the South Building and bridge are a combination of hollow-core clay brick and concrete masonry units. Some of these walls are not original. The surface of the majority of these partition walls has been painted (Fig 22). The paint is in poor condition and is flaking off the masonry over the majority of surfaces.

2.3.3 Wood Structure

The South Building is supported by 7"x7" wood posts approximately 13' in height and spaced on a 20'x20' grid layout (Fig 18). The posts are connected to the wood roof structural framing with bolted steel connections (Fig 26). In addition, several perimeter bays have cross-bracing elements that tie back into the wood structure with bolted steel connections (Figs 25&27). As per RJC's Physical Building Condition Assessment Report, at approximately four locations in the South Building, possible deterioration of the roof wood decking was observed (Fig 24). RJC noted that based on the flaking paint and staining of the wood decking, it appears that moisture penetrated through the roof at those locations. Further investigation by a structural engineer is required in order to confirm the condition of the roof structure.

The wood columns are painted with lead-based white paint (Figs 23-24). The columns on the perimeter vary in colour and some of this paint is lead-based (Figs 25&27). Overall, the paint on the columns is intact (Fig 23). The paint on some of the surfaces of the roof structure and beams is peeling (Fig 24).

The wood structural elements are not specifically listed as heritage attributes in the designation bylaw.

2.3.4 Interior Lighting

The interior lighting system is a grid of industrial ceiling-mounted lights that contribute to the industrial heritage character of the South Building (Figs 18&23). The interior lights are not listed as heritage attributes in the designation bylaw. The lights are in good condition; however, they do not meet present-day safety standards.

2.3.5 Furnace & Mechanical Lift

The Boiler Room currently houses the original cast-iron Inglis furnace (Figs 28-29) and a mechanical lift (Fig 30) that contribute to the industrial heritage character of the building as non-operational artefacts. The furnace and mechanical lift are not listed as heritage attributes in the designation bylaw.

FIG 28: Original Inglis Furnace in current Boiler Room (ERA, 2016).

FIG 29: Close up of cast iron logo from Inglis Furnace in current Boiler Room (ERA, 2016).

FIG 30: Mechanical lift on east wall of the Bridge in current Boiler Room (ERA, 2016).

3 CONSERVATION SCOPE OF WORK

3.1 Conservation Approach

In order to protect the heritage resources of 1352 Lakeshore Road East, the following conservation approach has been prepared, specifically addressing the heritage attributes and features outlined in Section 2.0 (Condition Assessment).

All proposed conservation work will follow heritage principles and guidelines found in Parks Canada's Standards and Guidelines for the Conservation of Historic Places in Canada (Appendix 5.1).

The intent is to conserve the building's identified heritage attributes while making minor modifications, primarily for matters of safety and accessibility.

3.2 Description of Proposed Development and Impact to Heritage Resource

The application for redevelopment proposes the adaptive reuse of the Small Arms Building to accommodate a mixed-use space with office, studio, and community functions. The current conservation strategy involves the complete retention of the building with minor modifications to the exterior heritage facade and interior features.

The alterations to the building include the following actions:

- Maintain and rehabilitate existing continuous steel windows;
- Maintain existing punched openings, rehabilitate existing original steel framed punched windows, and provide new steel windows to match original appearance where replacements are necessary;
- Maintain and rehabilitate the three existing steel framed skylights on the roof of the South Building;
- Provide new AODA accessible double door in east courtyard within the current masonry opening;
- Modify one punched opening in the west courtyard to provide an additional door that enables access from the proposed multi-purpose room to the exterior landscaping;
- Rehabilitate interior features, such as the concrete floors and interior masonry walls;

FIG 31 (OPPOSITE PAGE): West fade of South Building (ERA, 2016).

- Rehabilitate and reinforce existing interior wood structure where new openings are proposed in roof deck to accommodate HVAC equipment;
- Demolish select interior partition walls and build new interior partition walls;
- Replace interior lighting with new sympathetic lighting;
- Maintain and abate the boiler room, boiler, and mechanical lift;
- Replace existing mechanical electrical systems and sprinklers.

3.3 Conservation Strategies and Scope of Work

The conservation work to be carried out during Phase I of construction at 1352 Lakeshore Road involves the selective restoration of exterior and interior heritage attributes. The following is a detailed explanation of the conservation methods involved in the restoration of each of the elements that will be conserved in Phase I.

3.3.1 Continuous Steel Window Restoration

FIG 32: Condition of continuous steel windows at south-east corner of South Building showing missing and damaged glazing and corroded steel frames (ERA, 2016).

All continuous steel windows in the South Building will be maintained, abated, and rehabilitated as per the Heritage Architect's specifications and the guidelines provided below. The repair intent is to make the windows structurally sound and stable, while conserving the maximum amount of existing fabric and character. The window frames are to remain in situ while they are restored. For visual reference of the results of past steel window restoration projects in Toronto by ERA, refer to pages 26-27 (Figs 37-44).

The first step in the restoration of the continuous steel windows is the removal and abatement of hazardous substances. All asbestos putty and lead paint is to be removed as per the Abatement Specifications, using dry-ice blasting as the acceptable primary method of removal. All lead paint is to be completely removed from the steel windows, down to bare substrate. In the removal of paint and asbestos, special care must be taken around areas where the frames are corroded so as to avoid further damage the steel. Since the putty secures the windows panes in place, the complete removal of window panes is necessary in order to rid the windows of asbestos putty. Existing glass panes that are removed are to be disposed of as per the Abatement

Specifications. However, three (3) panes of original windows glass that are in good condition are to be carefully removed, abated, and submitted to Heritage Staff for archiving purposes.

Once all glazing has been removed and all asbestos putty and sealants have been abated, the steel frames and exterior wood fascia are to be prepared for painting as per the Heritage Architect's specifications. At this time the steel should be closely examined for areas of heavy rusting as well as missing components (Figs 32-34). Those areas are to be repaired/rebuilt by a Heritage Contractor as per the Heritage Architect's specifications. Areas of rusted metal are to be brushed down to sound material. Small localized areas with non-structural surface damage are to be made good with a specified metal filler, restoring the original profiles and tooling the surfaces flush.

In several area, components of the steel frame have been cut out to accommodate mechanical equipment (Fig 34). In these areas, replacement steel components are to be fabricated. Repairs are to be made using a minimal intervention approach. Fabricate replacement parts to match existing in size, section and mould profile, as directed by the Heritage Architect. Before installing replacement components, ensure that existing frames are securely fastened to the window jambs. Where replacement fasteners are required, use wherever possible the original methods of fastening. Replacement components are to be carefully welded to existing steel frame and ground flush and smooth with adjacent surfaces.

All window hardware is to be restored as per the Heritage Architect's specifications. At the time of inspection, all the pivot vents had their original locks. Most units also had their original operator chains, pulleys, and hooks (Fig 36). All restored hardware is to be reinstated, with the exception of the chains, which may pose a safety issue to users of the Facility. The chains are to be removed and retained in a safe and accessible space on site. Window hardware is to be reinstated in such a way that window operability is maintained.

After the window hardware has been restored, the steel windows and exterior wood fascia are to be primed and repainted as per the Heritage Architect's Specifications. Steel frame connections to masonry are to be provided with new masonry sealant to match the window colour.

FIG 33: Detail of delaminating steel frame on north elevation at east courtyard (ERA, 2016).

FIG 34: Area near on south elevation near south-east loading bay where the steel frame has been cut out to accommodate equipment. Missing components are annotated in red (ERA, 2016).

FIG 35: Detail of wood fascia showing loose/flaking lead paint (ERA, 2016).

FIG 36: Interior detail of original window harware (ERA, 2016).

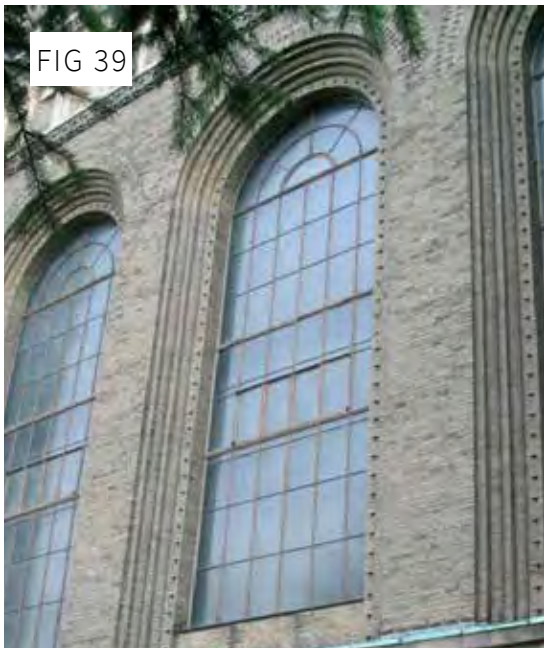
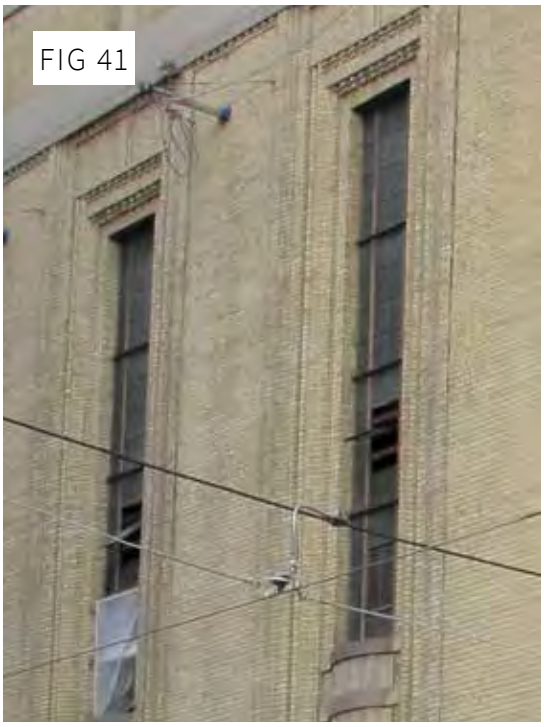


FIG 37 (TOP, LEFT): Steel windows at Bloor-Gladstone Library before refurbishment (ERA).

FIG 38 (TOP, RIGHT): Steel windows at Bloor-Gladstone Library after refurbishment (ERA).

FIG 39 (BOTTOM, LEFT): Steel windows at the Royal Ontario Museum before refurbishment (ERA).

FIG 40 (BOTTOM, LEFT): Steel windows at the Royal Ontario Museum after refurbishment (ERA).



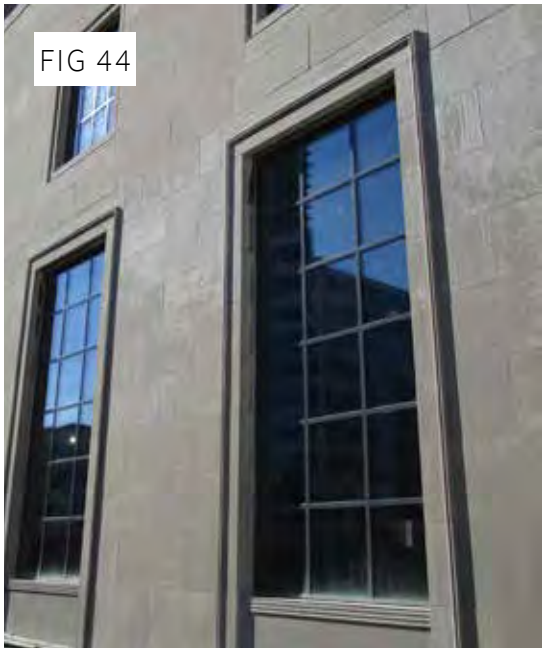


FIG 41 (TOP, LEFT): Steel windows at Maple Leaf Gardens before refurbishment (ERA).

FIG 42 (TOP, RIGHT): Steel windows at Maple Leaf Gardens after refurbishment (ERA).

FIG 43 (BOTTOM, LEFT): Original steel windows at Postal Station K c. 1937 (RAIC Journal, Sept 1937).

FIG 44 (BOTTOM, RIGHT): Replacement steel windows at Postal Station K (ERA).

FIG 45: East elevation at east courtyard (ERA, 2016).

FIG 46: Single remaining original steel window on ground floor of east elevation of east courtyard (ERA, 2016).

FIG 47: One of three small second floor original steel framed windows on east elevation at east courtyard.(LGA, 2016).

Once the paint has cured, the steel frames are to be fitted with new single-glazed glass panes with a Low-E coating, fabricated to match existing in size (~490 x 340mm). New panes are to be 6mm in thickness (original panes are 2.5mm). New silicone sealant is to be applied to the perimeter of each window pane.

3.3.2 Punched Steel Window Restoration/ Replacement & Door Replacement

All existing original steel framed punched windows on the ground floor of the Bridge Section and three steel frame punched windows on the second floor of the east elevation at the east courtyard will be maintained, abated, and rehabilitated (Figs 45-51). Several masonry openings are to be fitted with new replacement steel framed punched windows replicated to match the appearance of existing. All existing exterior doors on the South Building and Bridge Section are to be replaced with new doors. One additional door is to be provided in on the west elevation at the west courtyard where there is currently a window (Fig 49). Window and door restoration and replacement is to be done as per the Heritage Architect's specifications and the guidelines provided below.

In the east courtyard, the one remaining original steel framed punched window on the ground floor (Fig 46) and the three on the second floor (Fig 47) are to be abated and rehabilitated (Fig 48, blue windows). These windows are to be fitted with 100% new single-glazed glass panes with Low-E coatings. The other two masonry openings on the ground floor in the east courtyard, which are presently boarded up, are to be provided with new steel framed windows that match the original steel frames in material, size, and appearance, as directed by the Heritage Architect (Fig 48, yellow windows). The existing double doors in the east courtyard are not heritage attributes and do not meet current accessibility requirements. The doors are proposed to be removed and replaced with new doors that meet AODA accessibility requirements (Fig 45 & Fig 48, red door). The masonry opening will remain unaltered in the provision of this new set of double doors. The single door on the east facade will be sealed closed. Mechanical air intakes and exhausts are proposed to be incorporated into the existing window directly adjacent to the single door and into a small new masonry opening next (Fig 48, purple annotations). This configuration of air intake and exhaust is necessary because of regulations governing minimum required distances with regards to this equipment. These proposed modifications have a minimal impact on the exterior envelop.

FIG 48 (TOP): Annotated east elevation at east courtyard showing proposed modifications to the envelop (LGA drawings with annotations by ERA, 2017).

FIG 49 (BOTTOM): Annotated west elevation at west courtyard showing proposed modifications to the envelop (LGA drawings with annotations by ERA, 2017).

- Original steel windows to be rehabilitated
- Non-original windows/ boarded up openings to be provided with new windows to match original
- Non-original door/modification to masonry opening to be provided with new door and transom
- Original steel windows to rehabilitated and relocated
- Non-original window to be replaced with rehabilitated original steel window
- Proposed new door
- Proposed location of air intake and exhaust

FIG 50: West elevation at west courtyard (ERA, 2016).

FIG 51: One of three remaining original steel frame punched windows on west elevation at west courtyard (ERA, 2016).

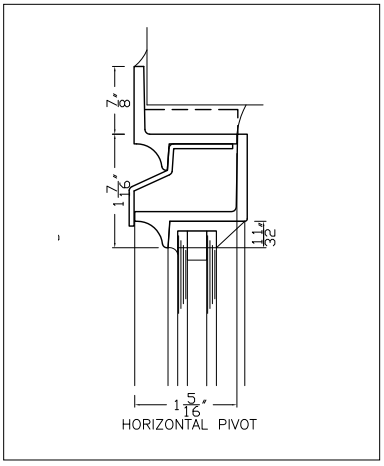


FIG 52: Bliss Nor-Am Historic/Industrial steel window with pivot vent head detail, proposed for use in as replacement windows (Bliss Nor-Am).

In the west courtyard, the three remaining original steel framed punched windows are to be abated, rehabilitated, and fitted with 100% new single-glazed glass panes with Low-E coatings (Fig 49, blue windows & Figs 50-51). One masonry opening is to be modified to accommodate a standard size door as per the Heritage Architect's specification (Fig 49, red door). The provision of this new door will result in a minor modification to the masonry facade, which is addressed in Section 3.3.5 (Exterior Masonry Repairs/Alterations). Since this door is located where there is currently an original steel framed window, that window is to be rehabilitated and relocated to another masonry opening, as indicated on Fig 49 (dashed blue line). The remaining masonry opening that currently has a non-original window is to be provided with a new steel framed window that will replicated to match the original windows in material, size, and appearance, as directed by the Heritage Architect (Fig 49, yellow window). Additionally, the existing non-original door and transom is to be replaced with a new door and transom (Fig 49, green door). This masonry opening will remain unaltered in the provision of the new door.

The rehabilitation of the steel framed punched windows will be undertaken using the same methods used to rehabilitate the continuous steel framed windows (as outlined in Section 3.3.1). For the replicated steel windows, ERA recommends Bliss Nor-Am Historic/Industrial Horizontal Pivot Vent with putty glazing (Fig 52, see Appendix for details). Samples and mock-ups of proposed windows are to be provided for review on site with the Heritage Consultant and Heritage Staff.

With the exception of the provision of the additional door on the west facade at the west courtyard, all replacement doors are proposed to fit within the existing building envelop openings. As such, it is ERA's opinion that the new doors do not negatively impact the heritage attributes or cultural heritage value of the property. Moreover, all new doors will be of a simple utilitarian design that is sympathetic to the industrial heritage character of the building (Fig 53). Additionally, the new doors will have all new hardware and security features that will improve the accessibility and security of the building.

3.3.3 Skylight Restoration

All three steel framed skylights in the South Building will be maintained, abated, and rehabilitated as per the Heritage Architect's specifications and the guidelines provided below.

The rehabilitation of the steel framed skylights will be undertaken using the same methods used to rehabilitate the continuous steel framed windows (as outlined in Section 3.3.1). Though the original skylights contained wire-frame glazing, in ERA's opinion, the replacement of glazing with single-pane tempered and laminated clear glazing with Low-E coatings for reasons of occupant safety would not negatively impact this heritage attribute.

3.3.4 Assessment of Impact of Complete Glass Replacement on Heritage Fabric

As discussed in Sections 3.3.1, 3.3.2, and 3.3.3, the proposed conservation approach for the glazing units in the continuous steel perimeter windows of the South Building, select punched steel windows in the Bridge Section, and the steel skylights in South Building is complete replacement of the glazing units with new to match original in size. New panes are to be 6mm in thickness (original panes are 2.5mm). Below is a comprehensive rationale for this approach with reference to Parks Canada Standards and Guidelines for the Conservation of Historic Places in Canada.

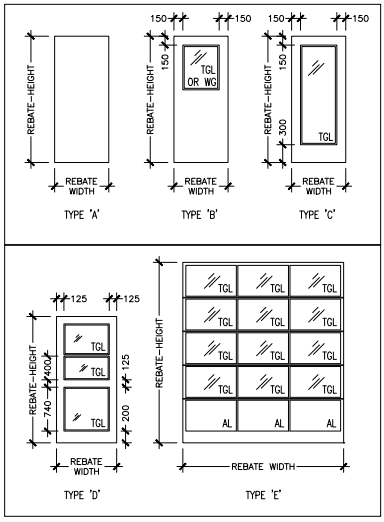


FIG 53: Proposed door elevations (LGA, 2017).

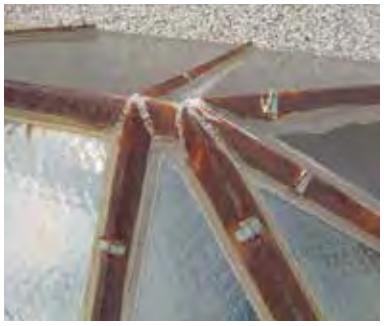


FIG 54: Detail of north-west skylight on South Building showing rusted steel frame, original wire glass panels and replacement boarding (ERA, 2016).

FIG 55: Typical window bay on South Building (ERA, 2016).

Continuous Steel Windows

The majority of the original glass panes of the continuous steel windows remain undamaged in the South Building (Fig 55). Under Section 4.3.5, the Standards and Guidelines recommend the replacement in kind of extensively deteriorated or missing parts of windows, where there are surviving prototypes (4.3.4 (12)). It would therefore follow that any missing or damaged glazing units should be replaced in kind and any undamaged units should be abated, retained, and reinstalled. However, the client has conducted a cost analysis which has shown that the cost of abatement and reinstatement of the existing glazing is approximately twice that of upgrading to 100% new glazing units with Low-E coatings. The higher cost of retaining the glazing is prohibitive for this community-based project. According to the Standards and Guidelines,

> "Planning should consider all factors affecting the future of an historic place, including the needs of the owners and users, community interests, the potential for environmental impacts, available resources and external

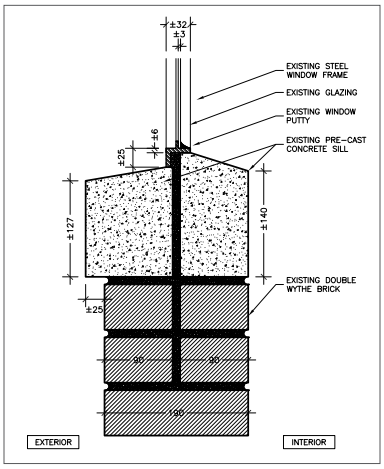


FIG 56: Detail of typical existing window section at sill (LGA, 2017).

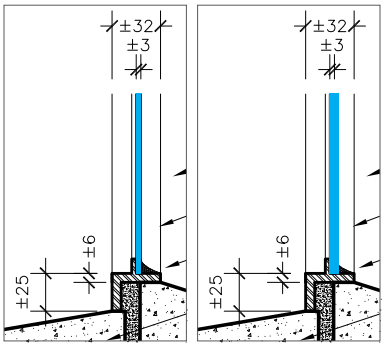


FIG 57: Annotate detail of typical existing window section at sill (left) and proposed window section at sill (right) showing increased thickness of glazing (Drawings by LGA, annotations by ERA, 2017).

FIG 58: Single-pane glass samples from manufacturer's website showing clear glass on the left and glass with a Low-E coating on the right (Mid State Door & Window, available at http://www.midstatedoorandwindow.com/mirror-copy).

constraints. The most effective planning and design approach is an integrated one that combines heritage conservation with other planning and project goals."

Accordingly, due to the nature of project - rehabilitating the property for community use - budgetary constraints are a critical element of project planning. Replacement of the glass panes will in no way impair the ability of the windows to communicate the cultural heritage value of the property. Therefore, in this context, the windows should be rehabilitated in a cost-effective manner to allows the project to proceed.

Section 4.3.5 (12) of the Standards and Guidelines also states that any substitute material should convey the same appearance of and be physically and visually compatible with the original elements. In keeping with this guidelines, the replacement glass units will be fabricated to match the original panes in size. The original glazing unit thickness (2.5mm or 1/8") is to be increased to 6mm (1/4") (Fig 57). The thicker glass will not only be more durable but will also increase the thermal performace of the envelop. The thicker glass will not impact the way the steel frames receive the glazing nor will it impact the optical qualities of the glass. It is ERA's opinion that the thicker glass will not negatively impact the heritage integrity of the structure.

Additionally, every effort will be made to match the original colour of the glass. However, in order to improve the thermal performance of the building envelope, a Low-E coating is proposed to be applied to the new panes in order to minimize solar gains in the South Building during the summer and therefore improve the comfort of occupants and lower the required energy spent conditioning the building. Low-E coatings, which are applied to glazing to improve thermal values, have a subtle tint to them which may be visually perceptible when compared next to clear glass (Fig 58). It follows that each pane should have the same colour/tint in order for the window glazing to read uniformly across the building.

The upgrading of the glazing to units with Low-E coating is supported by Section 4.3.5 of the Standards and Guidelines, which state that energy efficiency objectives in upgrades to exterior wall assemblies should be made in a manner that respects the building' character-defining

elements, and considers the energy efficiency of the building envelop and system as a whole (4.3.4 (25)). While the appearance of single pane Low-E coated glazing units will differ slightly from the original panes in colour, their profile and functionality will match that of existing (Fig 57). The replacement panes will thus integrate into the retained and refurbished steel window frames without negatively impacting the historical character of the steel frames.

Punched Steel Windows

In addition to the reasons stated for the 100% replacement of the glazing unit for the continuous perimeter windows, the choice to fully replace the existing glass panes in the punched steel windows was done because many of the original glass panes are missing or damaged from these window units (see pages 12-15).

Steel Skylights

In addition to the reasons stated in the rationale for the 100% replacement of the glazing unit for the continuous perimeter windows, the choice to fully replace the existing glass panes with new non-wired glass panels was done primarily because approximately 82% of the glazing is missing or damaged from the large skylight (see page 15). Additionally, the new tempered and laminated glazing units will ensure the safety of the occupants should any panes break or fail.

Conclusion

In ERA's opinion, the complete replacement of the existing glazing on the perimeter windows of the South Building, select punched steel windows in the Bridge Section, and the skylights in South Building with new glazing units will not negatively impact the heritage integrity of the structure.

FIG 59: Large skylight in South Building showing protective boarding and missing panes (ERA, 2016).

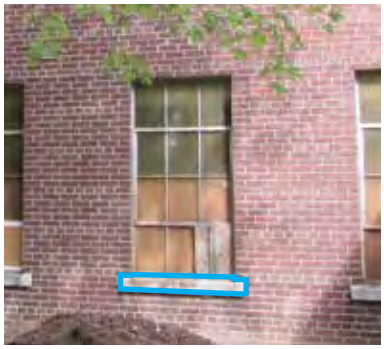


FIG 60: Annotated photograph indicating sill on the west elevation of the west courtyard that could be salvaged and reused on the south elevation of the east courtyard (ERA, 2016).

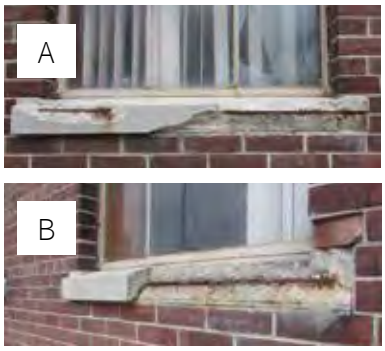


FIG 61: Sills on south elevation at east courtyard that are in an advanced state of deterioration (ERA, 2016).

3.3.5 Exterior Masonry Repairs/Alterations

There are three select areas where repairs or alterations to the exterior masonry will be undertaken during Phase I.

The first area is on west elevation at the west courtyard, where there is a proposed modification to the exterior masonry. The fourth masonry opening from the north is proposed to be dropped to grade in order to accommodate a new standard door (Fig 49, red door). This elevation has been modified in the past, when a standard door was put into the

FIG 62: Existing original exterior lighting unit on the west facade (ERA, 2016).

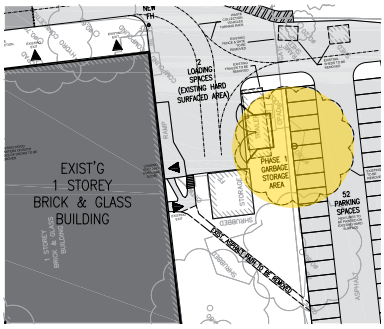


Fig 63: Detail of proposed site plan showing location of tree to be removed in yellow (LGA, 2017).

second opening from the north (Fig 49, green door). The new masonry opening will be cut out and rebuilt by a Heritage Mason, as per the Heritage Architect's specifications. The existing cast concrete lintel will be carefully removed and salvaged for possible reuse in the east courtyard (Figs 60-61). The brick units will be cut out and salvaged for reuse in the rebuilding of this opening. The new opening is to be finished by turning the existing bricks so that their uncut ends are exposed.

The second area of select masonry repair is on the south elevation at the east courtyard. Two cast concrete sills show spalling to the extent that the structural rebar is exposed and corroded (Fig 61). Due to the extent of deterioration, these two existing concrete sills are to replaced. The existing damaged sills will be cut out by a Heritage Mason. If possible, the salvaged concrete sill from the west courtyard (Fig 60) should be repaired as required and reinstated in the east courtyard. New sill(s) will be of precast and reinforced concrete, fabricated to match existing in material, size, texture, colour, and profile, as per the Heritage Architect's specifications. Additionally, the spalled brick located above sill "B" (Fig 61) should be cut out and replaced with a new unit to match existing. If possible, the new brick should be one salvaged from the south elevation of the east courtyard.

The third area of select masonry repair is on the east elevation at the east couryard where a small opening is proposed to be made in the masonry facade to accomodate an air intake louvre for the boiler room (Fig 48). The brick units will be cut out and salvaged for reuse. The new opening is to be finished by turning the existing bricks so that their uncut ends are exposed. As stated in Section 3.3.2, this configuration of air intake is necessary because of regulations governing minimum required distances with regards to this equipment. This proposed modification has a minimal impact on the exterior envelop.

3.3.6 Exterior Lighting Retaining

There are two original exterior lighting units that are currently mounted to the west and south facades of the South Building (Fig 62). These units are no longer functional but the housing is in fair condition. The units will be retained in situ. Any loose or flaking paint on the units will be removed as per the methods outlined in Section 3.3.1. while

the continuous steel windows are being abated and restored. The units will then be painted as per the methods outlined in Section 3.3.1. and the Heritage Architect's specifications.

3.3.7 Exterior Landscape Features

The woodlot to the rear of the property, which is suggested in historical photography is a designated attribute. One tree at the rear (south) of the building is proposed to be removed to accommodate parking (Fig 63). Wayne Holder, certified arborist and Acting Supervisor of Tree Preservation & Protection at the City of Mississauga, has reviewed this tree and confirmed in his email dated December 2, 2016 that the tree is of the Silver Maple species (which are very common) and advised that the tree is in poor condition.

3.3.8 Concrete Floor Restoration

The entire surface of the South Building and Bridge section flooring within the scope of Phase I is to be restored (Fig 64). As the desired finish is exposed concrete, any existing tiling and mastics will be removed as per the Abatement Specifications.

As the interior mechanical, electric, and plumbing systems are to be reconfigured in the proposed design, some areas of the CIP flooring will be cut into. In this case, a self-leveling concrete should be used to fill in the cut wherever required. Special attention should be made to match the colouring of the existing concrete. The cured floor should then be ground to be flush with existing.

To finish the entire floor surface, any irregularities will be ground down and the surface will be polished to a smooth finish and coated with a concrete sealer as per the Architect's Specifications.

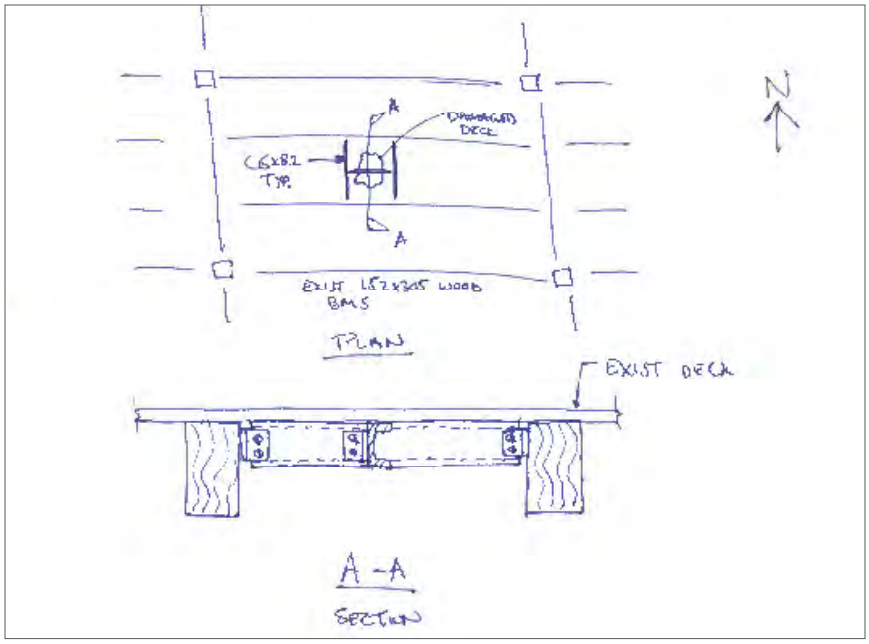
3.3.9 Interior Masonry Restoration

All interior masonry perimeter walls and select interior masonry partition walls are to be refurbished and repainted (Fig 65-66). The masonry walls need not be completed stripped of lead paint. Rather, any loose/flaking paint is to scrapped off, followed by a light sanding as per the Heritage Architect's Specifications. The surface is then to be primed and painted as per the Heritage Architect's specifications.

FIG 64: Concrete floor in South Building (ERA, 2016).

FIG 65: Painted interior perimeter brick wall and column (ERA, 2016).

FIG 66: Painted hollow-core brick wall (ERA, 2016).



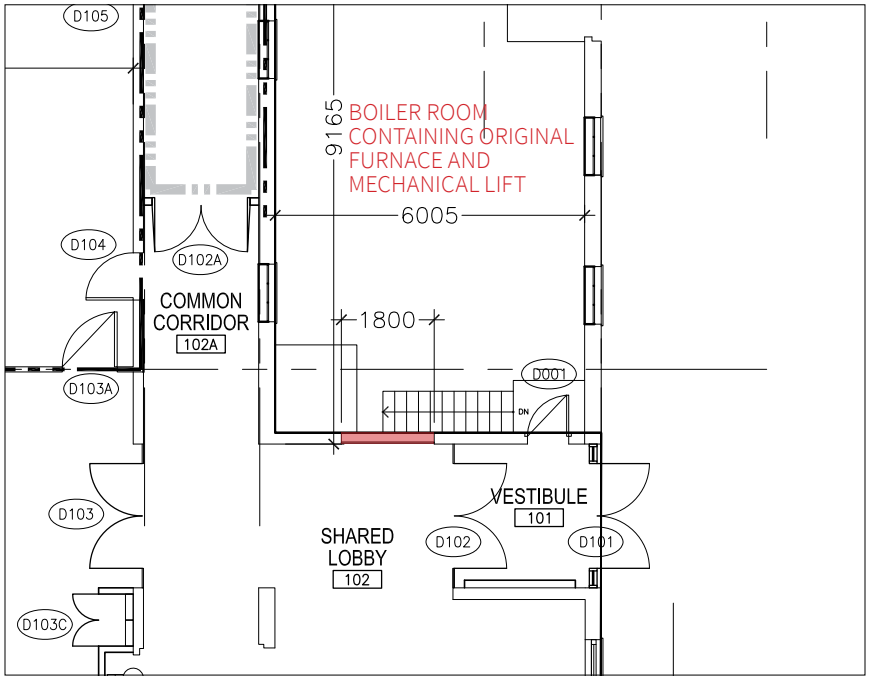


Fig 67: Sketch of structural details in plan and section showing deck reinforcing at water-damaged areas (Blackwell, 2017)..

Fig 68: Detail of proposed ground floor plan showing location of interior window (highlighted in red) that allows views into original boiler room below (LGA, 2017).

3.3.10 Wood Structure Restoration

All interior wood structural elements are to be refurbished and repainted. The wood structural surfaces need not be completed stripped of paint. Rather, any loose/flaking paint is to scrapped off, followed by a light sanding. The surface is then to be primed and painted as per the Heritage Architect's specifications.

Select areas of the roof decking are proposed to be cut into to accommodate new roof-mounted HVAC units (refer to Architect's Drawings, Roof Plan). Existing lead paint is to be 100% removed from areas where cutting is proposed, as per the Abatement Specifications.

In areas where the wood decking is to be cut through to accommodate venting of HVAC equipment to the roof, structural reinforcement will be provided (Fig 67). This proposed structure is to be painted to match the adjacent surfaces. In ERA's opinion, the structural reinforcements do not negatively impact the cultural heritage value or attributes of the property.

As stated in Section 2.3.3, further investigation by a structural engineer is required in order to confirm the condition of the roof structure at the areas where flaking paint and staining of the wood decking is evident.

The steel structural connections and cross-bracing should be restored and re-painted when the wood elements are being restored and re-painted.

3.3.11 Interior Lighting Replacement

The interior lighting system is to be replaced with a new lighting system that is sympathetic to the character of the original (Figs 69-70). The existing system is proposed to be replaced because it does not meet electrical code requirements nor the client's illumination needs. Note that the fixture will be open rather than having the optional lensed door that is illustrated in Fig 70. The pendant lights will be suspended from the ceiling via cables. All existing lighting units are to be salvaged.

3.3.12 Furnace & Mechanical Lift Retaining

The Inglis furnace and a mechanical lift are to be retained as non-operational artefacts which will be available for viewing by way of an interior window in the shared lobby near the entrance from the east courtyard (Figs 68&71).

Fig 69: Original interior light fixture (ERA, 2016).

Fig 70: Proposed interior light fixture by Spectrum Lighting Inc.

FIG 71: Original Inglis Furnace in current Boiler Room (ERA, 2016).

3.4 Maintenance Recommendations

With respect to continual maintenance, there are a number of procedures that should be undertaken on a regular basis, as follows:

Yearly

Clean roof drains and rainwater leaders;

Inspect the envelope of the building for damage due to weather events, disturbance by animals, vandalism and damage due to human occupancy that may compromise its condition if left unrepaired.

Every 3-5 Years

Complete an updated condition assessment of the building to evaluate the performance of the masonry, sealants, windows and doors, flashings, roofing, and adjacent grade conditions.

Every 5-10 Years

Painting of exposed wood elements including fascia, painting and sealing of windows, renewal of caulking, inspection of operating hardware and weatherstripping.

10-20 Years

Replacement of roofing membrane and flashings;

Selective repointing of mortar joints in exposed locations.

The creation of a maintenance log with regular entries of inspection and maintenance activity is key to refining the time frames for maintenance work, as the particular configuration and features of the building will provide their own rhythm of requirements to ensure ongoing conservation.

3.5 General Criteria for Hiring Qualified Specialists

Please refer to the Heritage Specifications for a breakdown of required qualificaitons per scope of conservation work. The contractor(s) will undertake the work in accordance with the Heritage Architects' specifications. This work will be reviewed on site by a consultant with heritage experience for general conformance with heritage guidelines, the conservation notes described in this Conservation Plan, and the Heritage Architects' specifications.

4 CONCLUSION

This report finds that the proposal to rehabilitate the building at 1532 Lakeshore Road East conserves and protects its cultural heritage value and the attributes listed in the designation bylaw.

As part of the program of work contained within this Conservation Plan, many improvements are proposed. These include:

The maintaining and rehabilitation of the existing continuous steel windows;

The retention of existing punched openings, rehabilitation of existing original steel framed punched windows, and provision of new windows to match original material and appearance where replacements are necessary;

The retention and rehabilitation of the three existing steel framed skylights on the roof of the South Building;

The provision of new AODA accessible double doors in east courtyard within the current masonry opening;

The modification of one punched opening in the west courtyard to provide an additional door that enables access from proposed office spaces to the exterior landscaping;

The rehabilitation of the interior features such as the concrete floors and interior masonry walls;

The rehabilitation and shoring-up (where necessary) of existing wood structure;

The replacement of interior lighting with new sympathetic lighting;

The maintaining and abatement of the boiler room, boiler, and mechanical lift.

Small Arms Limited, Administration Building, c. 1945

The proposed interventions in the Small Arms Building will enable the now dis-used building to become a focal point for community engagement in Mississauga by supporting office, studio, and community functions.

5 APPENDIX

5.1 Parks Canada Standards and Guidelines for the Conservation of Historic Places in Canada

The Standards and Guidelines describes three approaches to treating a heritage site: (Source: Standards and Guidelines, 2nd Ed, Glossary)

- *Preservation: The action or process of protecting, maintaining, and /or stabilizing the existing materials, form, and integrity of a historic place or of an individual component, while protecting its heritage value.*
- *Restoration: The action or process of accurately revealing, recovering or representing the state of a historic place or of an individual component, as it appeared at a particular period in its history, while protecting its heritage value.*
- *Rehabilitation: The action or process of making possible a continuing or compatible contemporary use of a historic place or an individual component, while protecting its heritage value.*

The primary treatment of 1352 Lakeshore Avenue East is Rehabilitation.

The Standards and Guidelines recognize twelve possible standards in the rehabilitation process of historic properties. These standards have been listed below. One through nine of these standards relate to all three conservation methods, while ten, eleven and twelve apply to rehabilitation only.

1. Conserve the heritage value of a historic place. Do not remove, replace or substantially alter its intact or repairable character defining elements. Do not move a part of a historic place if its current location is a character defining element.

2. Conserve change to an historic place that, over time, have become character-defining elements in their own right.

3. Conserve heritage value by adopting an approach calling for minimal intervention.

4. Recognize each historic place as a physical record of its time, place and use. Do not create a false sense of historical development by adding elements from other historic places or other properties, or by combining features of the same property that never coexisted.

5. Find a use for a historic place that requires minimal or no change to its character- defining elements.

6. Protect and, if necessary, stabilize a historic place until any subsequent intervention is undertaken. Protect and preserve archaeological resources in place. Where there is potential for disturbing archaeological resources, take mitigation measures to limit damage and loss of information.

7. Evaluate the existing condition of character-defining elements to determine the appropriate intervention needed. Use the gentlest means possible for any intervention. Respect heritage value when undertaking an intervention.

8. Maintain character-defining elements on an outgoing basis. Repair character-defining elements by reinforcing their materials using recognized conservation methods. Replace in kind any extensively deteriorated or missing parts of character-defining elements, where there are surviving prototypes.

9. Make any intervention needed to preserve character-defining elements physically and visually compatible with the historic place and identifiable on close inspection. Document any intervention for future reference.

10. Repair rather than replace character-defining elements. Where character-defining elements are too severely deteriorated to repair, and where sufficient physical evidence exists, replace them with new elements that match the forms materials and detailing of sound versions of the same elements Where there is insufficient physical evidence, make the form material and detailing of the new elements compatible with the character of the historic place.

11. Conserve the heritage value and character defining elements when creating any new additions to a historic place or any related new construction. Make the new work physically and visually compatible with, subordinate to and distinguishable from the historic place.

12. Create any new additions or related new construction so that the essential form and integrity of a historic place with not be impaired if the new work is removed in the future.

5.2 Architectural Drawings (LGA)

5.3 Architectural Specifications (LGA)

5.4 Structural Reinforcement Detail (Blackwell)

5.5 Replacement Steel Window Details (Bliss Nor-Am)

5.6 Heritage Conservation Specifications (ERA)

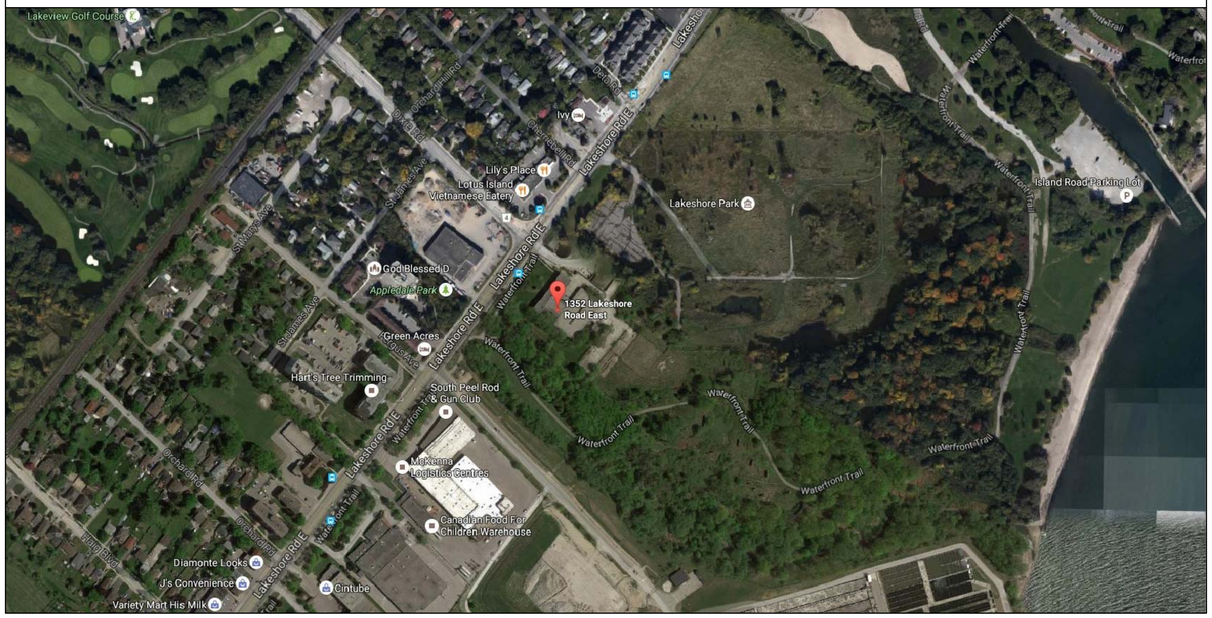
5.7 Abatement Specifications (Martech Group)

5.8 Window Study (RJC)

5.9 Condition Assessment (RJC)

5.10Archeological Assessment Report

LOCATION MAP



RENOVATION & RESTORATION:

SMALL ARMS BUILDING - PHASE 1

1352 Lakeshore Road East, Mississauga, ON

CONSULTANT DRAWING LIST

ELECTRICAL

NO.	SHEET NAME
E-001	ELECTRICAL LEGEND, PROJECT NOTES & SCOPE OF WORK
E-002	ELECTRICAL SPECIFICATIONS
ED-100	ELECTRICAL DEMOLITION PLAN
E-100	ELECTRICAL SITE PLAN
E-200	LIGHTING GROUND FLOOR PLAN
E-300	POWER AND SYSTEMS GROUND FLOOR PLAN
E-301	POWER AND SYSTEMS ROOF PLAN
E-400	ELECTRICAL AV / I.T / SECURITY GROUND FLOOR PLAN
E-500	ELECTRICAL DETAILS
E-501	AV DETAILS
E-600	ELECTRICAL SINGLE LINE DIAGRAMS
E-700	ELECTRICAL RISER DIAGRAMS
E-800	SCHEDULES

MECHANICAL

NO.	SHEET NAME
M-200D	UNDERSLAB PLUMBING DEMO
M-201D	FIRST FLOOR PLUMBING DEMO
M-201	GROUND FLOOR NEW PLUMBING
M-202	SECOND FLOOR NEW PLUMBING
M-203	UPPER ROOF PLUMBING
M301D	FIRST FLOOR FIRE PROTECTION DEMO
M-301	FIRST FLOOR NEW FIRE PROTECTION
M-302D	SECOND FLOOR FIRE PROTECTION DEMO
M-302	SECOND FLOOR NEW FIRE PROTECTION
M-401D	FIRST FLOOR HVAC DEMO
M-401	FIRST FLOOR NEW HVAC
M-403	ROOF NEW HVAC
M-501D	FIRST FLOOR HVAC PIPING DEMO
M-501	FIRST FLOOR NEW HVAC PIPING
M-502	SECOND FLOOR NEW HVAC PLUMBING
M-601	GAS SCHEMATIC
M-602	DHW / DCW / DHWR SCHEMATIC
M-603A	HOT WATER HEATING SCHEMATIC
M-603B	HOT WATER HEATING SCHEMATIC
M-604	FIRE PROTECTION SCHEMATIC
M-701A	DETAILS
M-701B	DETAILS

STRUCTURAL

NO.	SHEET NAME
S-101	NOTES, PLANS AND SECTIONS

CIVIL

NO.	SHEET NAME
DET1	DETAIL AND NOTES PLAN
SSG1	SITE SERVICING AND GRADING PLAN

SURVEY

NO.	SHEET NAME
125-1-16	PLAN OF SURVEY
125-2-16	PLAN OF SURVEY

ARCHITECTURAL DRAWING LIST

NO.	SHEET NAME
A-000	COVER SHEET - LOCATION MAP, PHASING, DRAWING LISTS
A-001	OBC MATRIX, ABBREVIATIONS, LEGENDS, GENERAL NOTES
A-002	DOOR & FRAME SCHEDULES, ELEVATIONS AND DETAILS
A-010	SITE PLAN - NEW & DEMOLITION
AD-100	GROUND FLOOR DEMOLITION PLAN
A-101	GROUND FLOOR & BASEMENT PLANS
A-102	SECOND FLOOR & LOWER ROOF PLANS
A-103	UPPER ROOF PLAN
A-110	GROUND FLOOR - REFLECTED CEILING PLANS
A-120	ENLARGED GROUND FLOOR PLAN
	ENLARGED GROUND FLOOR - REFLECTED CEILING PLAN
AD-200	EXTERIOR ELEVATIONS - EXISTING & DEMOLITION
AD-201	EXTERIOR ELEVATIONS - EXISTING & DEMOLITION
A-200	EXTERIOR ELEVATIONS - NEW
A-201	EXTERIOR ELEVATIONS - NEW
A-300	BUILDING SECTIONS
A-500	TYPICAL DETAILS
A-501	TYPICAL DETAILS

PHASING DESCRIPTION

PHASE ONE SCOPE OF WORK: (SEE PLANS FOR DIVISION BETWEEN PHASE 1 & PHASE 2 AREAS)

THE EXISTING BUILDING IS APPROXIMATELY 43,000 SQUARE FEET. PHASE 1 AREA OF WORK IS APPROXIMATELY 23,850 SQUARE FEET.

- NEW SITE SERVICES & NEW ELECTRICAL SERVICE
- NEW FIRE ROUTE, PAVED PATH & BARRIER-FREE PARKING
- NEW GARBAGE STORAGE AREA, BOLLARDS, & TRAFFIC GATE
- NEW SITE LIGHTING
- ABATEMENT OF DESIGNATED SUBSTANCES IN PHASE 1 AREA & SELECTIVE ABATEMENT IN PHASE 2 AREA
- REMOVE & REPLACE SPRINKLER SYSTEM - PHASE 1 & PHASE 2 AREAS
- NEW PLUMBING & SANITARY AT PHASE 1 AREA
- NEW ELECTRICAL IN PHASE 1 AREA
- NEW FIRE ALARM SYSTEM, EXIT SIGNAGE, PULL STATIONS & EMERGENCY LIGHTING FOR PHASE 1 & PHASE 2 AREAS
- NEW HVAC IN PHASE 1 AREA & NEW HEATING FOR STABILIZATION OF PHASE 2 AREA
- DEMOLITION OF EXISTING ELECTRICAL, PLUMBING, SANITARY, HVAC, INTERIOR PARTITIONS & FINISHES
- STRUCTURAL REINFORCEMENT FOR WORK RELATED TO PHASE 1 AREA
- REMOVE & REPLACE GLAZING AT EXISTING STEEL WINDOWS & SKYLIGHTS
- REMOVE & REPLACE EXISTING EXTERIOR DOORS
- NEW INTERIOR PARTITIONS, DOORS/SCREENS, MILLWORK & FINISHES
- ROUGH-INS FOR NEW SECURITY & COMMUNICATIONS - PHASE 1 & PHASE 2 AREAS
- SELECTIVE DEMOLITION OF EXISTING CEILING FINISHES - PHASE 2 AREA

CLIENT:

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info@martechgroup.ca

Appendix 2

LGA architectural partners

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lga-ap.com

ONTARIO ASSOCIATION OF ARCHITECTS
DEAN GOODMAN
LICENCE
4394

ISSUE DATE:

NO.	DATE	DESCRIPTION
2	2017.01.16	Issued for Building Permit
1	2017.01.16	Issued for Heritage Property Permit

PROJECT:
SMALL ARMS BUILDING - PHASE 1
RENOVATION & RESTORATION

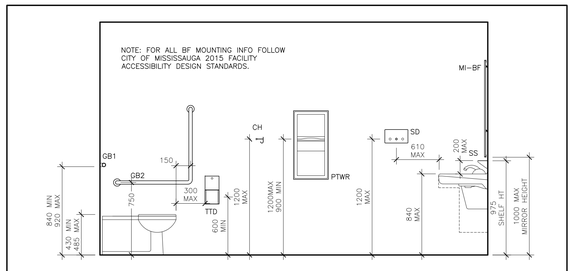
1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
COVER SHEET

PROJECT NO: 16361
SCALE: As indicated
DRAWN BY: Author
REVIEWED BY: Checker

PROJECT NORTH:

DRAWING NO:
A-000



TYP.BF WR FIXTURE & ACCESSORIES MOUNTING HEIGHTS

1 : 25

OBC MATRIX

Name of Project:
Phase 1 - Renovation & Restoration
Small Arms Building

Location:
1352 Lakeshore Rd. E., Mississauga, ON

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCDN.

Firm Name:
LGA Architectural Partners
533 College Street, Suite 301
Toronto, ON M6G 1A8 416 203 7600

Certificate of Practice Number:
5162

Ontario Building Code Data Matrix – Part 11 – Renovation of Exisitng Building			OBC Reference
11.1	Existing Building Classification:	Describe Existing Use: GROUP F, DIVISION 2 Construction Index: 1 Hazard Index: 6 ☐ Not Applicable (no change of Major Occupancy)	11.2.1 T 11.2.1.1A T 11.2.1.1B to N
11.2	Alteration to Existing Building is:	Basic Renovation ☐ Extensive Renovation ☒	11.3.3.1 11.3.3.2
11.3	Reduction in Performance Level:		11.4.2
		Structural: ☒ No ☐ Yes	11.4.2.1
		By Increase in occupant load: ☐ No ☒ Yes	11.4.2.2
		By change of major occupancy: ☒ No ☐ Yes	11.4.2.3
		Plumbing: ☒ No ☐ Yes	11.4.2.4
		Sewage system: ☒ No ☐ Yes	11.4.2.5
	Compensating Construction:		11.4.3
		Structural: ☒ No ☐ Yes (explain)	11.4.3.2
		Increase in occupant load: ☐ No ☒ Yes (explain) See Memo prepared by David Hine Engineering Inc.	11.4.3.3
		Change of major occupancy: ☒ No ☐ Yes (explain) See Memo prepared by David Hine Engineering Inc.	11.4.3.4
		Plumbing: ☐ No ☒ Yes (explain) Existing plumbing systems are being removed & replaced in conformance with Part 7.	11.4.3.5
		Sewage system: ☐ No ☒ Yes (explain) Existing sewage systems are being removed & replaced in conformance with Part 8.	11.4.3.6
11.5	Compliance Alternative Proposed:	☒ No ☐ Yes (give number(s))	11.5.1
11.6	Alternative Measures Proposed:	☒ No ☐ Yes (explain)	11.5.2

ARCHITECTURAL ABBREVIATIONS LEGEND

ABBREVIATIONS MAY OR MAY NOT INCLUDE PERIOD PUNCTUATION.
ABBREVIATIONS APPLY TO ARCHITECTURAL DOCUMENTS ONLY.

@	AT
&	AND
AB	AIR BARRIER
AFF	ABOVE FINISH FLOOR
AG	ABOVE GRADE
AL	ALUMINUM
ANOD	ANODIZED
AVB	AIR & VAPOUR BARRIER
BB	BULLETIN BOARD
BD	BOARD
BG/AS	BELOW GRADE/ABOVE SLAB
BLDG	BUILDING
BF	BARRIER FREE
C	CLOSER
CAB	CABINET
CAT	CATEGORY
CB	CONCRETE BOARD
CC	CONCEALED CLOSER
CF	CEILING FINISH
CH	COAT HOOK
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CJ	CONTROL JOINT
COL	COLUMN
CONC	CONCRETE
COR	CORROSION
COORD	COORDINATE
CR	CARD READER
CST	CONCRETE STAIN
CT	CERAMIC TILE
C/W	COMPLETE WITH
D	DRYER
DC	DOOR CONTACT
DIA	DIAMETER
DF	DRINKING FOUNTAIN
DIM	DIMENSION
DN	DOWN
DO	AUTO DOOR OPERATOR
DW	DISHWASHER
DWG	DRAWING
EB	EXIT BUTTON
EF	EXHAUST FAN
EHO	ELECTRICAL HOLD OPEN
ELEC	ELECTRICAL
EP	EPOXY
EQUIP	EQUIPMENT
EWS	EYE WASH STATION
EX	EXISTING
EXP	EXPOSED
EXT	EXTERIOR
F	REFRIDGERATOR
FAAP	FIRE ANNUNCIATOR & ALARM PANEL
FAN	EX FAN EXHAUST
FCL	FINISHED CEILING
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FF	FLOOR FINISH
FFL	FINISHED FLOOR LEVEL
FH	FIRE HYDRANT
FIN	FINISH(ED)
FG	FIXED GLASS
FHC	FIRE HOSE CABINET
F/O	FACE OF
FR. GL	FROSTED GLASS
FRR	FIRE RESISTANCE RATING
GA	GUAGE
GAL	GALVANIZED
GB	GRAB BAR
G1S	GOOD ONE SIDE
G2S	GOOD TWO SIDES
GYP	GYPSUM
GWB	GYPSUM WALL BOARD
HHS	WATERLESS HAND HYGIENE STATIONS
HOR	HORIZONTAL
HR	HOUR
LF	LIGHT FIXTURE
M&E	MECHANICAL & ELECTRICAL
MANUF	MANUFACTURER
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
MB	MOISTURE BARRIER
MDF	MEDIUM DENSITY FIBREBOARD
MECH	MECHANICAL
MI	MIRROR
MIN	MINIMUM
ML	MAGLOCK
MTL	METAL
NIC	NOT IN CONTRACT
OBC	ONTARIO BUILDING CODE
OTA	OPEN TO ABOVE
OTB	OPEN TO BELOW
OPG	OPENING
PH	PANIC HARDWARE
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLY	PLYWOOD
PT	PAINT
PTD	PAINTED
PTWR	PAPER TOWEL & WASTE RECEPTACLE
R	RISER
RAD	RADIATOR
RD	ROOF DRAIN
RE-INF	RE-INFORCED
RF	RESISLIENT FLOORING
RL	RECESSED LIGHTING
RO	ROUGH OPENING
ROW	RIGHT-OF-WAY
RP	REMOVABLE PANEL
RR	REMOVE & REPLACE
RWL	RAIN WATER LEADER
S	SEALER
SCH	SCHEDULE
SCW	SOLID CORE WOOD
SD	SOAP DISPENSER
SG	SUPPLEMENTARY GUIDELINES OF OBC
SH	SILL HEIGHT
SIM	SIMILAR
SN	SANITARY NAPKIN DISPENSER
SOG	SLAB ON GRADE
SPEC	SPECIFICATION
SS	STAINLESS STEEL
SSG	STRUCTURAL SILICONE GLAZING
ST	STEEL
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STGR	GR STAIN GRADE
STRUCT	STRUCTURAL
T	TREADS
TB	THERMALLY BROKEN
TBD	TO BE DETERMINED
TG	TEMPERED GLAZING
THK	THICK
TM	TILT MIRROR
T/O	TOP OF
TTD	TOILET TISSUE DISPENSER
TWB	TOWEL BAR
TYP	TYPICAL
U/S	UNDERSIDE
ULC	UNDERWRITER'S LABORATORY OF CANADA
VERT	VERTICAL
VOS	VERIFY ON SITE
VB	VAPOUR BARRIER
VC	VENEER CORE
VR	VAPOUR RETARDER
W	WASHER
WB	WALL BASE
WG	WIRED GLASS
WH	WEATHER PROOF HOSE B/B
WS	WINDOW SHADE
WM	WATERMAIN

GENERAL NOTES

1. THE CONTRACTOR WILL VERIFY ALL DIMENSIONS FOR THE WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK.

2. DRAWINGS ARE NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.

3. ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF LGA ARCHITECTURAL PARTNERS. ALL COPYRIGHT CONDITIONS ARE RESERVED BY THE ARCHITECT WITH RESPECT TO THESE DOCUMENTS. THESE DOCUMENTS SHALL NOT BE DUPLICATED OR USED FOR OTHER THAN THE PURPOSE FOR WHICH THEY WERE ISSUED.

4. NO CHANGES OR SUBSTITUTIONS SHALL BE MADE TO THE WORK DESCRIBED IN THESE DRAWINGS OR SPECIFICATIONS WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF THE ARCHITECT. REFER TO THE SPECIFICATION FOR THE FULL LIST OF REQUIREMENTS AND PROCEDURES THAT MUST BE FOLLOWED TO MAKE ANY SUBSTITUTIONS. THE ARCHITECT RESERVES THE RIGHT TO REFUSE ANY REQUEST FOR SUBSTITUTION.

5. THE ARCHITECTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH DOCUMENTS OF ALL OTHER DISCIPLINES. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT PRIOR TO ANY EXECUTION OF RELATED WORK.

6. THE CONTRACTORS SHALL ENSURE THAT MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CONTRACT DOCUMENTS.

7. THE CONTRACTORS SHALL ENSURE THAT THE LOCATIONS OF ALL UNDERGROUND SERVICES ARE IDENTIFIED PRIOR TO THE COMMENCEMENT OF WORK AND EXCAVATIONS. THE CONTRACTOR IS FULLY RESPONSIBLE TO REPAIR ANY DAMAGE TO UNDERGROUND SERVICES THEY HAVE COMMITTED.

8. ALL STRUCTURAL COMPONENTS TO BE TAKEN OFF THE STRUCTURAL DOCUMENTS. NO STRUCTURAL DESIGN INFORMATION SHALL BE INFERRED FROM THE ARCHITECTURAL DRAWINGS. ALL M&E + CIVIL COMPONENTS TO BE TAKEN OFF THE M&E + CIVIL DOCUMENTS. NO M&E + CIVIL DESIGN INFORMATION SHALL BE INFERRED FROM THE ARCHITECTURAL DRAWINGS. WHERE M&E COMPONENTS ARE SHOWN ON ARCHITECTURAL, IT IS FOR INTENDED LOCATION OF COMPONENTS ONLY. IT IS NOT TO INDICATE THE QUALITY, SIZE, ETC. WHERE THERE IS A DISCREPANCY IN M&E LOCATION BETWEEN ARCH + M&E DOCUMENTS, CONTRACTOR TO FOLLOW ARCH FOR LOCATION ONLY.

9. DRAWINGS ARE IN METRIC. DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS OTHERWISE NOTED.

10. ELEMENTS OF THE EXISTING BUILDING ARE HERITAGE DESIGNATED AS PER CITY OF MISSISSAUGA BYLAW 0258-2009. REFER TO BYLAW AND TO HERITAGE SPECIFICATIONS PREPARED BY ERA ARCHITECTS INC. FOR INFORMATION ON WHICH ELEMENTS ARE DESIGNATED AND PROCEDURES FOR WORK RELATED TO THESE ELEMENTS.

11. TYP OR TYPICAL WRITTEN AT THE END OF A NOTE INDICATES THAT THE ENTIRE NOTE IS TYPICAL

GRAPHICS LEGEND

D101 — DOOR TAG
WN-01 — WINDOW UNIT TAG
MK101 — MILLWORK UNIT TAG
W1 — WALL ASSEMBLY TAG
R1 — ROOF ASSEMBLY TAG
F1 — FLOOR ASSEMBLY TAG
C1 — CEILING ASSEMBLY TAG
(REFER TO ASSEMBLIES SCHEDULES)

1 / A-200 — DETAIL NUMBER / DRAWING SHEET NUMBER
1 / A-200 — SECTION NUMBER / DRAWING SHEET NUMBER
1 / A-200 — ELEVATION NUMBER / DRAWING SHEET NUMBER
A200 — INTERIOR ELEVATION NUMBER / DRAWING SHEET NUMBER
A — GRID BUBBLE
SPOT ELEVATION (ABOVE FINISH FLOOR)
ELEV 0000 — ELEVATION TAG
ROOM NAME 101 100 SF — ROOM TAG WITH AREA

FINISHES
FLR: –
BSE: –
N: –
E: –
S: –
W: –
FINISH KEY - SEE FINISH LEGEND & SPECIFICATIONS

1 — REVISION TAG
℄ — CENTRELINE

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ISSUE DATE:

NO.	DATE	DESCRIPTION
3	2017.01.16	Issued for Building Permit
2	2017.01.16	Issued for Heritage Property Permit
1	2016.12.14	Issued for Owner Review

PROJECT:
SMALL ARMS BUILDING - PHASE 1
RENOVATION & RESTORATION

1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
OBC MATRIX, GENERAL NOTES, LEGENDS & TYP. BF MOUNTING HEIGHTS

PROJECT NO: 16361
SCALE: As indicated
DRAWN BY: Author
REVIEWED BY: Checker

PROJECT NORTH:

DRAWING NO:
A-001

DOOR & FRAME SCHEDULE

DOOR SCHEDULE

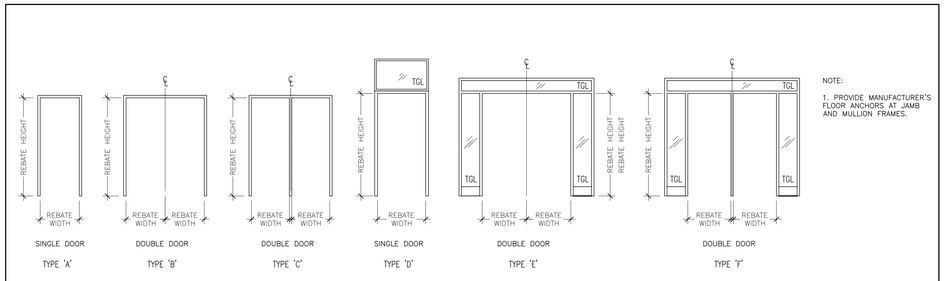
			DOOR PANEL								FRAME			FIRE RATING		
DOOR NO.	ROOM NAME	ROOM NO.	TYPE	EX/NEW	WIDTH	HEIGHT	THICK	MATL	FINISH	# OF LEAVES	TYPE	MATL	FINISH	WALL	DOOR	NOTES
EX003	EXIST. ELEC. RM.	003	A	EX	915 mm		45 mm	HM	PT	1	A	HM	PT			
D001	EXIST. BOILER RM.	001	B	NEW	810 mm	2032 mm	45 mm	HM	PT	1	A	HM	PT	1 hr	45 min	PROVIDE WIRED GLASS AT LITE
D101	VESTIBULE	101	D	NEW	1016 mm	2134 mm	38 mm	STL	PT	2	F	STL	PT	–	–	
D102	SHARED LOBBY	102	D	NEW	1016 mm	2134 mm	38 mm	STL	PT	2	E	STL	PT	–	–	PROVIDE AUTO-DOOR OPERATOR
D102A	COMMON CORR.	102A	B	NEW	900 mm	2134 mm	45 mm	HM	PT	2	B	HM	PT	–	–	PROVIDE AUTO-DOOR OPERATOR
D103	MULTI-PURPOSE RM.	103	D	NEW	1016 mm	2134 mm	38 mm	STL	PT	2	E	STL	PT	–	–	
D103A	MULTI-PURPOSE RM.	103	A	NEW	1016 mm	2050 mm	45 mm	HM	PT	1	A	HM	PT	1 hr	45 min	
D103B	MULTI-PURPOSE RM.	103	D	NEW	1000 mm	2134 mm	38 mm	STL	PT	1	D	STL	PT	–	–	PROVIDE TRANSLUCENT FILM ON INSIDE FACE OF GLAZING
D103C	MULTI-PURPOSE RM.	103	A	NEW	475 mm	2134 mm	45 mm	HM	PT	2	B	HM	PT	–	–	PROVIDE ASTRAGAL
D103D	MULTI-PURPOSE RM.	103	A	NEW	525 mm	2134 mm	45 mm	HM	PT	1	A	HM	PT	–	–	
D103E	MULTI-PURPOSE RM.	103	A	NEW	915 mm	2100 mm	45 mm	HM	PT	1	A	HM	PT	–	–	
D104	OFFICE SPACE	104	B	NEW	915 mm	2100 mm	45 mm	HM	PT	1	A	HM	PT	1 hr	45 min	PROVIDE WIRED GLASS AT LITE
D104A	OFFICE SPACE	104	D	NEW	1000 mm	2134 mm	38 mm	STL	PT	1	D	STL	PT	–	–	PROVIDE TRANSLUCENT FILM ON INSIDE FACE OF GLAZING
D105	OFFICE	105	C	NEW	1016 mm	2134 mm	45 mm	HM	PT	1	A	HM	PT	–	–	
D105A	IT	105A	A	NEW	1016 mm	2134 mm	45 mm	HM	PT	1	A	HM	PT	–	–	
D105B	EXIST. VAULT	105B	A	NEW	860 mm	1950 mm	45 mm	HM	PT	1	A	HM	PT	–	–	
D106	UTILITY SINK	106	A	NEW	1016 mm	2134 mm	45 mm	HM	PT	2	B	HM	PT	–	–	
D107	JAN. STORAGE	107	A	NEW	1016 mm	2134 mm	45 mm	HM	PT	2	B	HM	PT	–	–	
D108	UNIV. W/R	108	A	NEW	1016 mm	2134 mm	45 mm	HM	PT	1	A	HM	PT	–	–	PROVIDE AUTO-DOOR OPERATOR
D109	MALE W/R	109	A	NEW	1016 mm	2134 mm	45 mm	HM	PT	1	A	HM	PT	–	–	PROVIDE AUTO-DOOR OPERATOR
D110	A/V ROOM	110	A	NEW	1016 mm	2134 mm	45 mm	HM	PT	2	B	HM	PT	–	–	
D111	FEMALE W/R	111	A	NEW	1016 mm	2134 mm	45 mm	HM	PT	1	A	HM	PT	–	–	PROVIDE AUTO-DOOR OPERATOR
D112	PANTRY	112	A	NEW	1000 mm	2134 mm	45 mm	HM	PT	1	–	*	–	–	–	*SLIDING POCKET DOOR
D114	B.F. W/R	114	A	NEW	1016 mm	2134 mm	45 mm	HM	PT	1	A	HM	PT	–	–	PROVIDE AUTO-DOOR OPERATOR
D115A	COMMUNITY CENTRE	115	A	NEW	810 mm	2032 mm	45 mm	HM	PT	1	A	HM	PT	–	–	
D115B	COMMUNITY CENTRE	115	D	NEW	915 mm	2440 mm	38 mm	STL	PT	2	C	STL	PT	–	–	
D115C	COMMUNITY CENTRE	115	E	NEW	3100 mm	2750 mm	45 mm	STL	PT	**	–	**	–	–	–	**OVERHEAD DOOR
D115D	COMMUNITY CENTRE	115	A	NEW	915 mm	2000 mm	45 mm	HM	PT	1	A	HM	PT	–	–	
D115E	COMMUNITY CENTRE	115	A	NEW	860 mm	2082 mm	45 mm	HM	PT	1	A	HM	PT	–	–	
D115F	COMMUNITY CENTRE	115	E	NEW	2810 mm	3048 mm	45 mm	STL	PT	**	–	**	–	–	–	**OVERHEAD DOOR
D115G	COMMUNITY CENTRE	115	A	NEW	760 mm	2180 mm	45 mm	HM	PT	1	A	HM	PT	–	–	

LEGEND:

AL – ALUMINUM
ANOD – CLEAR ANODIZED
EX – EXISTING TO REMAIN
HM – HOLLOW METAL
PT – PAINT FINISH
STL – STEEL

NOTES:

1. ALL FIRE RATED DOORS REQUIRE DOOR CLOSERS.
2. ALL EXIT DOORS TO HAVE HARDWARE IN CONFORMANCE TO O.B.C EXIT REQUIREMENTS. GENERAL CONTRACTOR TO CO-ORDINATE INSTALLATION AND LOCATIONS WITH DOOR AND HARDWARE MANUFACTURER.
3. ALL EXTERIOR DOORS TO BE INSULATED AND HAVE THERMALLY BROKEN FRAMES UNLESS NOTED OTHERWISE.
4. ALL DOORS TO COORDINATE THROATSIZE TO WALL SCHEDULE AND MANUFACTURERS TOLERANCES.
5. FOR DOOR SWINGS SEE PLAN.
6. ALL SIZES FOR EXISTING DOORS & OPENINGS TO BE CONFIRMED ON SITE.

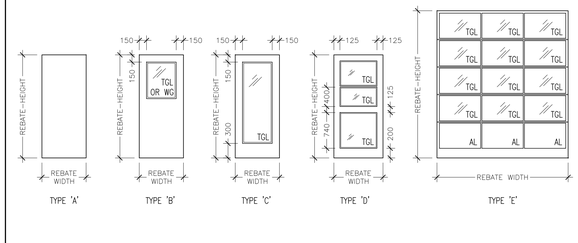


NOTE:

1. PROVIDE MANUFACTURER'S FLOOR ANCHORS AT JAMB AND MULLION FRAMES.

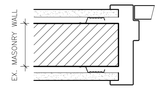
FRAME TYPES

1 : 50



DOOR ELEVATIONS

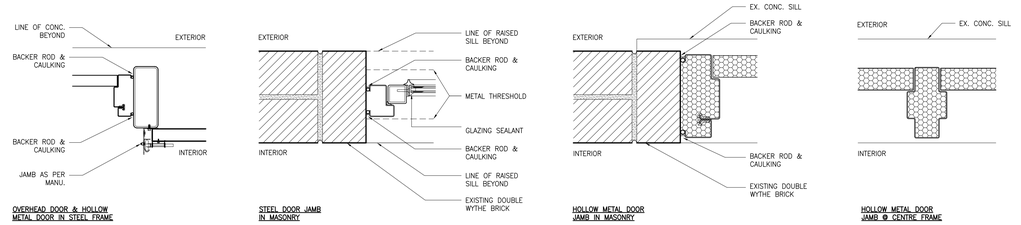
1 : 50



FIRE-RATED METAL FRAME IN W1 WALL

INTERIOR WALL JAMB DETAILS

1 : 5



OVERHEAD DOOR & HOLLOW METAL DOOR IN STEEL FRAME

STEEL DOOR JAMB IN MASONRY

HOLLOW METAL DOOR JAMB IN MASONRY

HOLLOW METAL DOOR JAMB @ CENTRE FRAME

EXTERIOR WALL JAMB DETAILS

1 : 5

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ISSUE DATE:

NO.	DATE	DESCRIPTION
3	2017.01.16	Issued for Building Permit
2	2017.01.16	Issued for Heritage Property Permit
1	2016.12.14	Issued for Owner Review

PROJECT:
SMALL ARMS BUILDING - PHASE 1
RENOVATION & RESTORATION

1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
DOOR & FRAME SCHEDULES, ELEVATIONS AND DETAILS

PROJECT NO: 16361
SCALE: As indicated
DRAWN BY: Author
REVIEWED BY: Checker

PROJECT NORTH:

DRAWING NO:
A-002

GROSS FLOOR AREA ANALYSIS

G.F.A. - NON-RESIDENTIAL *

Phase 1 - Community Centre	Bsmt	n/a	n/a
	Grd flr	2,095 m^2	(22,542 sf)
	2nd flr	-	-
Total Phase 1 Community Centre G.F.A.		2,095 m^2	(22,542 sf)
Phase 2 - Community Centre	Bsmt	-	-
	Grd flr	781 m^2	(8,404 sf)
	2nd flr	1,114 m^2	(11,986 sf)
Total Phase 2 Community Centre G.F.A.		1,895 m^2	(20,390 sf)
TOTAL BUILDING G.F.A. (Exist'g / No Change)		3,990 m^2	(42,932 sf)

*Area calculated based on Zoning By-law Part 1 - Definitions: Gross Floor Area (GFA) - Non-Residential; No deductions included at this time.

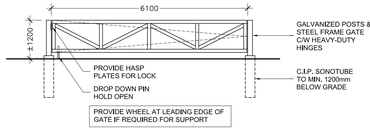
PARKING

PARKING REQUIRED per Zoning By-law 0225-2007

	By-law req.ts	# of spaces
PHASE 1 Community Centre	*based on 2,095 m^2 (22,542 sf) * 4.5 spaces per 100m^2 GFA*	94
PHASE 2 Community Centre	*based on 1,895 m^2 (20,390 sf) * 4.5 spaces per 100m^2 GFA*	85
TOTAL		179

ACCESSIBLE PARKING REQUIRED per Table 3.1.3.1. - Accessible Parking Regulations

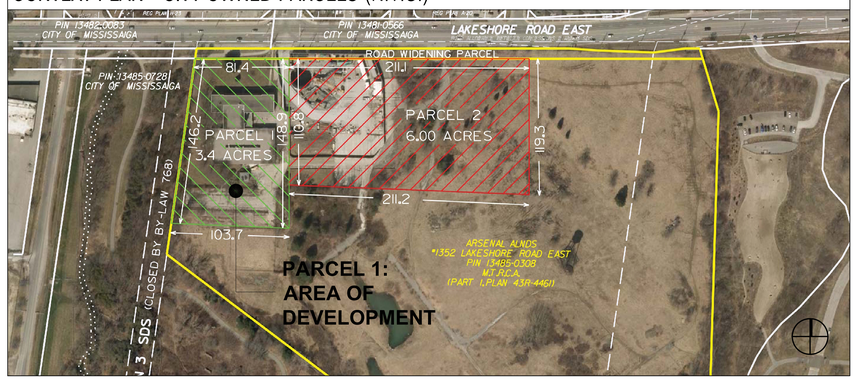
	By-law req.ts	# of spaces
PHASE 1	*based on TOTAL NUMBER OF REQUIRED NON-RESIDENTIAL PARKING SPACES 13-100 4% of the total*	4
PHASE 2	*based on TOTAL NUMBER OF REQUIRED NON-RESIDENTIAL PARKING SPACES 13-100 4% of the total*	3
TOTAL		7



GATE ELEVATION 1

1 : 100

CONTEXT PLAN - CITY OWNED PARCELS (N.T.S.)



SITE PLAN LEGEND

- NEW HEAVY-DUTY ASPHALT PAVING
- NEW ASPHALT PAVING
- EXISTING HARD SURFACE
- LINE OF PARCEL 1 - AREA OF DEVELOPMENT

SITE STATISTICS

ZONING	OS2
LOT AREA	13,818 m^2 (3.4 Acres)
BUILDING AREA (BA) (Exist'g / No Change)	±2,931.5 m^2 (±31,555 sf)
BUILDING CLASSIFICATION	Group A - Division 2, Group D & Vacant

GENERAL NOTES - SITE PLAN

1. ALL SITE DIMENSIONS SHOWN IN THIS DRAWING INCLDING BUT NOT LIMITED TO THE EXISTING BUILDING FOOTPRINTS, ENCROACHMENTS, PROPERTY LINES, SETBACKS, INFRASTRUCTURE ARE TAKEN FROM THE SURVEY AUTHORED BY DAVID B. SEARLES SURVEYING LTD. DATED SEPT.23, 2016. (FILE NO. 125-1-16) CONTRACTORS SHALL NOT USE THIS DRAWING TO INFER ANY SITE DIMENSIONS BUT SHALL USE THE OFFICIAL SURVEYS.

2. IT IS THE RESPONSIBILITY OF THE CONSTRUCTION MANAGER & TRADE CONTRACTORS TO COORDINATE THE REQUIRED SITE SERVICE WORK AND MAKE GOOD ANY DAMAGES TO THE EXISTING PAVEMENTS AND LANDSCAPING DESIGN TO REMAIN. THIS SITE PLAN SHOW INTENT ONLY.

3. REFER TO CIVIL & ELECTRICAL DOCUMENTS FOR FULL EXTENT OF SITE WORK AND FINAL GRADES. THIS SITE PLAN SHOWS INTENT ONLY. REPORT ANY DISCREPANCIES TO ARCHITECT. FOR ALL WORK INSIDE THE BUILDING REFER TO ARCHITECTURAL DOCUMENTS FOR SCOPE OF WORK.

4. UTILITY VERIFICATION: BEFORE COMMENCING ANY WORK THE TRADE CONTRACTOR SHALL DETERMINE AND INDEPENDENTLY VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES AND STRUCTURES.

5. THE FOLLOWING TREES ARE DESIGNATED IN CITY OF MISSISSAUGA BYLAW 0258-2009: THE ROW OF DECIDUOUS TREES ALONG THE WEST SIDE OF THE BUIDLING; THE WOODLOT TO THE REAR OF THE PROPERTY. CONTRACTORS TO ENSURE THAT THESE TREES ARE NOT IMPACTED, DESTROYED OR INJURED BY CONSTRUCTION AND/OR CONSTRUCTION ACTIVITIES.

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ONTARIO ASSOCIATION of ARCHITECTS
DEAN GOODMAN LICENCE 4394

ISSUE DATE:

NO.	DATE	DESCRIPTION
12	2017,01,16	Issued for Building Permit
11	2017,01,16	Issued for Heritage Property Permit
10	2017,01,16	Issued for Heritage Conservation Plan
9	2017,01,10	Issued for DRAFT Heritage Conservation Plan
8	2017,01,06	Issued for Zoning Certificate of Occupancy
7	2016,12,14	Issued for Owner ReView
6	2016,12,08	Issued for Minor Variance Application
5	2016,12,02	Re-Issued for SPAX
4	2016,11,22	Re-Issued for SPAX
3	2016,11,18	Issued for SPAX Pre-Application Mtg, #2

PROJECT:
SMALL ARMS BUILDING - PHASE 1
RENOVATION & RESTORATION

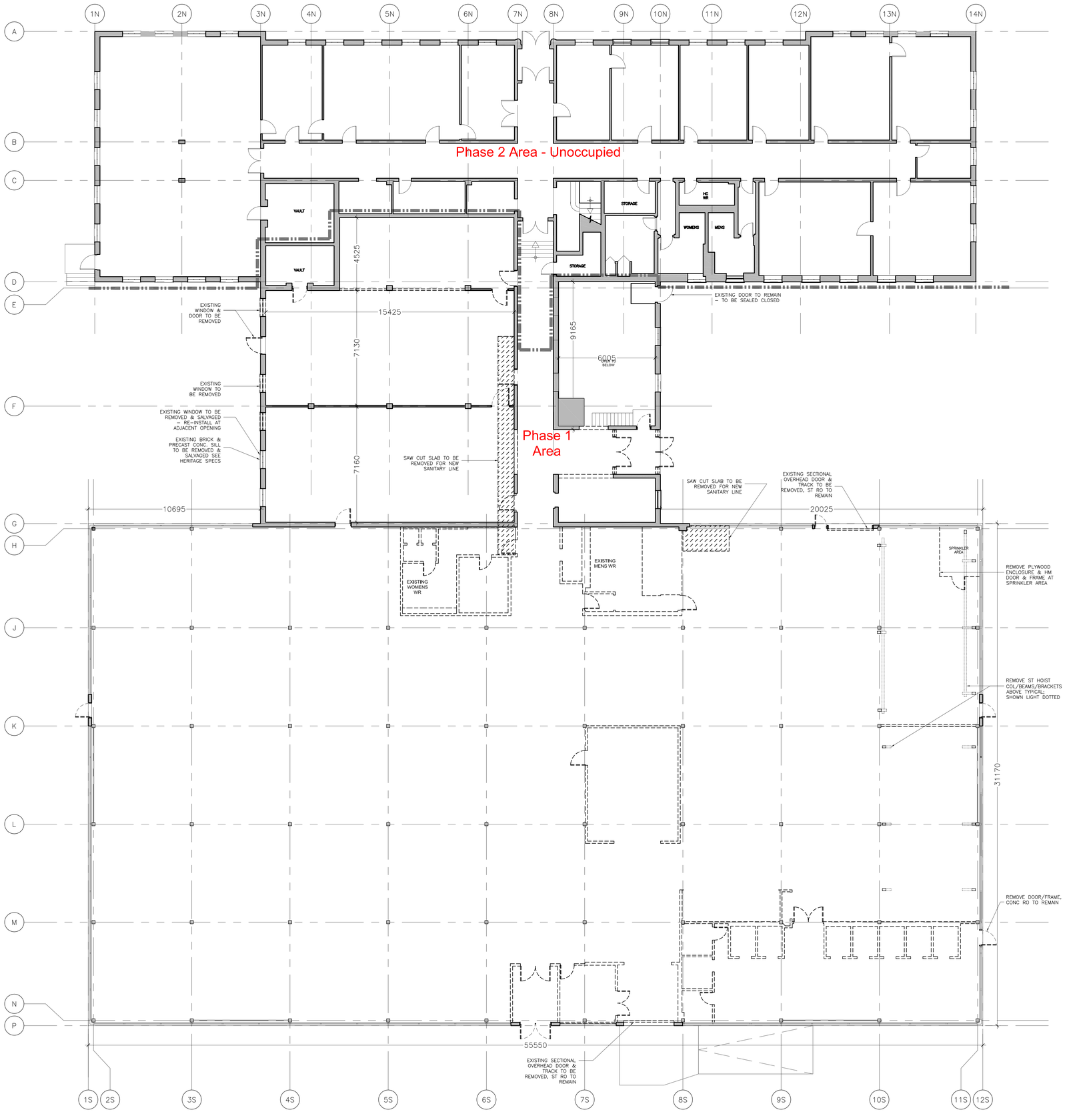
1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
SITE PLAN
- NEW & DEMOLITION

PROJECT NO: 16361
SCALE: 1:200
DRAWN BY: KP
REVIEWED BY: BJ

PROJECT NORTH:

DRAWING NO:
A-010



GROUND FLOOR PLAN - DEMOLTION (1)
1 : 100

NOTES:

1) ALL DIMS OF EXISTING ELEMENTS ARE APPROXIMATE AND HAVE TO BE VERIFIED ON SITE BY THE CONTRACTOR. REPORT ANY DISCREPANCIES TO ARCHITECT

2) WHEN REMOVING DOOR OR WINDOW, ALSO REMOVE INFILL MATERIAL BETWEEN FRAME AND MASONRY, UNLESS OTHERWISE NOTED

3) IN PHASE 2 AREA: REMOVE ALL TILES FROM SUSPENDED TILE CLG SYSTEMS; WITHIN 600 OF NEW SPRINKLER LINES REMOVE ALL T-BAR AND CLG FINISHES; SALVAGE ALL ELEC ELEMENTS IMPACTED BY THESE REMOVALS

4) WINDOWS: REMOVE AND SALVAGE WINDOW VENT CHAINS

WALL ASSEMBLIES

INTERIOR WALL ASSEMBLIES

W1 — INTERIOR PARTITION WALL
1 HR FRR (SEE OBC REPORT)
16 TYPE X GWB
1.3 METAL RESILIENT CHANNEL
EX. MASONRY BLOCK
1.3 METAL RESILIENT CHANNEL
16 TYPE X GWB

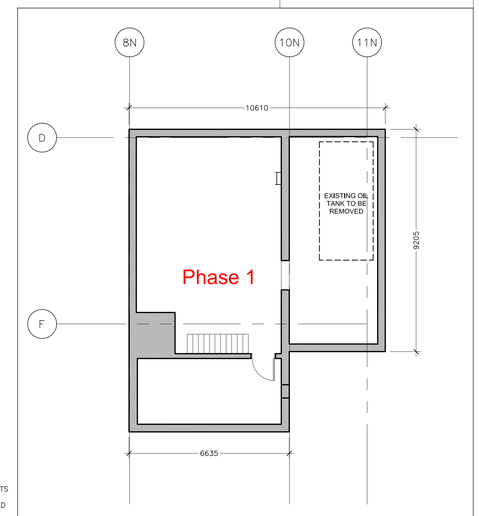
W2 — 16 GWB
100 ST. STUDS @ 400 O.C.
16 GWB

W3 — 3MM SHEET STEEL
13MM GWB
150MM STUD W SOUND BATT
13MM RESILIENT CHANNEL
13MM PERF PLYWOOD
19MM WOOD STRAPPING
25MM STEEL RODS (FACING CC SPACE)

W4 — 3MM SHEET STEEL
13MM GWB
89MM STUD W SOUND BATT
13MM GWB
3MM SHEET STEEL

LEGEND

- LINE REPRESENTS DIVISION BETWEEN PHASE 1 & PHASE 2
- FIRE SEPARATION WITH 1-HOUR FIRE RESISTANCE RATING
- EXISTING WALLS, DOORS, ETC. TO BE DEMOLISHED
- EXISTING WALLS, DOORS, ETC. TO REMAIN
- NEW WALLS, DOORS, ETC.



BASEMENT PLAN - DEMO (2)
1 : 100

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LICENCE
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ISSUE DATE:

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5	2017.01.16	Issued for Heritage Property Permit
4	2017.01.10	Issued for DRAFT Heritage Conservation Plan
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2	2016.11.18	Issued for SPAX Pre-Application Mtg. #2
1	2016.11.01	Issued for SD Costing

PROJECT:
SMALL ARMS BUILDING - PHASE 1
RENOVATION & RESTORATION

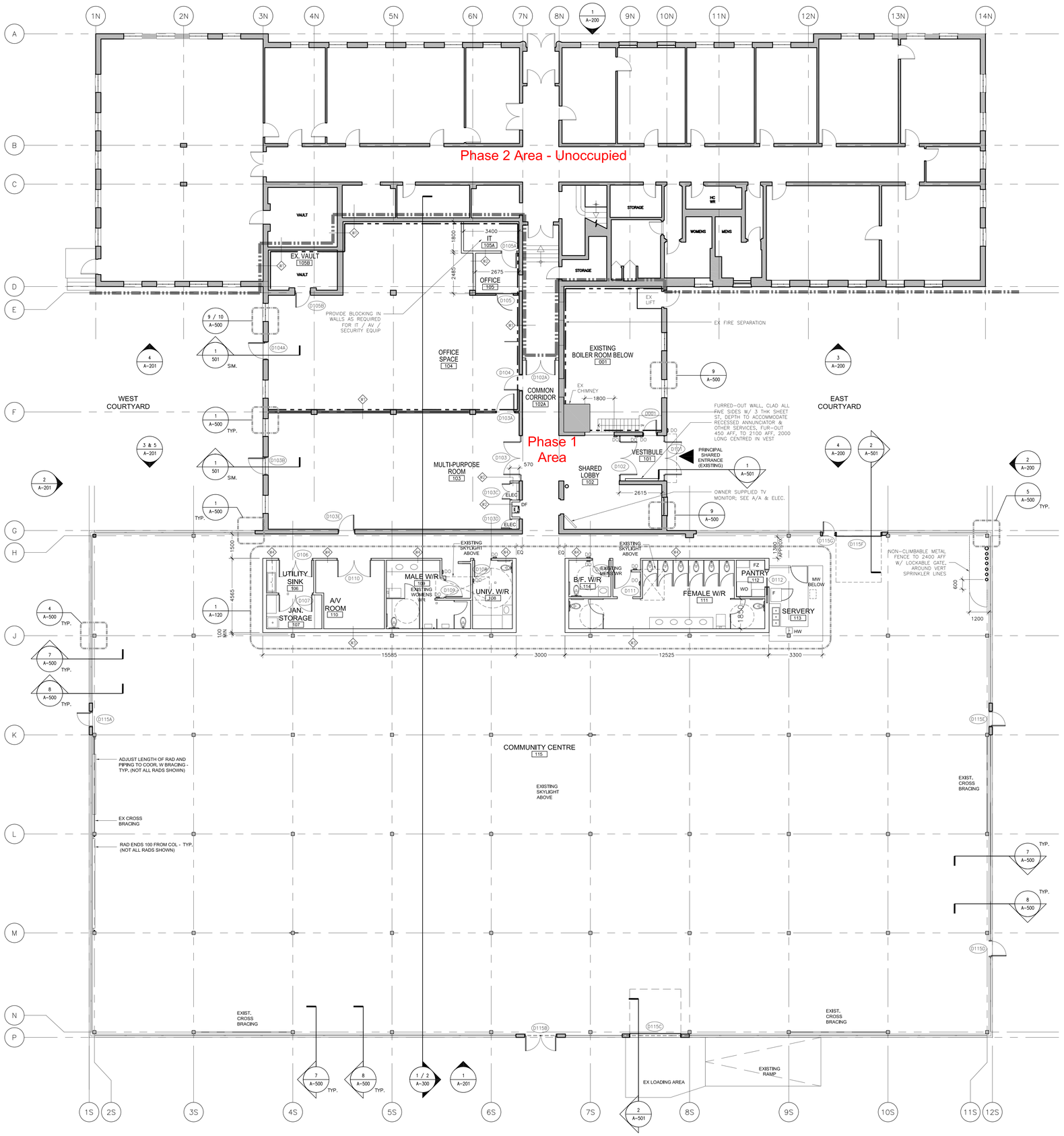
1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
BASEMENT & GROUND FLOOR
- EXISTING & DEMOLITION PLANS

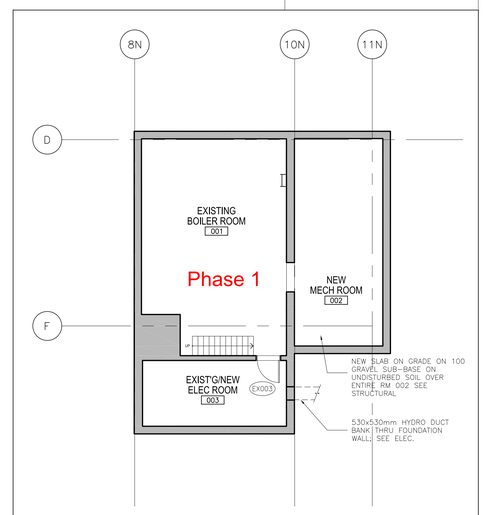
PROJECT NO: 16361
SCALE: 1:100
DRAWN BY: KP
REVIEWED BY: BJ

PROJECT NORTH:

DRAWING NO:
AD-101



GROUND FLOOR PLAN 1
1 : 100



BASEMENT PLAN 2
1 : 100

NOTES:

1) SCOPE OF WORK INCLUDES: ABATEMENT OF EXISTING PAINT AS PER LEAD ABATEMENT SPECIFICATIONS PREPARED BY MARTECH GROUP INC.; PRIME & PAINT AS PER HERITAGE SPECIFICATIONS PREPARED BY ERA ARCHITECTS INC.

WALL ASSEMBLIES

INTERIOR WALL ASSEMBLIES

W1 INTERIOR PARTITION WALL
1 HR FRR (SEE OBC REPORT)
16 TYPE X GWB
1.3 METAL RESILIENT CHANNEL
EX. MASONRY BLOCK
1.3 METAL RESILIENT CHANNEL
16 TYPE X GWB

W2 16 GWB
100 ST. STUDS @ 400 O.C.
16 GWB

W3 3MM SHEET STEEL
13MM GWB
150MM STUD W SOUND BATT
13MM RESILIENT CHANNEL
13MM PERF. PLYWOOD
19MM WOOD STRAPPING
25MM STEEL RODS (FACING CC SPACE)

W4 3MM SHEET STEEL
13MM GWB
89MM STUD W SOUND BATT
13MM GWB
3MM SHEET STEEL

LEGEND

- LINE REPRESENTS DIVISION BETWEEN PHASE 1 & PHASE 2
- FIRE SEPARATION WITH 1-HOUR FIRE RESISTANCE RATING
- EXISTING WALLS, DOORS, ETC. TO BE DEMOLISHED
- EXISTING WALLS, DOORS, ETC. TO REMAIN
- NEW WALLS, DOORS, ETC.

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1	2016.11.01	Issued for SD Costing

PROJECT:
SMALL ARMS BUILDING - PHASE 1
RENOVATION & RESTORATION

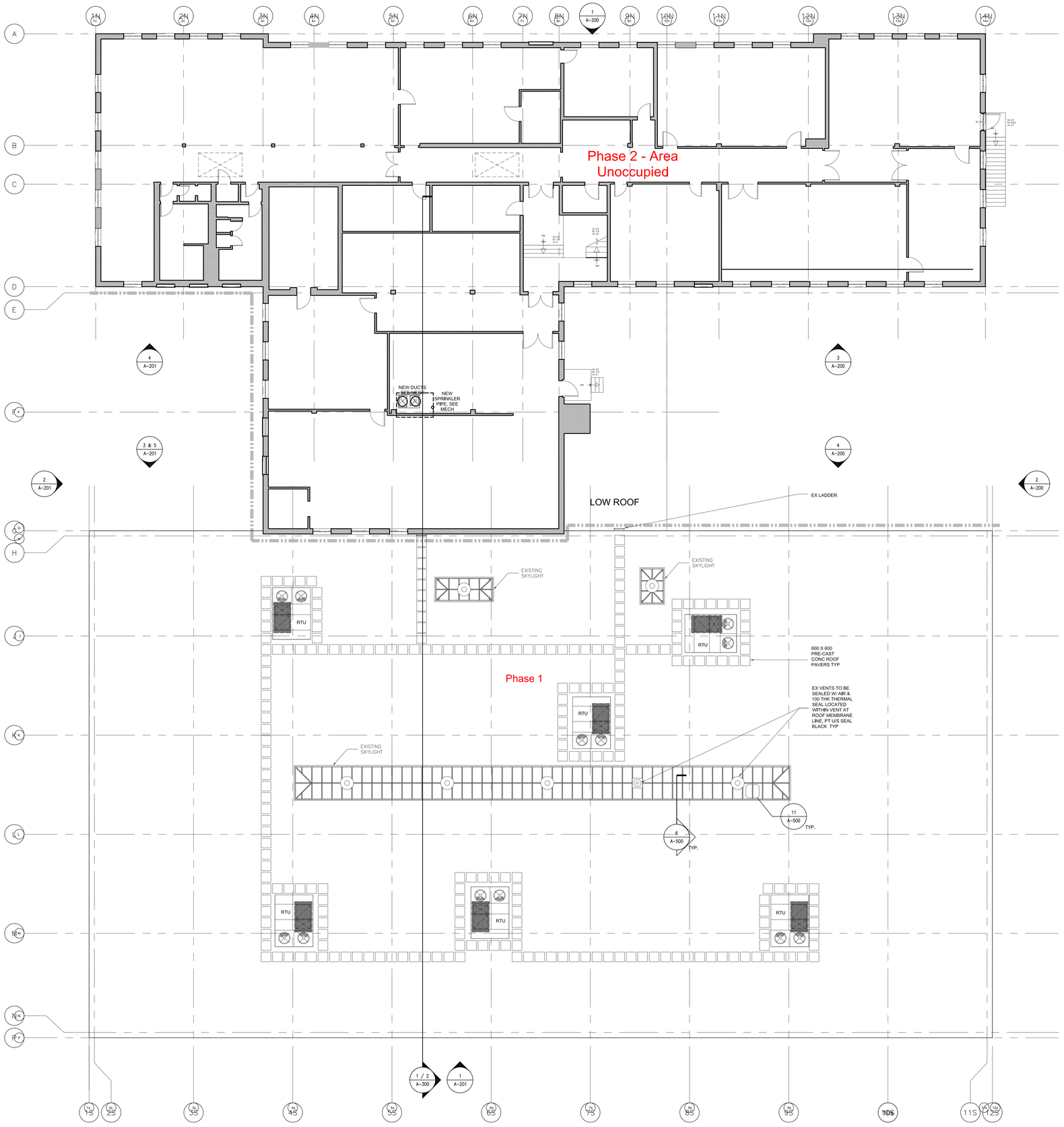
1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
BASEMENT & GROUND FLOOR PLANS

PROJECT NO: 16361
SCALE: 1:100
DRAWN BY: KP
REVIEWED BY: BJ

PROJECT NORTH:

DRAWING NO:
A-101



NOTES:

1) FOR M&E DEMO IN PHASE 2 REFER TO M&E DOCS

WALL ASSEMBLIES

INTERIOR WALL ASSEMBLIES

W1 **INTERIOR PARTITION WALL**
1 HR FRR (SEE OBC REPORT)

16 TYPE X GWB
13 METAL RESILIENT CHANNEL
EX. MASONRY BLOCK
13 METAL RESILIENT CHANNEL
16 TYPE X GWB

W2
16 GWB
100 ST. STUDS @ 400 O.C.
16 GWB

W3
3MM SHEET STEEL
13MM GWB
150MM STUD W SOUND BATT
13MM RESILIENT CHANNEL
13MM PERF PLYWOOD
19MM WOOD STRAPPING
25MM STEEL RODS (FACING CC SPACE)

W4
3MM SHEET STEEL
13MM GWB
89MM STUD W SOUND BATT
13MM GWB
3MM SHEET STEEL

LEGEND

- LINE REPRESENTS DIVISION BETWEEN PHASE 1 & PHASE 2
- FIRE SEPARATION WITH 1-HOUR FIRE RESISTANCE RATING
- EXISTING WALLS, DOORS, ETC. TO BE DEMOLISHED
- EXISTING WALLS, DOORS, ETC. TO REMAIN
- NEW WALLS, DOORS, ETC.

SECOND FLOOR/LOWER ROOF PLAN
1 : 100 (1)

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2	2016.11.18	Re-Issued for SD Costing
1	2016.11.01	Issued for SD Costing

PROJECT:
SMALL ARMS BUILDING - PHASE 1
RENOVATION & RESTORATION

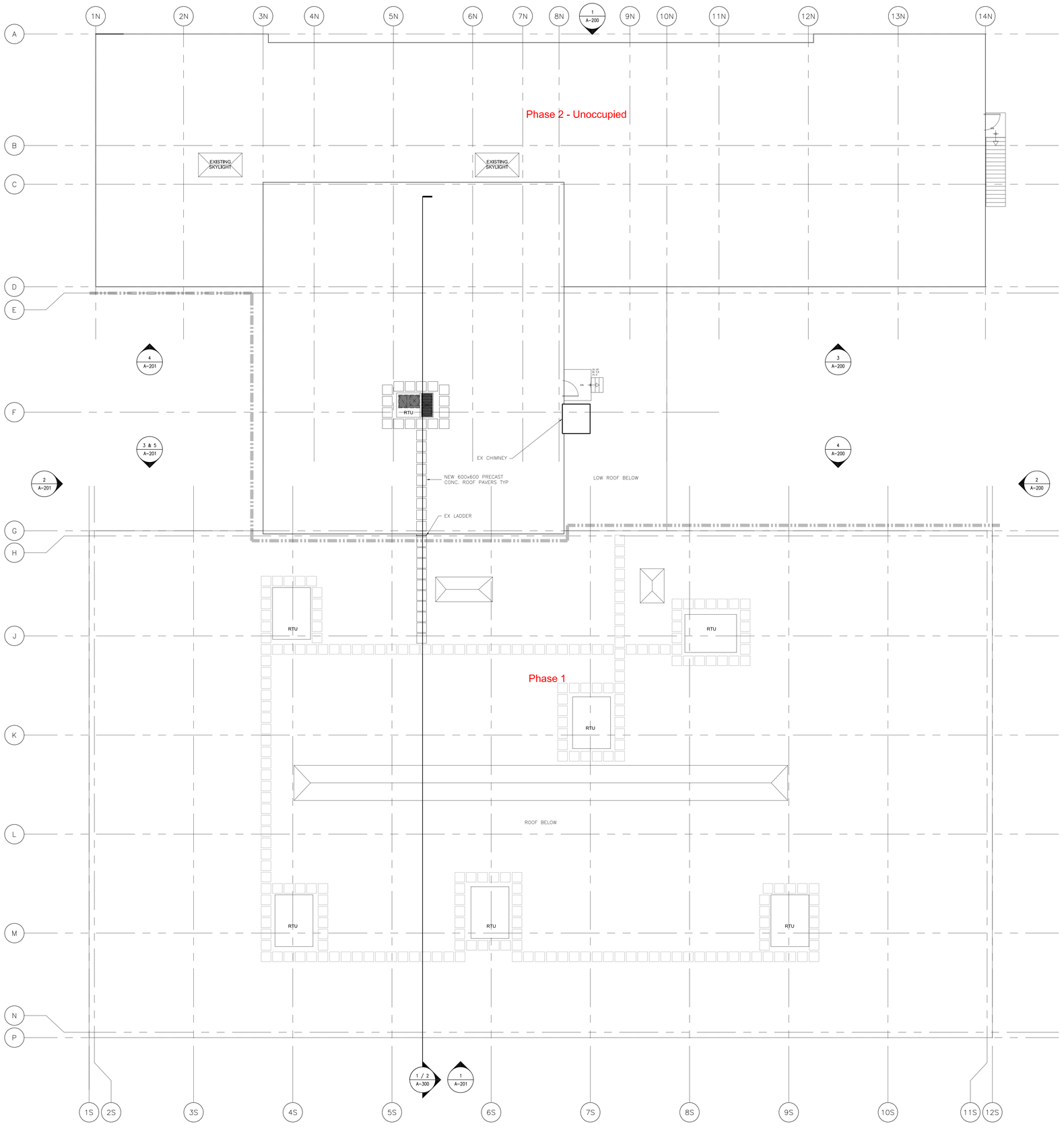
1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
SECOND FLOOR / LOWER ROOF
- PROPOSED PLAN

PROJECT NO: 16361
SCALE: 1:100
DRAWN BY: KP
REVIEWED BY: BJ

PROJECT NORTH:

DRAWING NO:
A-102



UPPER ROOF PLAN 1
1 : 100

WALL ASSEMBLIES

INTERIOR WALL ASSEMBLIES

W1 INTERIOR PARTITION WALL
1 HR FRR (SEE OBC REPORT)

16 TYPE X GWB
13 METAL RESILIENT CHANNEL
EX. MASONRY BLOCK
13 METAL RESILIENT CHANNEL
16 TYPE X GWB

W2 16 GWB
100 ST STUDS @ 400 O.C.
16 GWB

W3 3MM SHEET STEEL
13MM GWB
150MM STUD W SOUND BATT
13MM RESILIENT CHANNEL
13MM PERF PLYWOOD
19MM WOOD STRAPPING
25MM STEEL RODS (FACING CC SPACE)

W4 3MM SHEET STEEL
13MM GWB
89MM STUD W SOUND BATT
13MM GWB
3MM SHEET STEEL

LEGEND

- LINE REPRESENTS DIVISION BETWEEN PHASE 1 & PHASE 2
- FIRE SEPARATION WITH 1-HOUR FIRE RESISTANCE RATING
- EXISTING WALLS, DOORS, ETC. TO BE DEMOLISHED
- EXISTING WALLS, DOORS, ETC. TO REMAIN
- NEW WALLS, DOORS, ETC.

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PROJECT:
SMALL ARMS BUILDING - PHASE 1
RENOVATION & RESTORATION

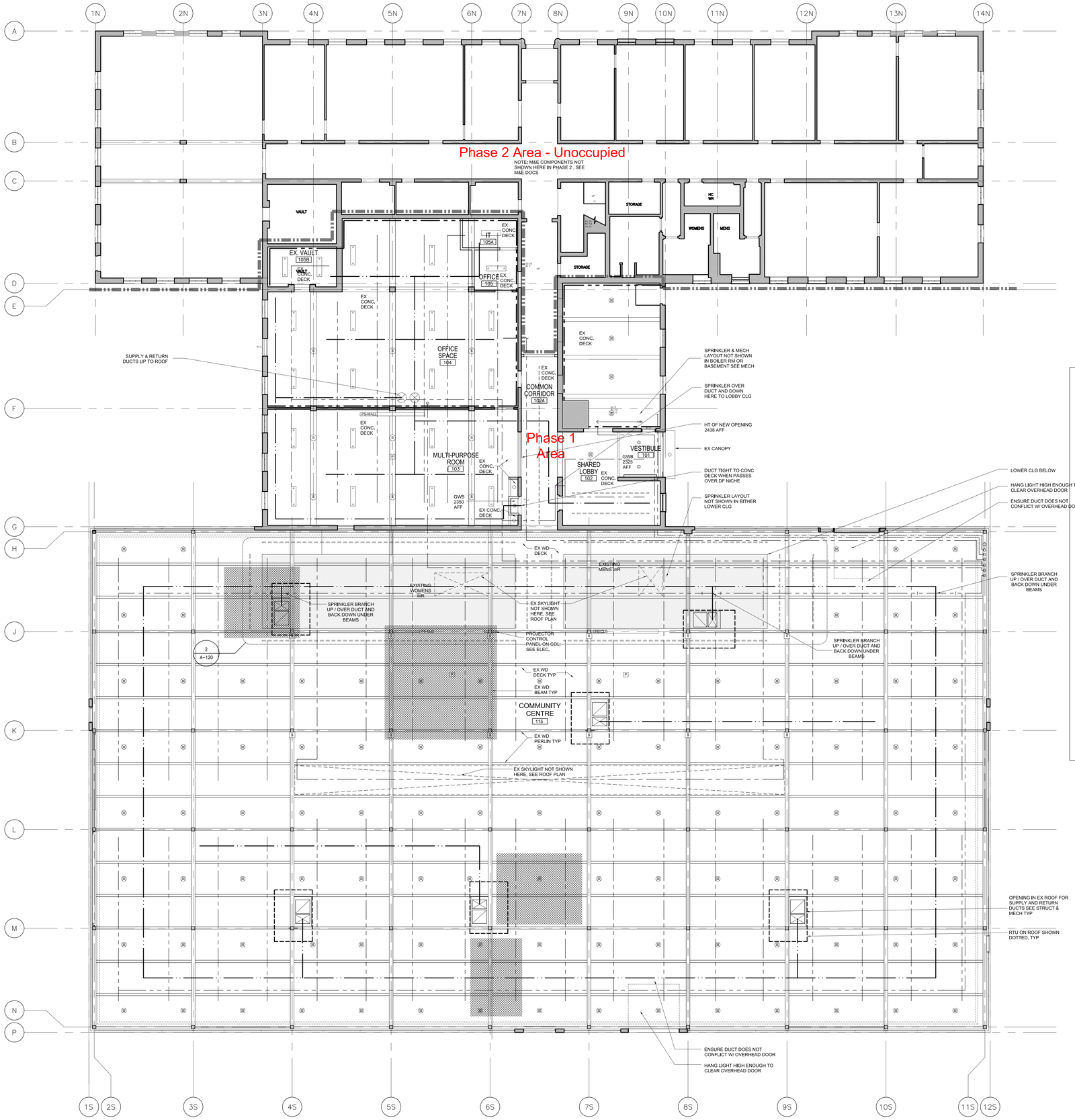
1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
UPPER ROOF PLAN
- PROPOSED PLAN

PROJECT NO: 16361
SCALE: 1:100
DRAWN BY: KP
REVIEWED BY: BJ

PROJECT NORTH:

DRAWING NO:
A-103



GROUND FLOOR REFLECTED CEILING PLAN
1 : 100 (1)

NOTES:

1) NOT ALL M&E COMPONENTS SHOWN HERE, SEE M&E DOCS FOR M&E SCOPE.

2) M&E COMPONENTS THAT ARE SHOWN HERE INDICATE INTENDED LOCATION ONLY. SEE M&E DOCS OR ALL OTHER M&E INFO INCLUDING BUT NOT LIMITED TO QUANTITY AND SIZE, ETC.

3) CONTRACTOR TO VERIFY CONDITIONS ON SITE AND COORDINATE ALL BUILDING COMPONENTS. CONTRACTOR TO PRODUCE INTERFERENCE DRAWINGS THAT ARE BASED ON THE INTENT OF HE CONTRACT DOCUMENTS

4) ALL ELEC, A/V, SECURITY, IT – WIRE/CONDUIT TO RUN TIGHT TO THE CONC SLAB AND WD DECK. WHEN CROSSING A BEAM/PERLIN, SAME TO PROCEED TIGHT TO BEAM/PERLIN AND BACK UP TIGHT TO SLAB/DECK. SAME TO RUN ALONG EDGE WHERE DECK/SLAB MEETS BEAM/PERLIN/WALL, RUNNING THE SHORTEST DISTANCE POSSIBLE FROM THIS EDGE AND TERMINATION POINT (I.E. ELEC BOX).

5) WHERE OPENINGS OR MECH ARE REQUIRED IN MASONRY/CONC WALLS PROVIDE OPENING AS PER STRUCT

6) SCOPE OF WORK INCLUDES: ABATEMENT OF EXISTING PAINT AS PER LEAD ABATEMENT SPECIFICATIONS PREPARED BY MARTECH GROUP INC.; PRIME & PAINT AS PER HERITAGE SPECIFICATIONS PREPARED BY ERA ARCHITECTS INC.

7) PHASE 2 AREA: RE-INSTALL SALVAGED M&E COMPONENTS, SUCH AS LIGHT FIXTURES, THAT CONFLICT WITH NEW SPRINKLERS

WALL ASSEMBLIES

INTERIOR WALL ASSEMBLIES

(W1) **INTERIOR PARTITION WALL**
1 HR FRR (SEE OBC REPORT)
16 TYPE X GWB
1.3 METAL RESILIENT CHANNEL
EX. MASONRY BLOCK
1.3 METAL RESILIENT CHANNEL
16 TYPE X GWB

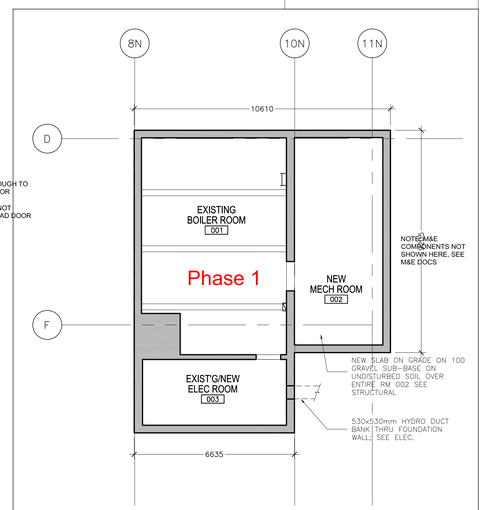
(W2) 16 GWB
100 ST. STUDS @ 400 O.C.
16 GWB

(W3) 3MM SHEET STEEL
1.3MM GWB
150MM STUD W SOUND BATT
1.3MM RESILIENT CHANNEL
1.3MM PERF PLYWOOD
19MM WOOD STRAPPING
25MM STEEL RODS (FACING CC SPACE)

(W4) 3MM SHEET STEEL
1.3MM GWB
89MM STUD W SOUND BATT
1.3MM GWB
3MM SHEET STEEL

LEGEND

- LINE REPRESENTS DIVISION BETWEEN PHASE 1 & PHASE 2
- FIRE SEPARATION WITH 1-HOUR FIRE RESISTANCE RATING
- EXISTING WALLS, DOORS, ETC. TO BE DEMOLISHED
- EXISTING WALLS, DOORS, ETC. TO REMAIN
- NEW WALLS, DOORS, ETC.



BASEMENT RCP
1 : 100 (2)

RCP LEGEND:

- CL HEATING COOLING DUCT
- CL SPRINKLER PIPE
- CL RAD PIPE
- TRACK LIGHTING
- CLG. MOUNTED STRIP LIGHT FIXTURE
- PENDANT STRIP LIGHT FIXTURE
- (M) PENDANT LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- RECESS POT LIGHT
- CLG MOUNTED LIGHT FIXTURE
- PS-WALL — WALL MOUNTED PROJECTION SCREEN SEE A/V & ELEC
- PS-CLG — CLG MOUNTED PROJECTION SCREEN SEE A/V & ELEC
- P — CLG MOUNTED PROJECTOR SEE A/V & ELEC
- S — COL/WALL MOUNTED SPEAKER SEE A/V & ELEC
- (S) — CLG MOUNTED SPEAKER SEE A/V & ELEC
- HATCH INDICATES AREA WHERE WD DECK APPEARS TO HAVE BEEN IMPACTED BY WATER INFILTRATION. THIS AREA TO BE REPAIRED AS PER STRUCTURAL. CONDITION OF ALL WD DECK TO BE INSPECTED BY CONTRACTOR. ADDITIONAL AREAS REQUIRED TO BE REPAIRED, TO BE REPAIRED AS PER STRUCTURAL

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PROJECT:
SMALL ARMS BUILDING - PHASE 1 RENOVATION & RESTORATION

1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
BASEMENT AND GROUND FLOOR - REFLECTED CEILING PLANS

PROJECT NO: 16361
SCALE: 1:100
DRAWN BY: KP
REVIEWED BY: BJ

PROJECT NORTH:

DRAWING NO:
A-110

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LICENCE
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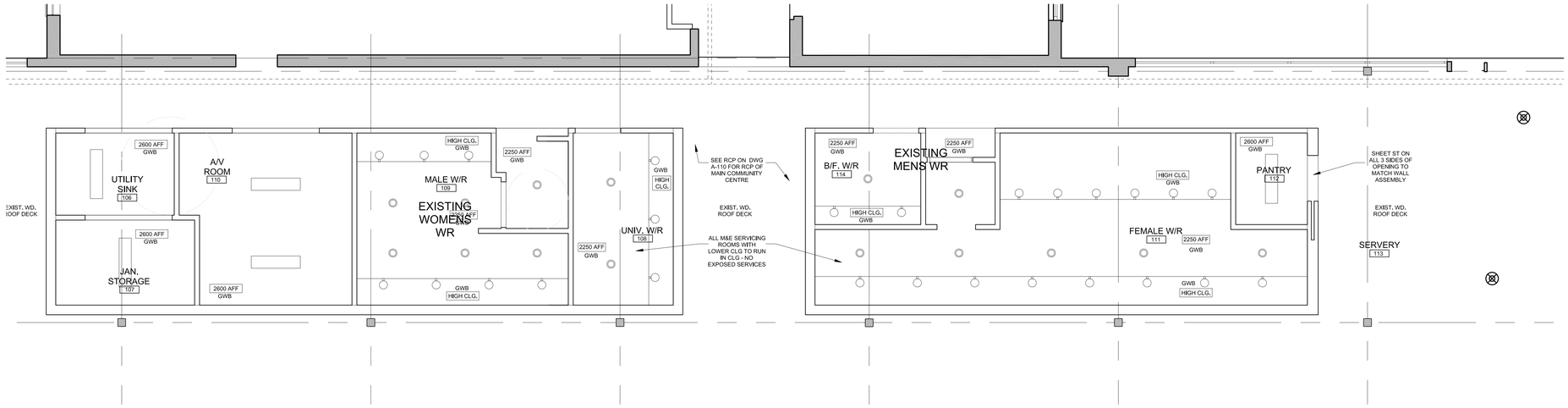
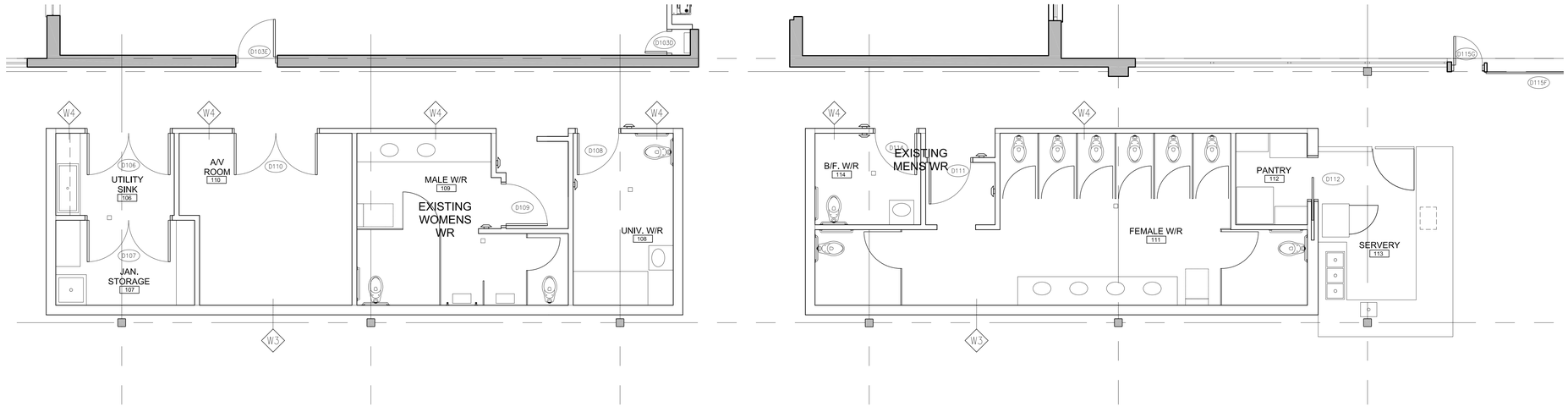


ENLARGED GROUND FLOOR REFLECTED CEILING PLAN

1 : 50 (2)



ENLARGED GROUND FLOOR PLAN

1 : 50 (1)

WALL ASSEMBLIES

INTERIOR WALL ASSEMBLIES

W1 INTERIOR PARTITION WALL
1 HR FRR (SEE OBC REPORT)
16 TYPE X GWB
1.3 METAL RESILIENT CHANNEL
EX. MASONRY BLOCK
1.3 METAL RESILIENT CHANNEL
16 TYPE X GWB

W2 16 GWB
100 ST. STUDS @ 400 O.C.
16 GWB

W3 3MM SHEET STEEL
13MM GWB
150MM STUD W SOUND BATT
13MM RESILIENT CHANNEL
13MM PERF PLYWOOD
19MM WOOD STRAPPING
25MM STEEL RODS (FACING CC SPACE)

W4 3MM SHEET STEEL
13MM GWB
89MM STUD W SOUND BATT
13MM GWB
3MM SHEET STEEL

LEGEND

- LINE REPRESENTS DIVISION BETWEEN PHASE 1 & PHASE 2
- FIRE SEPARATION WITH 1-HOUR FIRE RESISTANCE RATING
- EXISTING WALLS, DOORS, ETC. TO BE DEMOLISHED
- EXISTING WALLS, DOORS, ETC. TO REMAIN
- NEW WALLS, DOORS, ETC.

RCP LEGEND:

- CL HEATING COOLING DUCT
- CL SPRINKLER PIPE
- CL RAD PIPE
- TRACK LIGHTING
- CLG. MOUNTED STRIP LIGHT FIXTURE
- PENDANT STRIP LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- RECESS POT LIGHT
- CLG MOUNTED LIGHT FIXTURE
- PS-WALL — WALL MOUNTED PROJECTION SCREEN SEE A/V & ELEC
- PS-CLG — CLG MOUNTED PROJECTION SCREEN SEE A/V & ELEC
- P — CLG MOUNTED PROJECTOR SEE A/V & ELEC
- S — COLWALL MOUNTED SPEAKER SEE A/V & ELEC
- S — CLG MOUNTED SPEAKER SEE A/V & ELEC
- HATCH INDICATES AREA WHERE WD DECK APPEARS TO HAVE BEEN IMPACTED BY WATER INFILTRATION. THIS AREA TO BE REPAIRED AS PER STRUCTURAL. CONDITION OF ALL WD DECK TO BE INSPECTED BY CONTRACTOR. ADDITIONAL AREAS REQUIRED TO BE REPAIRED, TO BE REPAIRED AS PER STRUCTURAL

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PROJECT:
SMALL ARMS BUILDING - PHASE 1
RENOVATION & RESTORATION

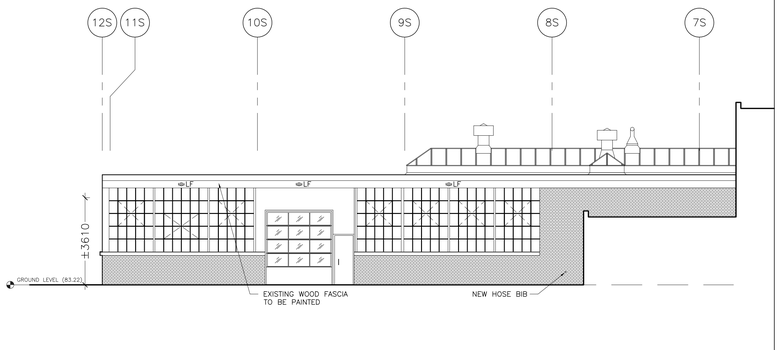
1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
ENLARGED GROUND FLOOR PLAN &
REFLECTED CEILING PLAN

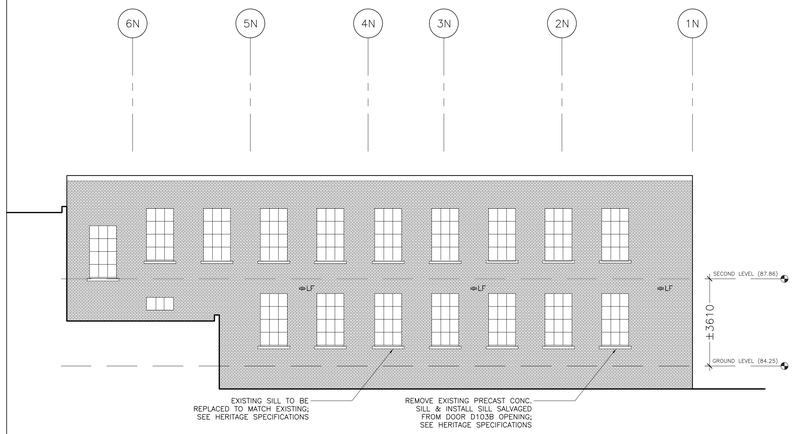
PROJECT NO: 16361
SCALE: 1:50
DRAWN BY: KP
REVIEWED BY: BJ

PROJECT NORTH:

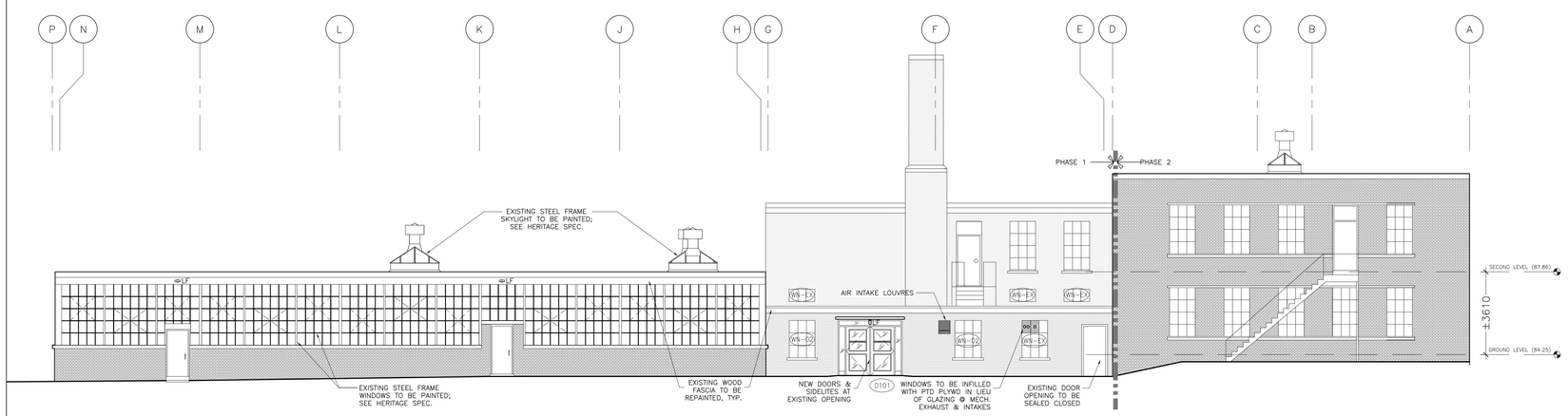
DRAWING NO:
A-120



NORTH ELEVATION (@ EAST COURTYARD) - NEW 4
1 : 100



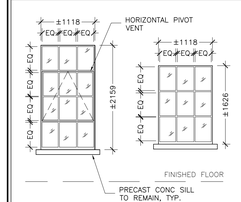
SOUTH ELEVATION (@ EAST COURTYARD) - NEW 3
1 : 100



EAST ELEVATION - NEW 2
1 : 100

RESERVED 1
1 : 100

NEW WINDOW ELEVATIONS



NOTE: NEW WINDOWS TO MATCH EXISTING UNLESS NOTED OTHERWISE. MASONRY OPENINGS TO BE VERIFIED ON SITE.

GENERAL NOTES - ELEVATIONS

1. EXISTING WINDOWS, SKYLIGHTS & FINISHES CONTAIN HAZARDOUS MATERIALS; REFER TO LEAD ABATEMENT SPECIFICATIONS & ASBESTOS AND LEAD ABATEMENT SPECIFICATIONS PREPARED BY MARTECH GROUP INC.

2. EXISTING WINDOWS, PRECAST CONCRETE SILLS, EXTERIOR MASONRY, WOOD FASCIA & SKYLIGHTS ARE HERITAGE DESIGNATED; REFER HERITAGE SPECIFICATIONS PREPARED BY ERA ARCHITECTS INC. FOR FULL LIST OF HERITAGE DESIGNATED BUILDING ELEMENTS REFER TO REFER TO CITY OF MISSISSAUGA BYLAW 0285-2009.

3. TYPICAL SCOPE OF WORK FOR EXISTING WINDOWS & SKYLIGHTS AS FOLLOWS: ABATEMENT OF HAZARDOUS MATERIALS INCLUDING PAINT & WINDOW PUTTY, REMOVAL OF EXISTING GLAZING (OR OTHER INFILL MATERIAL), RESTORATION OF STEEL FRAMES, RESTORATION OF EXISTING PIVOT VENT OR HORIZONTAL PIVOT HARDWARE, PRIME & PAINT STEEL FRAMES, AND INSTALLATION OF NEW GLAZING TO BE FIXED IN PLACE AS PER HERITAGE SPECIFICATION.

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PROJECT:
SMALL ARMS BUILDING - PHASE 1
RENOVATION & RESTORATION

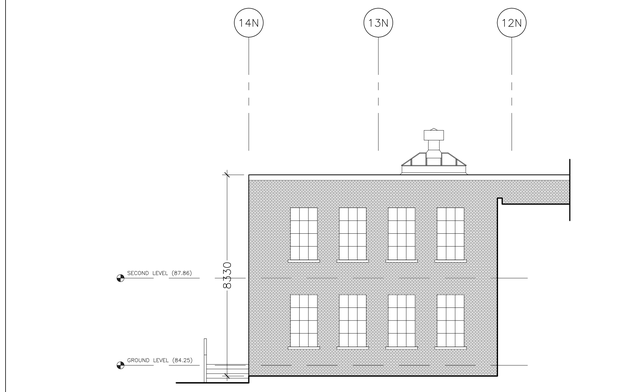
1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
EXTERIOR ELEVATIONS - NEW

PROJECT NO: 16361
SCALE: 1:100
DRAWN BY: KP
REVIEWED BY: BJ

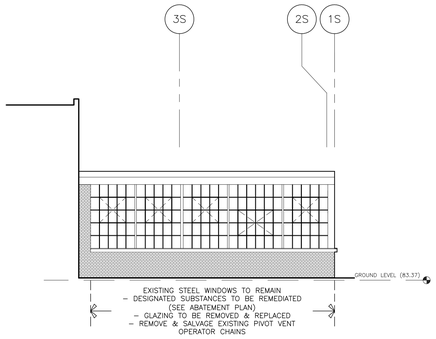
PROJECT NORTH:

DRAWING NO:
A-200



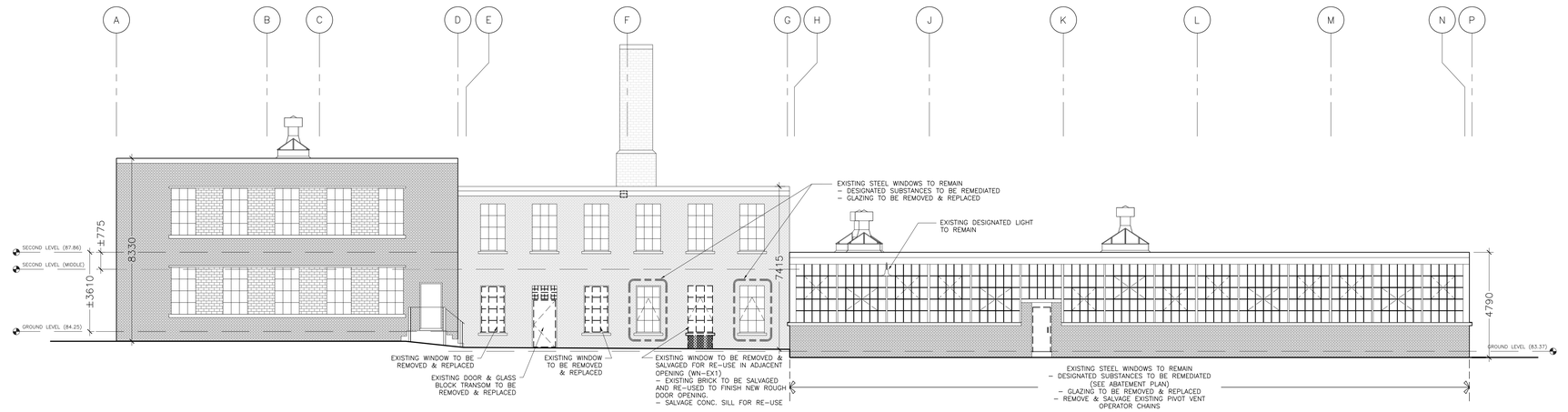
SOUTH ELEVATION (@ WEST COURTYARD) - EXISTING 4

1 : 100



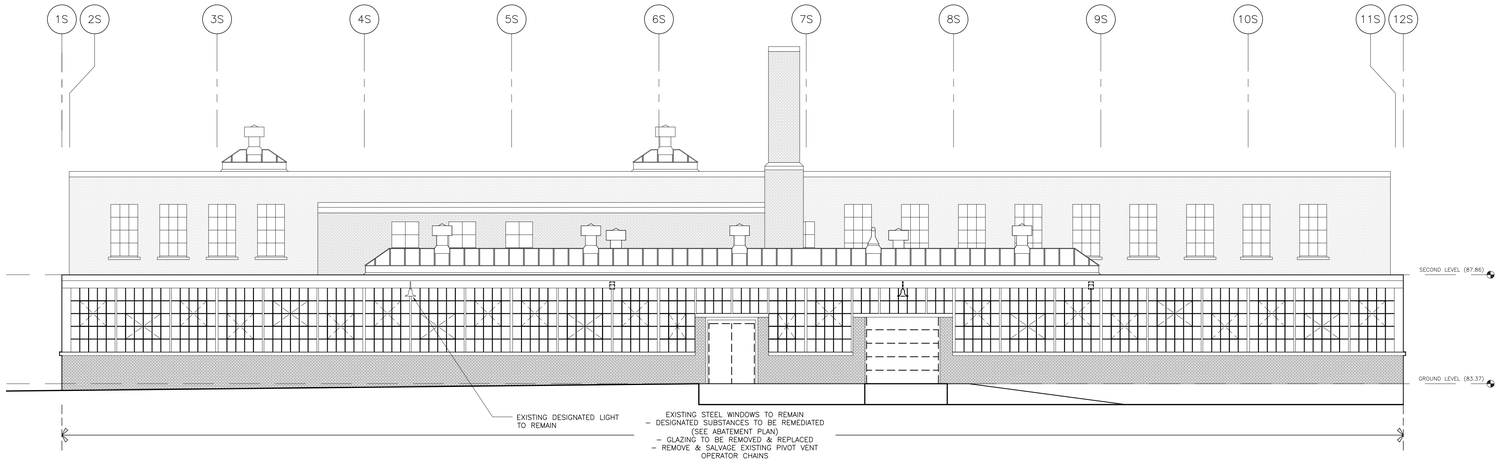
NORTH ELEVATION (@ WEST COURTYARD) - EXISTING 3

1 : 100



WEST ELEVATION - EXISTING 2

1 : 100



SOUTH ELEVATION - EXISTING 1

1 : 100

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GENERAL NOTES - ELEVATIONS

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2. EXISTING WINDOWS, PRECAST CONCRETE SILLS, EXTERIOR MASONRY, WOOD FASCIA & SKYLIGHTS ARE HERITAGE DESIGNATED; REFER HERITAGE SPECIFICATIONS PREPARED BY ERA ARCHITECTS INC. FOR FULL LIST OF HERITAGE DESIGNATED BUILDING ELEMENTS REFER TO REFER TO CITY OF MISSISSAUGA BYLAW 0285-2009.

3. TYPICAL SCOPE OF WORK FOR EXISTING WINDOWS & SKYLIGHTS AS FOLLOWS: ABATEMENT OF HAZARDOUS MATERIALS INCLUDING PAINT & WINDOW PUTTY, REMOVAL OF EXISTING GLAZING (OR OTHER INFILL MATERIAL), RESTORATION OF STEEL FRAMES, RESTORATION OF EXISTING PIVOT VENT OR HORIZONTAL PIVOT HARDWARE, PRIME & PAINT STEEL FRAMES, AND INSTALLATION OF NEW GLAZING TO BE FIXED IN PLACE AS PER HERITAGE SPECIFICATION.

ONTARIO ASSOCIATION of ARCHITECTS
JOAN GOODMAN
LICENCE
4394

ISSUE DATE:

NO.	DATE	DESCRIPTION
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PROJECT:
SMALL ARMS BUILDING - PHASE 1
RENOVATION & RESTORATION

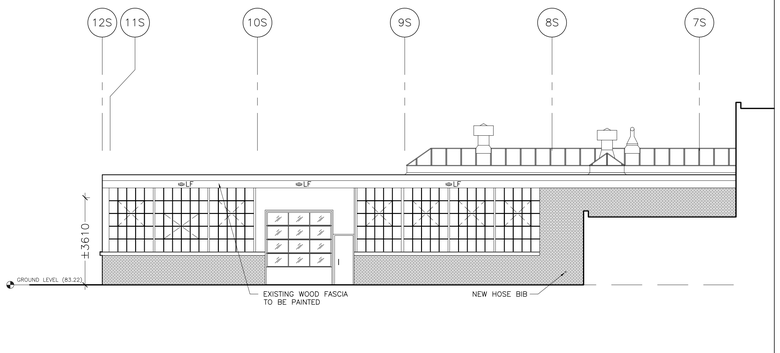
1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
EXTERIOR ELEVATIONS
- EXISTING & DEMOLITION

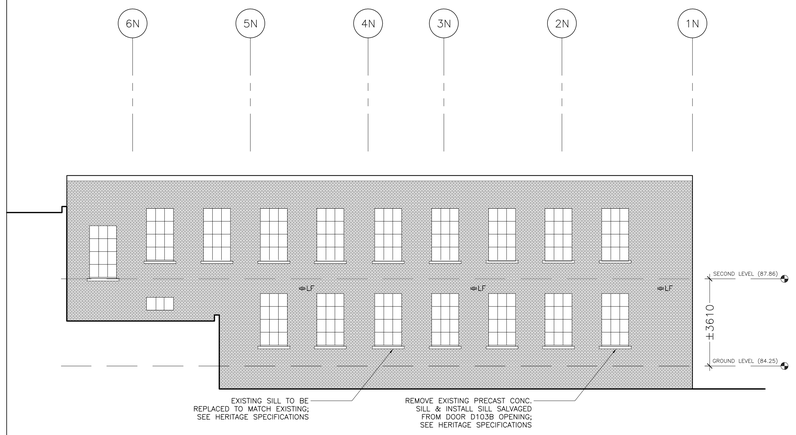
PROJECT NO: 16361
SCALE: 1:100
DRAWN BY: KP
REVIEWED BY: BJ

PROJECT NORTH:

DRAWING NO:
AD-201



NORTH ELEVATION (@ EAST COURTYARD) - NEW 4
1 : 100



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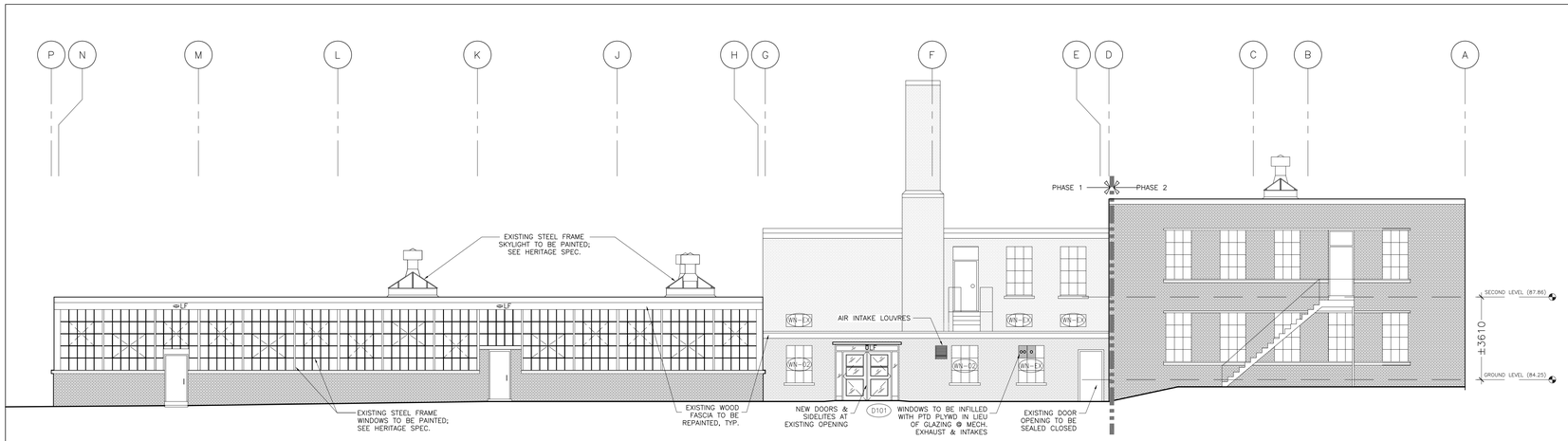
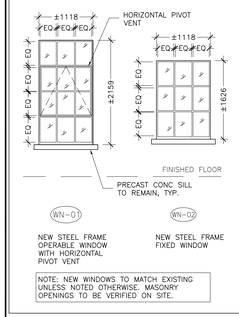
1 : 100



EAST ELEVATION - NEW 2
1 : 100

RESERVED 1
1 : 100

NEW WINDOW ELEVATIONS



NOTE: NEW WINDOWS TO MATCH EXISTING UNLESS NOTED OTHERWISE. MASONRY OPENINGS TO BE VERIFIED ON SITE.

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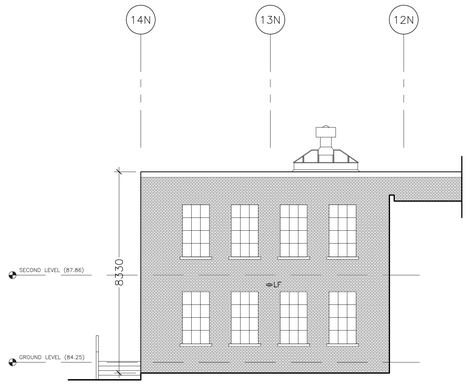
1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
EXTERIOR ELEVATIONS - NEW

PROJECT NO: 16361
SCALE: 1:100
DRAWN BY: KP
REVIEWED BY: BJ

PROJECT NORTH:

DRAWING NO:
A-200



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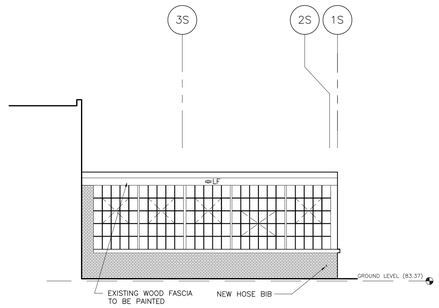

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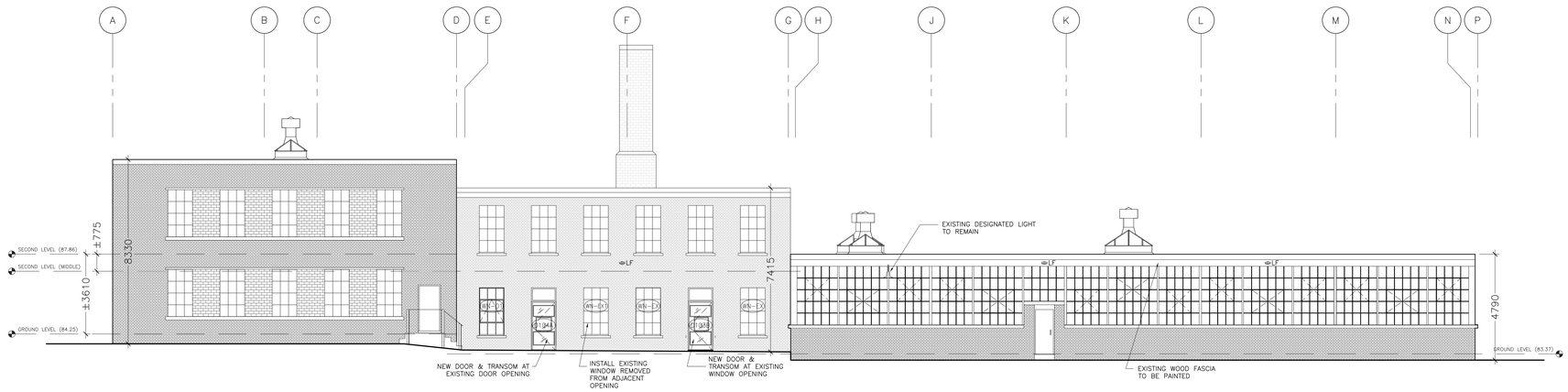
1 : 100



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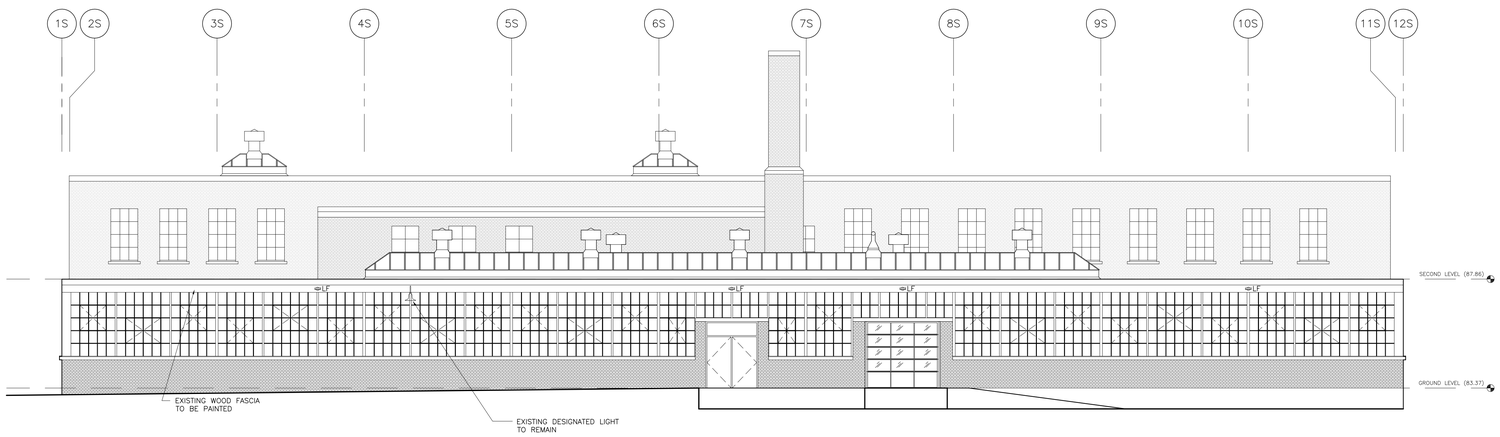
1 : 100



SOUTH ELEVATION - NEW 1
1 : 100

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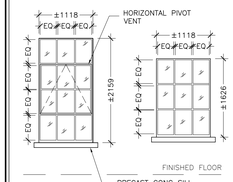
NEW WINDOW ELEVATIONS



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RENOVATION & RESTORATION

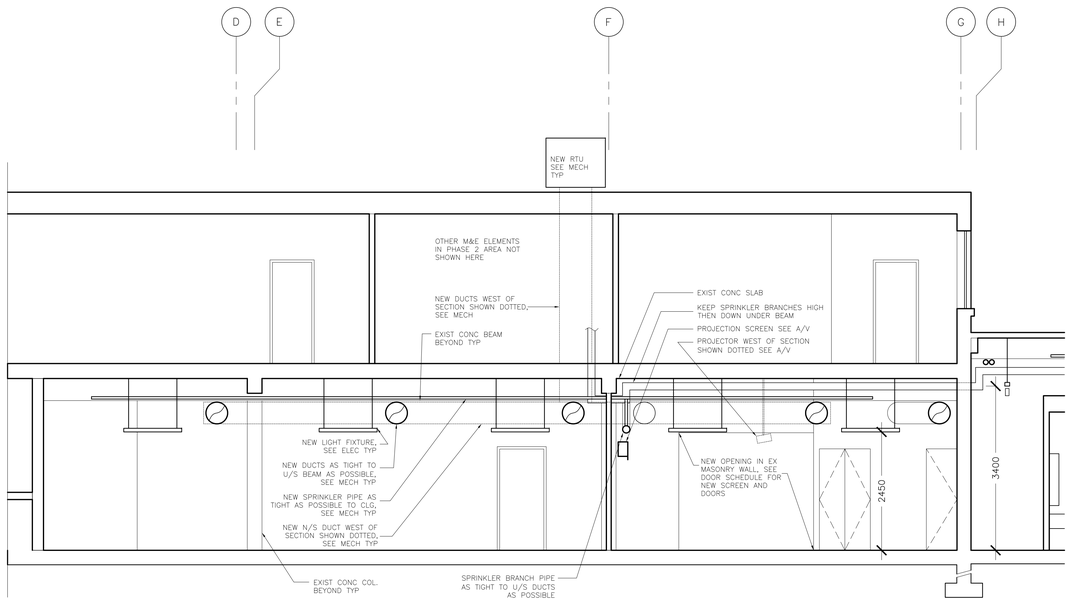
1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
EXTERIOR ELEVATIONS
- NEW

PROJECT NO: 16361
SCALE: 1:100
DRAWN BY: KP
REVIEWED BY: BJ

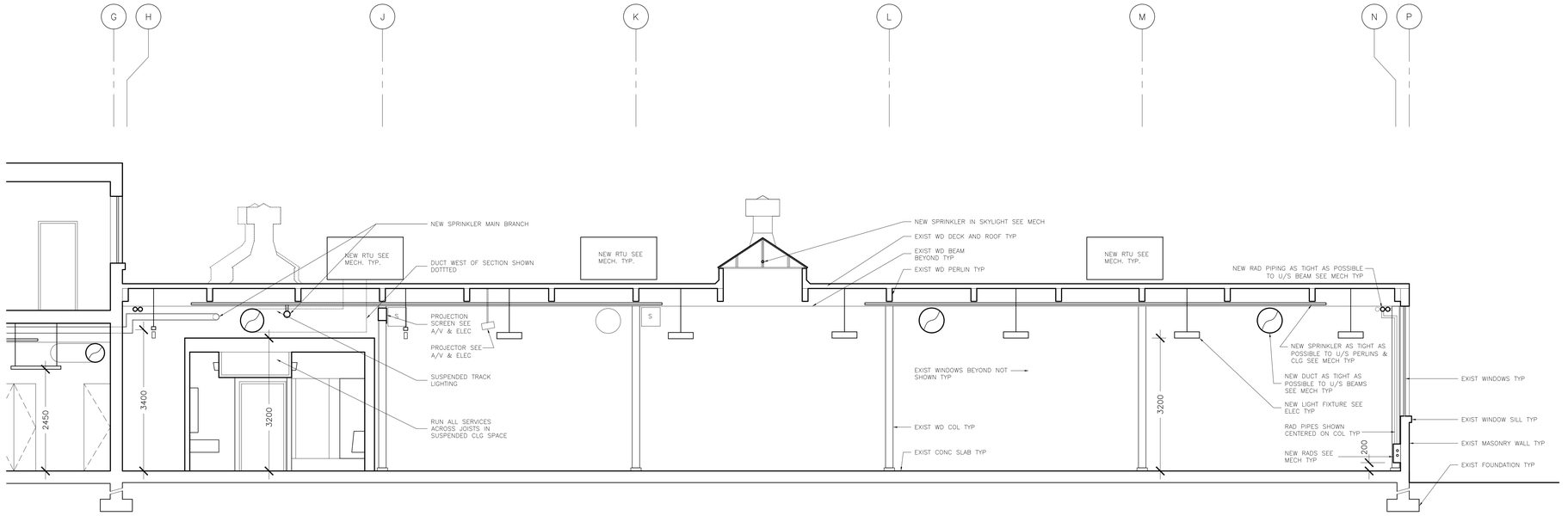
PROJECT NORTH:

DRAWING NO:
A-201



NORTH - SOUTH SECTION @ OFFICE & MULTI-PURPOSE RM.

1 : 50 (2)



NORTH - SOUTH SECTION @ COMMUNITY CENTRE

1 : 50 (1)

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SMALL ARMS BUILDING - PHASE 1
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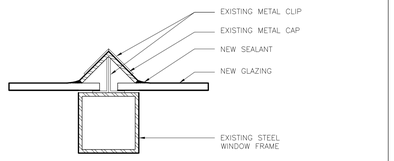
1352 Lakeshore Road East
Mississauga, ON

DRAWING TITLE:
NORTH-SOUTH
BUILDING SECTION

PROJECT NO: 16361
SCALE: 1:100
DRAWN BY: KP
REVIEWED BY: BJ

PROJECT NORTH:

DRAWING NO:
A-300



PLAN DETAIL @ SKYLIGHT MULLION 11
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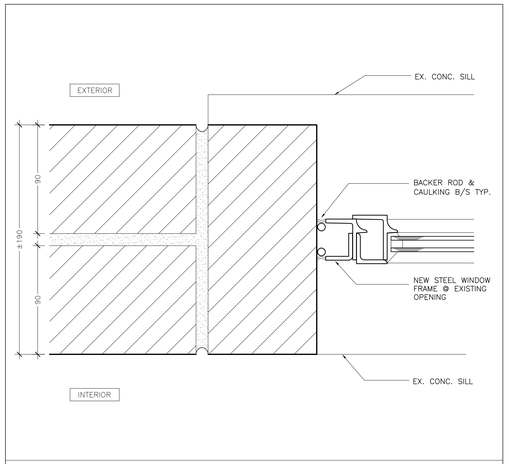
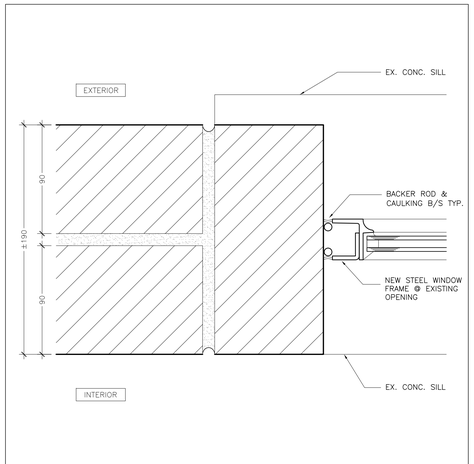
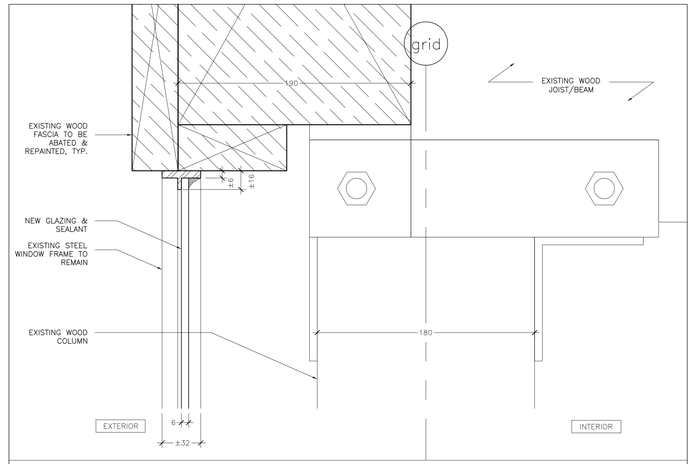


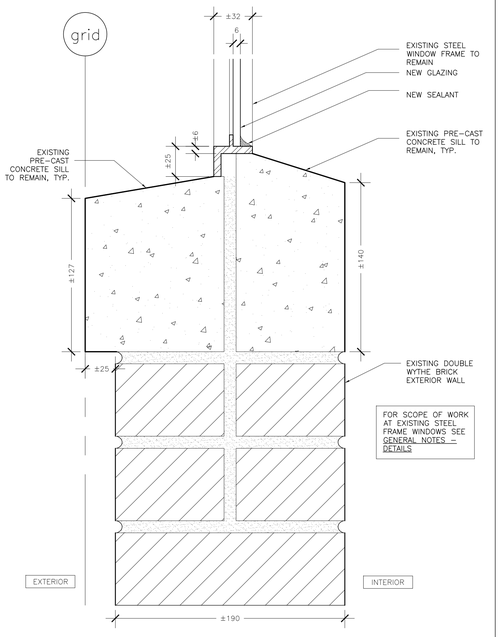
PLAN DETAIL OF STEEL WINDOW IN MASONRY @ VENT 10
1 : 2



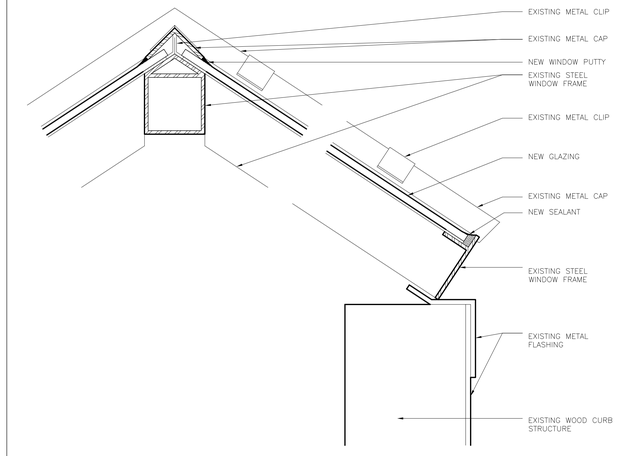
PLAN DETAIL OF STEEL WINDOW @ FIXED PORTION 9
1 : 2



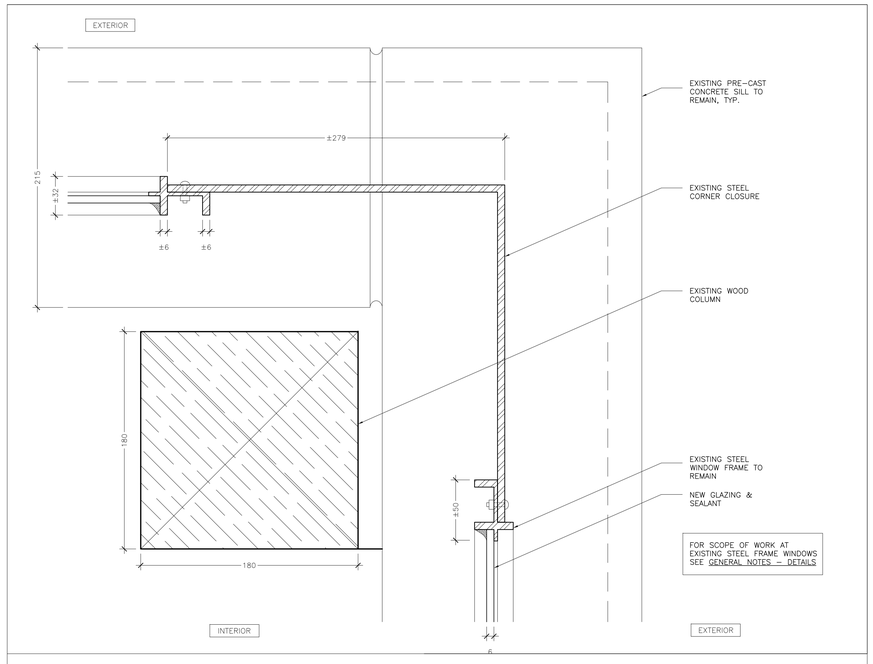
SECTION DETAIL @ TYP. HEADER 8
1 : 2



SECTION DETAIL @ TYP. SILL 7
1 : 2



SECTION DETAIL @ SKYLIGHTS 6
1 : 2



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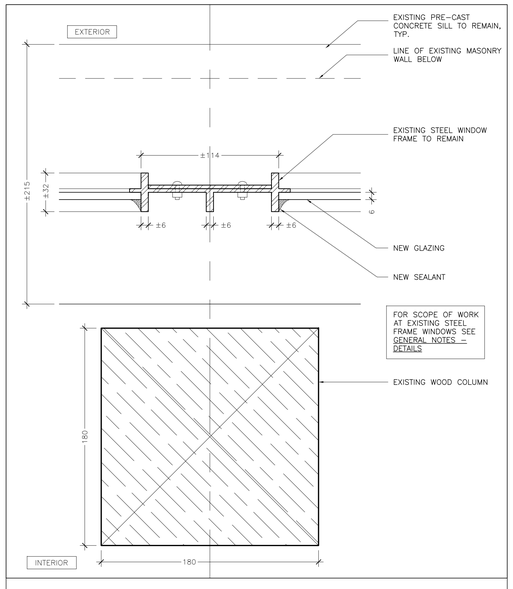

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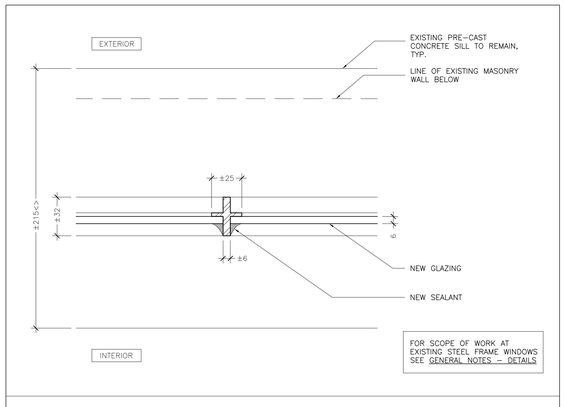

PLAN DETAIL @ TYP. MULLION 3
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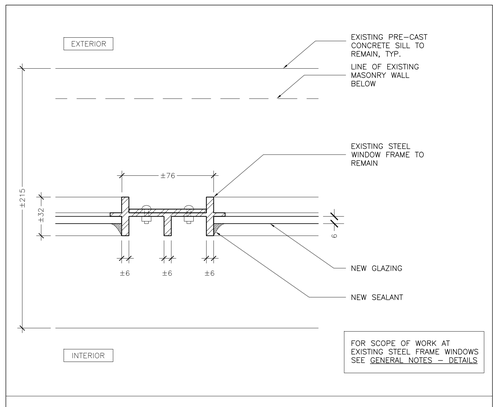

PLAN DETAIL @ TYP. MULLION 2
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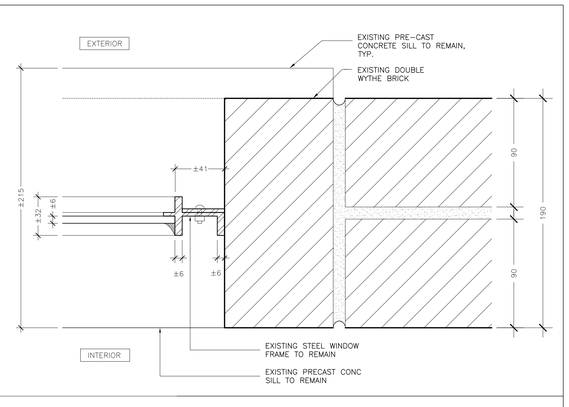

PLAN DETAIL @ TYP. JAM 1
1 : 2

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GENERAL NOTES - DETAILS

1. DIMENSIONS OF EXISTING WINDOW SECTIONS ARE APPROXIMATE. TRADE CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE, TYPICAL.

2. EXISTING WINDOWS, WINDOW PUTTY, SKYLIGHTS & FINISHES CONTAIN HAZARDOUS MATERIALS; REFER TO LEAD ABATEMENT SPECIFICATIONS & ASBESTOS AND LEAD ABATEMENT SPECIFICATIONS PREPARED BY MARTECH GROUP INC.

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1352 Lakeshore Road East
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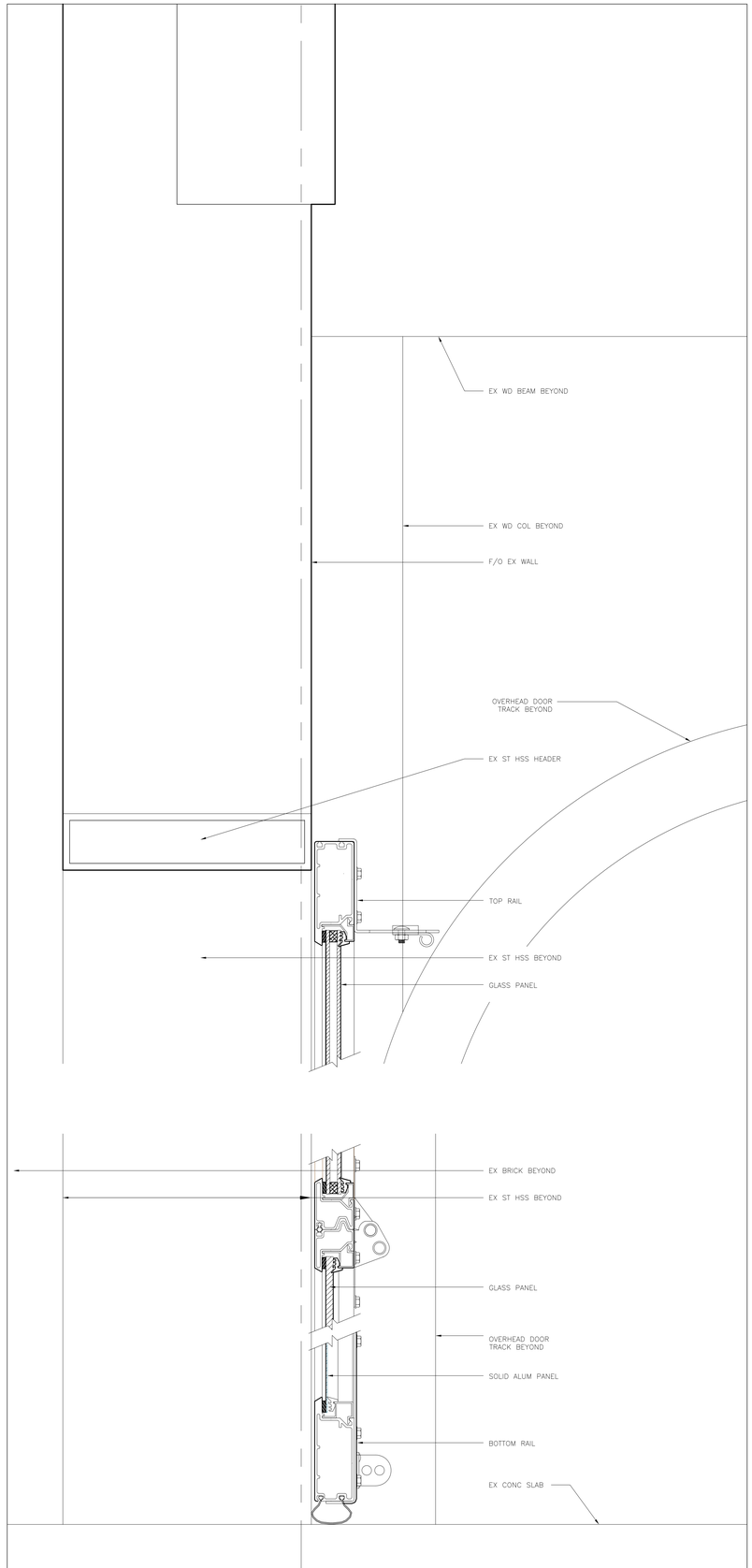
DRAWING TITLE:
TYPICAL DETAILS

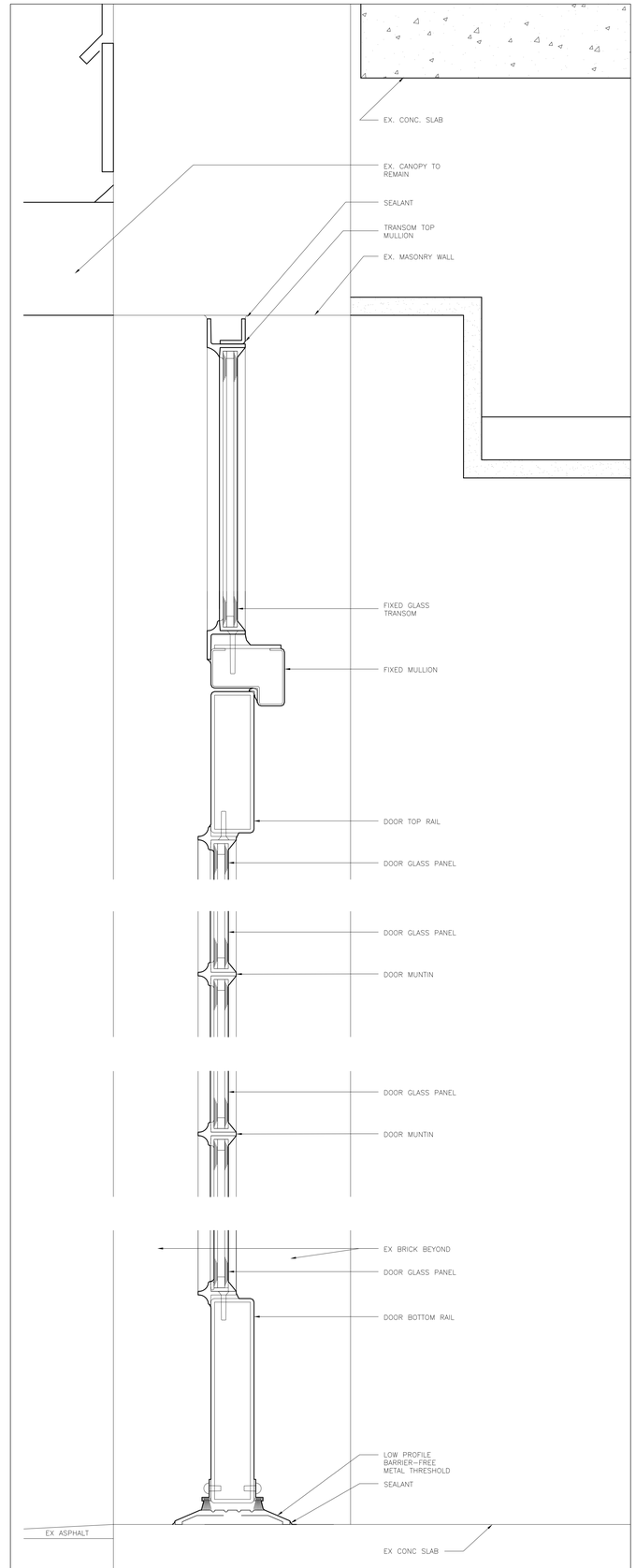
PROJECT NO: 16361
SCALE: 1:5
DRAWN BY: KP
REVIEWED BY: BJ

PROJECT NORTH:

DRAWING NO:
A-500



SECTION DETAIL @ NEW OVERHEAD DOORS 2
1 : 2



SECTION DETAIL @ NEW MAIN ENTRANCE DOORS 1
1 : 2

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1352 Lakeshore Road East
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DRAWING TITLE:
TYPICAL DETAILS

PROJECT NO: 16361
SCALE: 1:5
DRAWN BY: KP
REVIEWED BY: BJ

PROJECT NORTH:

DRAWING NO:
A-501

1 General

1.1 **SECTION INCLUDES**

.1 Labour, Products, equipment and services necessary for polished concrete Work in accordance with the Contract Drawings.

1.2 **SUBMITTALS**

.1 ACI 308.1, Specification for Curing Concrete.

1.3 **SUBMITTALS**

.1 Product data: Submit manufacturer's Product data in accordance with Section 01 10 10 indicating:
- .1 Two copies of manufacturer's Product data on characteristics, performance criteria, and limitations.
- .2 Preparation, installation requirements and techniques, Product storage, and handling criteria.

.2 Samples: Submit samples in accordance with Section 01 10 10 indicating coating and final concrete finish.

.3 Reports: Submit manufacturer's acceptance of substrate prior to installation in writing. Submit verification of moisture content of floor prior to installation.

.4 Close-out submittals: Submit maintenance data for incorporation into Operations and Maintenance manuals.

1.4 **QUALITY ASSURANCE**

.1 Perform Work of this Section by a company that has a minimum of five years proven experience in installations of a similar size and nature and that is approved by manufacturer. Submit to Consultant, applicator's current certificate of approval by the material manufacturer as proof of compliance.

.2 Mock-up:
- .1 Construct one 3 m^2 mock-up of polished concrete in location acceptable to Consultant.
- .2 Arrange for Consultant's review and acceptance, allow 48 hours after acceptance before proceeding with Work.
- .3 Mock-up may remain as part of Work if accepted by Consultant. If sealer application is unacceptable to Consultant, rework sealer in accordance with manufacturer's recommendations to provide a sealed concrete surface acceptable to Consultant.
- .4 Upon acceptance, mock-up shall serve as a minimum standard of quality for the balance of the work of this Section.

.3 Pre-installation meetings: Arrange with manufacturer's representative and Consultant to inspect substrates, and to review Mock-up and installation procedures 48 hours in advance of installation.

1.5 **SITE CONDITIONS**

.1 Do not install the Work of this Section outside of environmental ranges as recommended by the manufacturer without Product manufacturer's written acceptance and as follows:
- .1 Relative Humidity: In accordance with manufacturers' requirements.
- .2 When no dust is being raised.
- .3 In well-ventilated and broom clean areas.

.2 Install temporary protection and facilities to maintain the Product manufacturer's, and the above specification, environmental requirements for 24 hours before, during, and 24 h after installation.

.3 Post do not enter and appropriate warning signs at conspicuous locations.

1.6 **DELIVERY, STORAGE, AND HANDLING**

.1 Store materials at site in an area specifically set aside for purpose that is locked, ventilated, and maintained at a minimum temperature of 16°C.

.2 Ensure that health and fire regulations are complied with in storage area, and during handling and application.

1.7 **EXTENDED WARRANTY**

.1 At completion of this work, provide a signed Sealant and Waterproofing Association warranty to the Owner covering defects of workmanship and materials for a period of 2 years commencing from Contract Completion. Agree to make good promptly any defects which occur or become apparent within the warranty period in conjunction with the membrane manufacture's warranty. Defects shall include but not be limited to leakage, deformation and failure to stay in place. Coverage includes complete replacement including affected adjacent Work at no cost to Owner.

2 Products

2.1 **MATERIALS**

.1 General:
- .1 All materials under Work of this Section, including but not limited to, sealers and coatings are to have low VOC content limits.
- .2 Each material used in the application of each flooring system shall be as recommended or manufactured by the supplier of the flooring system.

2. Polished concrete sealer: Magnesium fluorosilicate concrete hardener and dustproofer; 'MasterKure HD 300WB' by BASF Building Systems or approved alternative by W. R. Meadows.

3 Execution

3.1 **EXAMINATION**

.1 Verify condition of previously installed Work upon which this Section depends. Report defects to Consultant. Commencement of Work means acceptance of existing conditions.

.2 Test surfaces for moisture content to ensure that they are suitable for application.

3.2 **PREPARATION**

.1 Prepare substrate in accordance with manufacturer's written instructions.

.2 Project adjacent surfaces from damage resulting from Work of this section. Mask and/or cover adjacent surfaces, fixtures, and equipment as necessary.

.3 Grind concrete surface starting with 30/60 grit and moving up through grit sequence to achieve finished gloss level of Low Reflective Finish in accordance with CPAA.

3.3 **APPLICATION**

.1 Apply minimum three coatings of sealer to entire surface in accordance with manufacturer's written instructions. Diluted ratio as recommended by manufacturer.

.2 Apply first coat and allow floor to dry until no longer visibly wet.

.3 Apply second coat and if crystals develop, flush surface liberally with clean water. At same time, rapidly brush floor with a stiff bristle broom. Mop up excess water and allow surface to dry.

.4 Apply final coat and wait for uniform appearance of white crystals to appear while drying. Flood floor with water and lightly buff floor with a commercial floor buffer and non-aggressive pad to bring up patina/polish finish and until whiteness is gone.

3.4 **CLEANING**

.1 Remove promptly as work progresses spilled or spattered materials from surfaces of work performed under other Sections. Clean floors on completion of work. Do not mar surfaces while removing.

3.5 **PROTECTION**

.1 Erect barriers to prevent the entry and presence of personnel not performing work of this Section during application of floor sealer, and for 48 hours following completion of application.

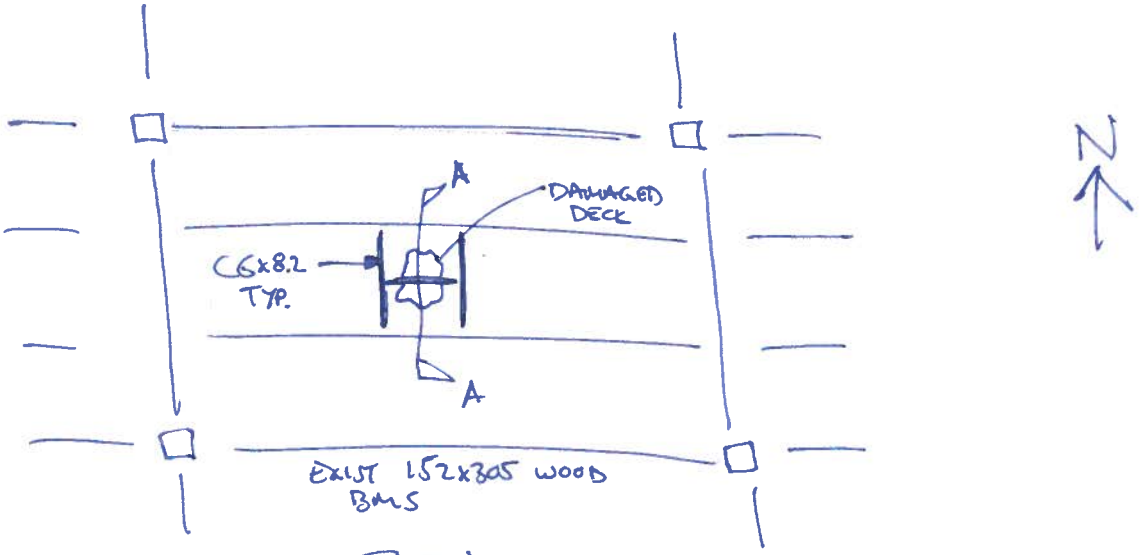
END OF SECTION

Blackwell

Seal	Title	Project #	Date
	RENOVATIONS TO SMALL ARMS BLDG PH 1 DETAIL @ DETERIORATED WOOD DECK	160596	2017-01-13
		Designer: AOG	Scale: N.T.S.
		Checked by	Sheet #: SK-1

Toronto 416.593.5300 | Waterloo 519.616.0895 | Halifax 902.701.0185 | blackwell.ca

DECK REINFORCING @ WATER-DAMAGED DECK



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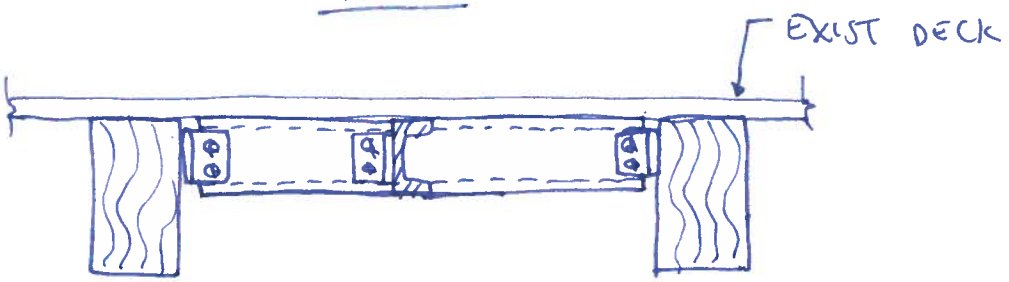

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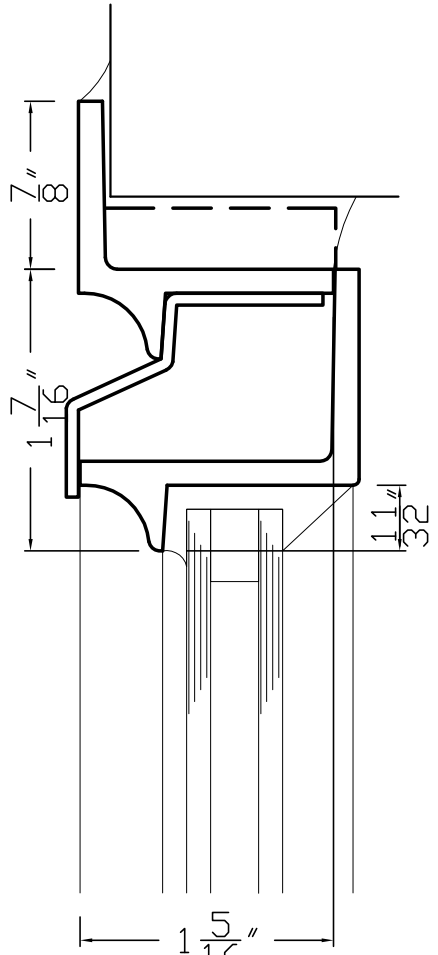
SECTION

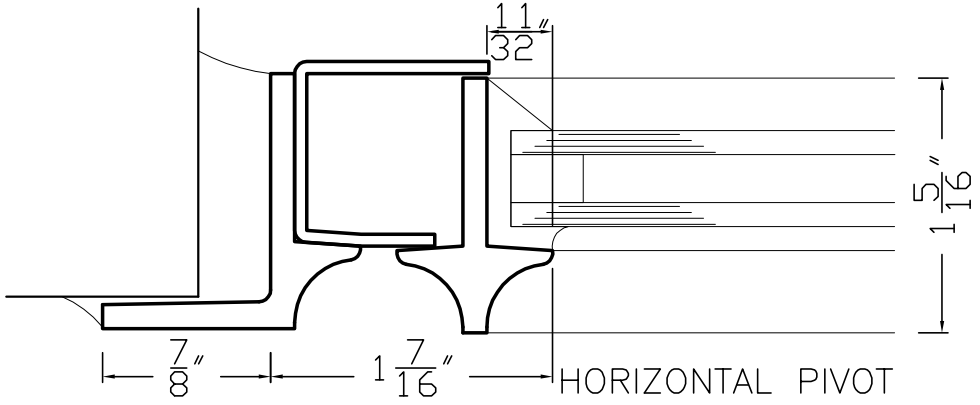
HISTORIC / INDUSTRIAL HORIZONTAL PIVOT – HEAD DETAILS

ACCEPTS UP TO 1/2" GLASS WITH PUTTY GLAZING

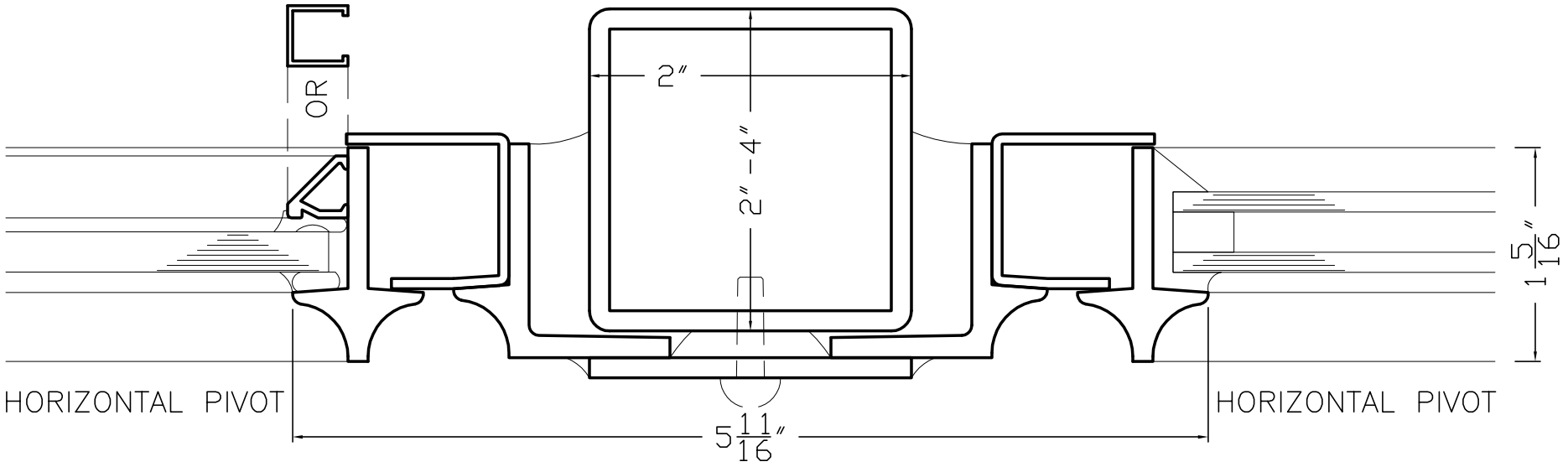


HORIZONTAL PIVOT

HISTORIC / INDUSTRIAL HORIZONTAL PIVOT – JAMB DETAILS



HISTORIC / INDUSTRIAL HORIZONTAL PIVOT – MULLION DETAILS



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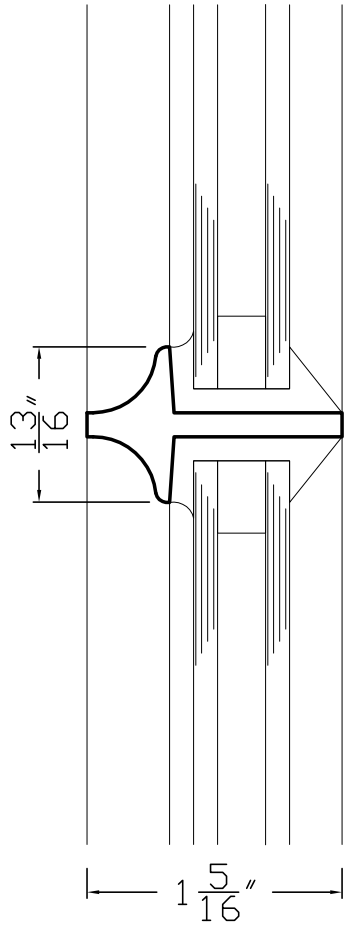
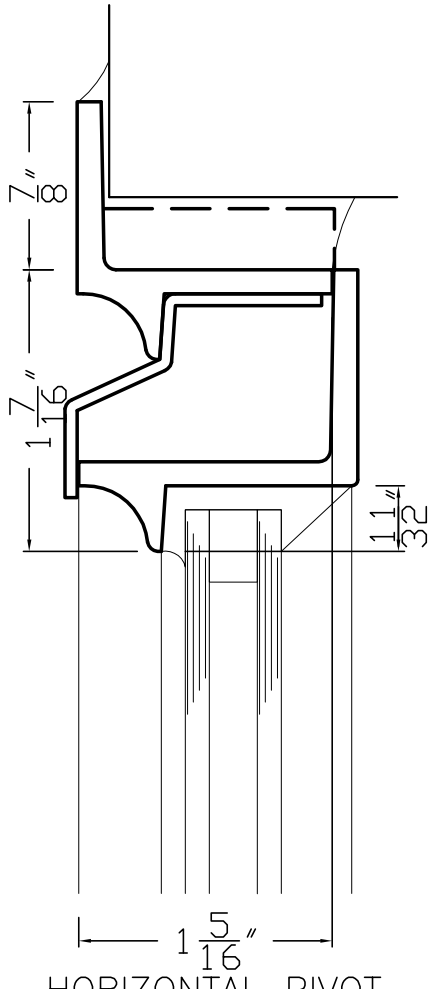


HISTORIC/ INDUSTRIAL HORIZONTAL PIVOT – SILL DETAILS



HORIZONTAL PIVOT

PART 1 – GENERAL

1.1 OWNER AND CONSULTANT

1.1.1 Owner: City of Mississauga

1.1.2 Owner's Contact: L. Laila Gabiazon

Facilties and Property Management

The City of Mississauga

300 City Centre Drive, 11th Floor

Mississauga ON L5B 3C9

1.1.3 Consultant: ERA Architects Inc.

Suite 801, 10 St. Mary Street

Toronto, Ontario M4Y 1P9

Tel: (416) 963-4497; fax (416) 963-8761

Contact: Philip Evans, Ext. 242

1.2 WORK TO A HISTORIC PROPERTY

1.2.1 The building on which work is being undertaken is on a property designated under Part IV of the Ontario Heritage Act. Refer to City of Mississauga By-law No. 258-2009. Undertake Work with care.

1.2.2 Where replacement or restoration is specified to match surviving original components, the parts are to be fabricated as faithful copies of the original in all respects and fastened by the original methods as far as possible.

1.3 GENERAL REQUIREMENTS

1.3.1 Commence work as soon as possible after written authorization to do so is issued by the Owner and proceed so as to complete the work fully in the time specified in the Contract.

1.3.2 Perform all work in accordance with the provisions of all applicable by-laws, ordinances, codes, regulations, authorities and standards.

1.3.3 Ensure that all replacement parts of the work fit snugly, accurately and in true planes.

1.3.4 Provide all necessary protection to ensure that no damage or harm to work, materials, or property results from the work of this Contract.

1.3.5 Take all possible care to protect the work and all property adjacent to the work against accident or injury from fire, or other causes.

1.3.6 Comply wth Owner’s allowed hours or work.

1.3.7 Limit access by work people to those areas of the site required for work of the Contract. Agree on means of access to areas of work with Owner before starting work.

1.3.8 Bring any discrepancies, errors or omissions in the Contract Documents, or any doubts as to the meaning or intent of any part thereof, to the attention of the Consultant for instructions, clarifications or explanations.

1.3.9 Check dimensions at the site before any fabrication begins, report any discrepancies to the Consultant and obtain clarification.

1.3.10 Pay and include in the cost of the work all government sales tax, custom duties and excise taxes payable on materials and services required for the execution of the work.

1.3.11 No smoking will be permitted.

1.3.12 Keep the work area clear of debris and broom clean at all times. Remove all debris from the site on a daily basis.

1.3.13 At completion of work, remove waste materials, tools, equipment and surplus materials and clean all exposed surfaces, removing grease, dust, dirt, fingerprints, and other foreign materials from sight-exposed exterior and interior finished surfaces.

1.3.14 Inform the Heritage Consultant when the work is complete and ready for inspection. Correct defects and deficiencies scheduled by Consultant during site reviews.

1.4 INSURANCES

1.4.1 At start of work, provide evidence of insurance, as set out below, and a current certificate of clearance from the Workers' Compensation Board. Provide, maintain and pay for the following insurance coverage:

1.4.1.1 General Liability Insurance: not less than three million dollars ($3,000,000) coverage in the joint names of Contractor, Owner and Heritage Consultant.

1.4.1.2 Automobile Liability Insurance: not less than three million dollars ($3,000,000) per occurrence.

1.4.1.3 Submit copies of insurance policies for Owner's review before contract is signed.

1.4.2 With second and any subsequent applications for payment, provide statutory declaration and current certificate of clearance from the Workers' Compensation Board.

1.5 LIABILITY INSURANCE

1.5.1 The Constructor shall take out and keep in force until the date of acceptance of the entire work by the Owner, a comprehensive policy of public liability and property damage insurance acceptable to the Owner providing insurance coverage in respect of any one accident to the limit of at least $5,000,000.00 (CCDC 2008 amount), exclusive of interest and cost, against loss or damage resulting from bodily injury to or death of one or more persons and loss of or damage to property and such policy shall name both Owner and the Owner's representative as additional insured thereunder and shall protect the above against all claims for all damage or injury including death to any person or persons and for damage to any property of the Owner or any other public or private property resulting from or arising out of any act or omission on the part of the execution of the contract. The successful Contractor shall be required to submit a Certificate of Insurance for the owner's review, prior to the commencement of the work.

END OF SECTION

PART 1 - GENERAL

1.1 GENERAL

1.1.1 Read all of the Contract Documents.

1.1.2 Submit as may be required construction schedule, records, certificates, requests and written queries in good time to avoid delay.

1.1.3 The General Contractor is to be responsible for the safety of the Heritage fabric during the full duration of work on site and shall carry appropriate levels of insurance for any loss of Heritage fabric to be salvaged or reinstalled.

1.1.4 The General Contractor shall indemnify the Owner and Consultants from claims resulting from any loss of Heritage fabric due to operations onsite or during transportation or storage.

1.2 RECORDS AND SCHEDULES

1.2.1 Keep a permanent record on site of work progress, commencement and completion dates, weather conditions, numbers of people engaged on site and visits to the site by Owner, Heritage Consultant, jurisdictional authorities, etc.

1.2.2 Submit copy of the record upon request by either Owner or Heritage Consultant.

1.3 HERITAGE DEFINITIONS

1.3.1 For this project, Heritage Conservation terms shall have the following meaning:

1.3.1.1 Conservation: a general term covering any act made to protect, safeguard or pass on a heritage artifact or building element

1.3.1.2 Restoration: where a building element is returned to the appearance of an earlier time by removing later material and/or replacing missing parts and details.

1.3.1.3 Reconstruction: where a building element that no longer exists is reproduced using new construction.

1.3.1.4 Repair: where a building element is returned to its former condition, following deterioration or damage, without altering its original appearance or detail.

1.3.1.5 Heritage Fabric: all existing fabric that is described to remain and all supporting elements.

1.3.1.6 Dismantle: disassemble by hand in a gradual systematic way to minimize damage to the heritage fabric of the building.

1.4 SAMPLES

1.4.1 Provide samples of materials specified in trade sections on site for the Heritage Consultant's inspection and any other samples as may be requested. Mock ups to be review by Heritage Consultant and Heritage Staff.

1.5 EXTENDED WARRANTIES AND GUARANTEES

1.5.1 Submit to Heritage Consultant extended warranties in writing as specified in each applicable Section of this specification with application for Certificate of Substantial Performance.

1.5.2 Extended warranties shall commence on termination of the warranty period specified in the General Conditions to the Contract and shall be an extension of these same provisions.

1.5.3 Complete Forms of Warranty in a format agreed with the Heritage Consultant.

1.6 RECORD PHOTOGRAPHS

1.6.1 Provide sufficient digital photographic files (minimum 6 per week) to document the progress of the work on a weekly basis and to record the existing condition of the heritage fabric of the buildings. Identify and date all photographs.

1.6.2 Retain copies of all photographs for the Owner.

1.6.3 Submit the set for the Owner's records on a CD (2 copies) to the Heritage Consultant upon completion of the Work, and prior to release of final payment.

1.7 SHOP DRAWINGS

1.7.1 Submit shop drawings for which submission is required in other Sections of this specification.

1.7.2 In addition to shop drawings specified in other Sections, submit shop drawings required by jurisdictional authorities in accordance with their requirements.

1.7.3 The Contractor shall check, sign, date and make notations considered necessary on shop drawings before each submission.

1.7.4 Indicate on each submission changes from the contract drawings and specifications that have been incorporated in the shop drawings. The Contractor shall be responsible for changes made from the contract drawings and specifications which are not indicated or otherwise communicated in writing with the submission.

1.7.5 Shop drawing review by the Heritage Consultant is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that the Heritage Consultant approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of his responsibility for errors or omissions in the shop drawings or of his responsibility for meeting all requirements of the contract documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation, and for co-ordination of the work of all subcontractors.

1.7.6 Shop drawings requiring professional engineer’s seal and signature, submitted without it, will be returned “Not Reviewed.”

1.7.7 Incorporate only dimensional system utilized for drawings, except where substitutes are otherwise approved. Make soft conversions from metric system to imperial, or vice versa, where required for incorporation of units of one dimensional system into construction in the other.

1.7.8 Show on shop drawings:

1.7.8.1 Name of project, Contractor and Subcontractors.

1.7.8.2 Clear and obvious notes of any proposed changes from drawings and specifications.

1.7.8.3 Fabrication and erection dimensions.

1.7.8.4 Provisions for allowable construction tolerances and deflections provided for live loading.

1.7.8.5 Details to indicate construction arrangements of the parts and their connections and interconnections with other work.

1.7.8.6 Location and type of anchors and exposed fastenings.

1.7.8.7 Materials and finishes.

1.7.8.8 Descriptive names of equipment.

1.7.8.9 Mechanical and electrical characteristics when applicable.

1.7.8.10 Information to verify that superimposed loads will not affect function, appearance or safety of the work detailed.

1.7.8.11 Assumed design loadings and dimensions and material specifications for load-bearing members.

1.7.8.12 Dimensions and dimensioned locations of proposed chases, sleeves, cuts and holes in structural members.

1.7.8.13 Time that fabricator considers necessary from date he receives Contractor's authority to proceed (and Shop Drawings are returned) until fabricated Work will be delivered to site, and for installation if installed by fabricator.

1.7.8.14 All documents shall carry the seal of a professional engineer registered in the Province of Ontario, and be responsible for the design of connections and details, fabrication and erection of all structural components, where applicable.

1.7.9 Submit shop drawings along with engineering data sheets, where applicable, catalogue cuts and standard diagrams may be substituted for shop drawings

1.7.10 Shop drawings which require correction will be sent back for revisions and resubmission.

1.7.11 Otherwise, shop drawings will be sent back with review comments only.

1.7.12 Only drawings noted for revision and resubmission need be resubmitted.

1.7.13 Do not add new details or information to shop drawings after they have been finally reviewed, except when approval is given.

1.7.14 Do not proceed with work dependent on shop drawing information until approval is given and verification received from Heritage Consultant and Owner. Approval shall not relieve the contractor of his responsibility for execution of work in accordance with contract docoments.

1.7.15 Work done prior to receipt of reviewed drawings will be at the risk of the Contractor.

1.7.16 Fabricate work exactly as shown on shop drawings. If shop practice dictates revisions, revise drawings and resubmit.

1.7.17 File one copy of each finally revised and corrected shop drawing at site.

1.7.18 Review of any Drawing and/or any notes added to it, does not constitute authorization to proceed with any Work which, in the Contractor's or Supplier's opinion, will involve extra cost to the Owner.

END OF SECTION

PART 1 – GENERAL

1.1 GENERAL

1.1.1 Refer to Abatement Specifications prepared by Martech Group Inc., dated January 13, 2016 for the removal or hazardous materials.

1.1.1.1 Comply with the requirements of the Ontario Environmental Protection Act and Regulation 345, covering the generation, transport and receipt at a designated disposal site.

END OF SECTION

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

1.1.1 Division 1, General Requirements, is part of this Section and shall apply as if repeated here.

1.2 SECTION INCLUDES

1.2.1 The Work of this Section covers the provision of all labour, materials, equipment, plant and products necessary for the completion of heritage protection, demolition and removals as indicated on the Drawings, as required to complete the project including but not limited to:

1.2.1.1 Removal of three (3) panes of original window glass in good condition from the steel windows of the South Building. These panes are to be carefully removed, abated, and submitted to Heritage Staff for archiving purposes;

1.2.1.2 Removal of all other glazing from the steel windows in the South Building as per the Abatement Plan;

1.2.1.3 Removal of glazing from the select steel windows in the Bridge Section as per the Abatement Plan;

1.2.1.4 Removal of select non-original windows in the Bridge Section;

1.2.1.5 Removal of all exterior doors from the South Building and Bridge Section;

1.2.1.6 Provision of temporary protection, including but not limited to: wood framing and plywood sheathing within window and door openings;

1.2.1.7 Demolition of select interior walls, as indicated on the Drawings;

1.2.1.8 Demolition of select areas of the interior slab on grade concrete floor;

1.2.1.9 Salvage of all original interior ceiling lights in the South Building;

1.2.1.10 Salvage of all operator chains on interior of perimter windows in the South Buiding.

1.2.2 Dispose off-site all materials not to be salvaged. Consult Abatement Plan for designated substance removals.

1.2.3 This scope of work is limited to Protection, Demolition and Removals. For criteria related to safety, engineering, environmental requirements and regulations etc., refer to instructions by Consultant.

1.2.4 Contractor to consult with Heritage Consultant before work begins.

1.3 RELATED SECTIONS

1.3.1 Section 01 33 00 Heritage Procedures & Submittals

1.3.2 Section 02 26 00 Heritage Hazardous Materials

1.4 INTENT

1.4.1 The intent of this Section is to dismantle and remove the specified elements while causing the least possible damage to the fabric to remain, or be salvaged and surrounding building fabric.

1.4.2 Openings are to be temporarily weather-protected until the later conservation phase.

1.5 SUBMITTALS

1.5.1 Construction Manager to provide progress photographs at each stage of the process and submit digital copies to the Heritage Consultant. The General Contractor may do this work.

1.6 PROJECT/SITE CONDITION

1.6.1 Report to the Consultant, and copy Contractor in writing all areas of deterioration revealed during the work.

1.6.2 Contractor to ensure existing site services are identified and located before beginning work.

1.7 SALVAGE AND DEMOLITION MEETING

1.7.1 Contractor to arrage a pre-salvage and demolition meeting with the Construction Manager, Owner, and the Heritage Consultant on-site prior to commencing operations to confirm dismantling intent, scope and schedule.

1.7.2 The Contractor to issue minutes following meeting.

1.8 CERTIFICATIONS

1.8.1 The Contractor is responsible for obtaining all necessary permits and inspections for dismantle work.

PART 2 – PRODUCTS

2.1.1 Materials for weather protection of window/door openings:

2.1.2 Lumber:

2.1.2.1 Use shed stock with maximum water content of 15% at time of installation.

2.1.2.2 Framing: As specified by Structural Engineer.

2.1.2.3 ¾” (19mm) Exterior grade plywood to CSA 0151-09

2.1.2.4 Wood blocking: as specified by Structural Engineer.

2.1.3 Weather Protection:

2.1.3.1 Spun-bonded polyolefin sheeting conforming to CAN 2-51.32M77, with a water vapour permeance of 4800 Ng/Pa.s.m2 and an air-permeance of less than 0.2 L/sec m2.

2.1.3.2 Reinforced Tarpaulin.

2.1.3.3 Acceptable material: Tyvek HomeWrap, as manufactured by DuPont, or approved equal.

2.1.4 Waterproofing Membrane:

2.1.4.1 Blueskin WP 200 self-adhesive membrane by Bakor Inc., Mississauga, Ontario (telephone: 1 800 387-9598) or approved equal.

2.1.4.2 Membrane primer: Blueskin Primer by Henry® Company, or approved equal.

PART 3 – EXECUTION

3.1 GENERAL

3.1.1 Carry out demolition work in strict accordance with the requirements of provincial and municipal authorities.

3.1.2 Bring the Heritage Consultant's attention to any discrepancies between site conditions and the contract documents, and any other unusual conditions, which may affect the performance of the Work of this Section.

3.1.3 Products requiring demolition become Contractor's property. Remove Products from Site daily, unless such Products are otherwise specified or shown on Contract Drawings to be reused or turned over to owner.

3.1.4 Clean up debris, resulting from Work, promptly and dispose at end of day or place in waste disposal bins. Empty bins on regular basis.

3.2 PROTECTION – GENERAL

3.2.1 Limit work to areas affected. Do not damage areas and materials to be conserved.

3.2.2 Protect all building components to remain in area of work from damage, including from but not limited to splatters, spills, direct or indirect impact, rubbing and gouging.

3.2.3 Protection to be independent of building components to remain. Where this is not possible, fasten protection measures securely to existing building as to not damage existing components.

3.3 PROTECTION OF OPENINGS

3.3.1 Install opening protection without damaging the heritage fabric, as follows:

3.3.1.1 Anchor wood framing and blocking to heritage building by mechanically attaching into mortar joints only.

3.3.1.2 Fit all exterior plywood sheathing snugly into masonry opening and attach to blocking.

3.3.2 Ensure weather protection overlaps heritage wall by 300mm on all sides. Coordinate with Heritage Consultant before commencing work.

3.4 CLEANING

3.4.1 At completion of the work remove all remaining waste, all equipment, protection, hoardings etc. and leave site clear and secure.

END OF SECTION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

1.1.1 Division 1, General Requirements, is part of this Section and shall apply as if repeated here.

1.2 SECTION INCLUDES

1.2.1 The Work of this Section covers the provision of all labour, materials, equipment, plant and products necessary for the completion of heritage masonry restoration as indicated on the Drawings, as required to complete the project including but not limited to:

1.2.1.1 Removal, salvage, and reuse of one cast concrete sill;

1.2.1.2 Provision of new cast concrete sill unit(s) to match existing;

1.2.1.3 Selective brick removal, salvage, and repair.

1.3 RELATED SECTIONS

1.3.1 Section 01 33 00 Heritage Procedures and Submittals

1.3.2 Section 07 90 00 Heritage Sealants

1.4 REPAIR INTENT

1.4.1 The intent of this section is to repair specific, deteriorated areas of the façade, as outlined in the Heritage Conservation Plan – Phase 1. The elements, to which work will be completed, are to be returned to a sound, durable condition.

1.5 UNIT PRICES

1.5.1 New cast concrete sill unit:

1.5.1.1 Price per sill.

1.5.2 Brick removal:

1.5.2.1 Price per unit.

1.5.3 Brick repair:

1.5.3.1 Price per square foot.

1.6 REFERENCES

1.6.1 Annotated Specifications for the Restoration of Historic Masonry (Ministry of Citizenship and Culture, Province of Ontario, Toronto, Canada, 1985).

1.6.2 CAN3-A371 – Masonry Construction for Buildings.

1.6.3 Confirm with test data that proposed cast concrete sills meet these standards with Consultant before supplying samples.

1.6.4 Perform all removals and installation in accordance with the Construction Safety Act and all other requirements of the authorities having jurisdiction.

1.7 PERFORMANCE REQUIREMENTS

1.7.1 Tolerances: Set on true planes between existing work where material is to be rebuilt or substantially altered. When tested with a 3000mm straight-edge rule placed anywhere on the surface in any direction the wall shall be true within 5mm for brick masonry.

1.8 QUALIFICATIONS

1.8.1 The contractor and its personnel undertaking the Work of this Section shall be of recognized standing in the industry, specializing in the area of heritage work and known to have been responsible for satisfactory installations equal to that specified for a period of at least the immediate past 5 years.

1.8.2 Provide for all work to be done by qualified and experienced trades people with a minimum of 5 years' experience in the heritage masonry work.

1.8.3 Execute all work of this Section under the continuous supervision and direction of a qualified heritage mason with a minimum of 10 years' experience.

1.8.4 Pre-qualified sub-contractors for the masonry work of this Section include:

1.8.4.1 Historic Restoration Inc., Paul Goldsmith (416) 645-0868

1.8.4.2 Heritage Restoration Inc., Chris Huntley (416) 757-5556

1.8.4.3 Phoenix Restoration, Michael Nel (905) 665-7600

1.8.4.4 Clifford Restoration Ltd., Sam Trigila (416) 691-2341 x281

1.8.4.5 Trinity Custom Masonry, Fergus Tyrell (416) 423–4545

1.8.5 Although the contractors' above have been pre-qualified by the Heritage Consultant this does not exclude other qualified contractors from bidding.

1.8.6 Provide completed CCDC-11 document with bid for any other proposed contractor.

1.9 PRE-INSTALLATION CONFERENCE

1.9.1 Arrange and hold meeting with Heritage Consultant to review Work requirements, before starting Work.

1.10 SAMPLES

1.10.1 Submit samples in accordance with Section 01 33 00 – Procedures and Submittals or review samples on site with Heritage Consultant.

1.10.2 Submit clearly labeled samples of proposed replacement reinforced cast concrete sill unit to the Heritage Consultant for review and approval.

1.10.3 The reviewed samples shall become the standard materials used on the job. Substitutions should not be made without written approval from the Heritage Consultant.

1.11 SHOP DRAWINGS

1.11.1 Refer to Heritage Conservation Plan – Phase 1 for locations of cast concrete sill units and brick work required to be repaired. Dimensions to be taken onsite when access to area is available.

1.11.2 Check all dimensions and profiles on-site.

1.11.3 Show in detail the sizes, sections, dimensions, bedding, joint arrangement, bonding, anchorage, and other related details required to install the cast concrete sill units.

1.11.4 Provide full-size profiles for all profiled cast concrete sill units.

1.12 MOCK-UPS

1.12.1 Agree locations on the building for mock-ups with Heritage Consultant.

1.12.2 Mock ups to be reviewed by Heritage Consultant and Heritage Staff.

1.12.3 Provide one cast concrete sill unit replacement for the Heritage Consultant's review before starting work.

1.12.4 Provide mock-up of masonry unit repointing.

1.12.5 Provide mock-up of brick infill and repair around new door opening.

1.12.6 Obtain Heritage Consultant's approval of mock up prior to proceeding with the work. Do not make changes to approved standards without written approval from the Heritage Consultant.

1.12.7 Protect and maintain the approved samples as the quality standard for each masonry type, and match all work to the samples.

1.13 ACCEPTANCE AT SITE

1.13.1 Accept products of this section on site in new condition and verify that they are not damaged.

1.14 DELIVERY, STORAGE, AND HANDLING

1.14.1 Deliver, store and handle products in accordance with the Conditions of the Contract and as specified herein.

1.14.2 Remove unacceptable materials from site and replace to acceptance of Heritage Consultant. Store materials off ground protected from wetting by rain, snow or ground water, or inter-mixture with earth or other materials. Store metal ties and reinforcement to prevent corrosion.

1.14.3 Deliver mortar materials in original unbroken and undamaged packages with the maker's name and brand distinctly marked thereon. Prevent damage to units.

1.14.4 Keep units protected from concrete, mortar and other materials, which could cause staining.

1.14.5 Keep materials dry and protect from weather and contamination. Stack masonry units on non-staining wood pallets (cypress, poplar, white or hollow pine without excessive resin). Do not use pressure treated wood.

1.14.6 Protect sills and salvaged bricks with clean, well-secured plastic sheeting.

1.15 PROTECTION

1.15.1 Protect all workmen from the effects of dust during cutting-out operations.

1.16 ENVIRONMENTAL REQUIREMENTS

1.16.1 Store and mix materials at a minimum of 5˚C at all times.

1.16.2 Do not lay mortar when the air and/or substrate temperature is below 5˚C or when the temperature is expected to fall below 5˚C within 48 hours of installation of mortar, unless a heated enclosure is provided.

1.16.3 Provide heated enclosure for work below 5˚C for a minimum of 24 hours prior to the start of work and maintain that minimum temperature for minimum of 5 full days (120 hours) after mortar is laid.

1.16.4 Protect mortar from direct sunlight and wind with protective measures reviewed with Heritage Consultant when air temperature exceeds 20˚C.

1.16.5 Keep newly laid mortar moist during curing with misted water when the air temperature is above 25˚C.

1.16.6 Do not prepare or use mortar when the air temperature exceeds 35˚C.

1.16.7 Conform to cold weather masonry requirements of CAN3-A371-M and Recommended Practices for Cold Weather Masonry Construction by Ontario Masonry Contractor's Association.

1.17 EXISTING SITE CONDITIONS

1.17.1 Report to the Heritage Consultant in writing all areas of concealed masonry deterioration revealed during the work and await instruction regarding repair.

PART 2 - PRODUCTS

2.1 MATERIALS

2.1.1 Water: To be potable and free of salts and other impurities.

2.1.2 King 1:1:6 Type N Mortar.

2.1.3 Concrete for sills.

2.2 EQUIPMENT

2.2.1 Brushes: fibre-bristle or plastic.

2.2.2 Do not use metal brushes at any time.

PART 3 - EXECUTION

3.1 EXAMINATION

3.1.1 Inspect site and verify with the Heritage Consultant items designated to be replaced.

3.1.2 Bring to the Heritage Consultant's attention any discrepancies between site conditions and the contract documents and any other unusual conditions, which may affect the performance of the work of this Section.

3.2 PREPARATION

3.2.1 Photograph work area on all faces before starting work in accordance with Section 01 33 00 – Heritage Procedures and Submittals.

3.3 DISMANTLE MASONRY FOR SALVAGE AND REUSE

3.3.1 All removal is to be done by skilled trademen under the direction of a competent mason experienced in this type of work.

3.3.2 Take care not to damage masonry units.

3.3.3 Cut out identified masonry units and cut back cavity to full depth, height and width of complete unit, including all mortar bedding.

3.3.4 Clean disassembled masonry units of all mortar to full depth and, height and width.

3.3.5 Store masonry units on non staining wood paletts, covered and proteted from moisture and physical damage.

3.4 INSTALL NEW OR SALVAGED MASONRY UNITS

3.4.1 Pre wet adjacent masonry and thoroughly dampen masonry units and cavities immediately before reinstallation. Do not dampen if air temporature is below 5˚C.

3.4.2 Reinstate dismantled masonry pieces in reverse order as indicated by dismantled number. Take care not to damage stone units.

3.4.3 Lay stones in full bed of Type 1 mortar, properly jointed with other work. Buttering corners of joints, and deep or excessive furrowing of mortar joints are not permitted.

3.4.4 Make vertical joints equal and of uniform width as far as matching the existing work allows.

3.4.5 Fully bond intersections, and external corners.

3.4.6 Ensure that all joints are filled with mortar, including veritcal joints.

3.4.7 Where exposed to view, match jointing width and character to existing work. Squeeze joints tight, but do not slush.

3.4.8 Do not shift or tap masonry units after mortar has taken initial set. Where adjustments must be made, remove mortar and replace.

3.4.9 Perform job site cuttting with proper tools to provide straight unchipped edges. Take care to prevent breaking masonry unit corner or edges.

3.4.10 Remove excess mortar before it sets up.

3.4.11 Where exposed to view, complete stone resetting before repointing generally. Rake back joints ¾” (20mm) and allow for at least 72 hours before repointing.

3.4.12 Where work is concealed complete jointing as stones are laid.

3.5 TOLERANCES

3.5.1 Tolerances for relaying of all stonework unless matching up to existing work:

3.5.1.1 Variation from plumb: 3mm (1/8”) in 3000mm (10’-0”) maximum.

3.5.1.2 Variation from level coursing: 3mm (1/8”) in 3000mm (10’-0”) maximum.

3.5.1.3 Maximum variation from cross sectional thickness of walls: plus or minus 13 mm (1/2”).

3.5.1.4 Variation from straight: within 3mm (1/8”) under 3000mm (10’-0”) long straightedge.

3.6 CLEAN UP

3.6.1 Remove excess mortar and smears, which are left on exposed faces of masonry.

3.6.2 Use non-metallic tools in cleaning operations.

3.7 PROTECTION OF INSTALLED WORK

3.7.1 Maintain protective boards at exposed external corners which may be damaged by construction activities.

3.7.2 Provide protection without damaging completed work.

3.7.3 At end of working day, cover unfinished work to prevent moisture infiltration.

END OF SECTION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

1.1.1 Division 1, General Requirements, is part of this Section and shall apply as if repeated here.

1.2 SECTION INCLUDES

1.2.1 The Work of this Section covers the provision of all labour, materials, equipment, plant and products necessary for the completion of the provision of heritage sealants as indicated on the Drawings, as required to complete the project including but not limited to:

1.2.1.1 Provision of sealants at perimeter of new windows and new doors in existing openings;

1.2.1.2 Provision of sealants at perimeter of refurbished windows and skylights in existing openings;

1.2.1.3 Provision of sealants at perimeter of each replacement glass pane in refurbished steel window frames;

1.2.1.4 Provision of sealants at perimeter of each replacement glass pane in refurbished steel skylight frames.

1.3 RELATED SECTIONS

1.3.1	Section 01 33 00	Heritage Procedures and Submittals
1.3.2	Section 04 01 20	Heritage Masonry Restoration
1.3.3	Section 08 51 23	Metal Window Repair
1.3.4	Section 08 81 00	Heritage Glass and Glazing

1.4 INTENT

1.4.1 Provide sealants to ensure a weather-tight and waterproof assembly at new and refurbished windows, skylights, and doors.

1.5 REFERENCES

1.5.1 ASTM C-920, Type M, Grade NS, Class 25, use T, NT, M, G, A, O.

1.5.2 U.S. Federal Specification TT-S-00227E, Type II, Class A (2-component, chemical curing sealant).

1.5.3 U.S. Federal Specification TT-S-00230C, 1 component, silicone or polyurethane base, moisture curing.

1.5.4 CAN-19.13-M87, Sealing Compound, 1 component, elastomeric, chemical curing.

1.5.5 CAN/CGSB 19.24 – M90, Sealing Compound, multi-component, chemical curing.

1.6 SUBMITTALS

1.6.1 Submit Technical Data Sheets and MSDS of all products proposed for use as part of this section for review of Department Representative prior to beginning work on site;

1.6.2 Samples:

1.6.2.1 Submit samples of different colours for review and selection by Heritage Consultant before commencing work.

1.6.3 Mock Ups:

1.6.3.1 Test sealant in contact with samples of materials to be caulked to ensure that proper adhesion will be obtained and no staining of the material will result.

1.6.3.2 Prepare sample joints at the site of each tube of sealant for each joint condition as agreed with the Heritage Consultant.

1.6.3.3 Mock ups to be reviewed by Heritage Consultant and Heritage Staff.

1.6.4 Test Reports:

1.6.4.1 The substrate shall be tested by the manufacturer's representative for adhesion, and a written report forwarded to the Heritage Consultant and Applicator.

1.6.4.2 Obtain Heritage Consultant's written approval before proceeding with work.

1.7 QUALIFICATIONS

1.7.1 The contractor and personnel undertaking the Work of this Section shall specialize in commercial/industrial steel windows and be known to have been responsible for satisfactory installations equal to that specified for a period of at least the immediate past 5 years.

1.7.2 Pre-qualified sub-contractors for the sealant work of this Section include:

1.7.2.1 Albion Glass Co., Rocky Bruno, rocky@albionglass.ca, (416) 749-2777

1.8 STORAGE AND PROTECTION

1.8.1 Store all materials above 4 °C and below 25 °C at all times.

1.8.2 Keep materials dry and protected from weather and contamination.

1.8.3 Remove from site materials that have deteriorated or become frozen.

1.9 ENVIRONMENTAL REQUIREMENTS

1.9.1 Sealants are not to be applied when the temperature is above 25 °C or less than 5 °C , or during wet, dusty, foggy, or similarly adverse conditions.

1.9.2 Schedule cleaning to allow for at least one month for walls to dry after completion before heavy frost risk occurs.

1.9.3 Take proper precautions to prevent adjacent surfaces from becoming stained, marked or soiled during installation.

1.9.4 The applicator shall ensure that the surfaces to be sealed are sound and free from contaminants and suitable for the application of sealant. All joints shall be free of dust, water, debris or frost.

1.9.5 The substrata shall be tested by the manufacturer's representative for adhesion and a written report forwarded to the Heritage Consultant and Applicator.

1.9.6 The warranty will apply to failures due to defects of the whole by other trades if such defects were possible to detect by examination prior to application of sealant.

1.10 QUALITY ASSURANCE

1.10.1 The application of sealants is to be made by an approved and qualified applicator specializing in this type of work and known to have been responsible for satisfactory installations to that specified for a period of at least the immediate past five years.

1.10.2 Do all work in strict accordance with manufacturer's printed directions, using pressure guns and equipment approved by the sealant manufacturer.

1.11 EXTENDED WARRANTY

1.11.1 Provide a written warranty for a period of TWO (2) YEARS beyond the warranty period specified in the General Conditions to the Contract for making good of defects in materials and workmanship from date of final acceptance of the work.

1.11.2 Repair or replace any work judged defective and any other work damaged due to faulty or defective work of this trade, at no additional cost to the Owner during the term of warranty.

1.11.3 The following shall be judged defective work:

1.11.3.1 Leakage through joint.

1.11.3.2 Hardening, crumbling, melting, shrinkage, or running of the sealant.

1.11.3.3 Loss of adhesion or bond.

1.11.3.4 Staining of adjacent surfaces or work.

1.11.4 The warranty will not apply to failures due to defects of work by other trades if such defects were impossible to detect by examination prior to application of sealant.

1.12 ACCEPTANCE AT SITE

1.12.1 Manufacturers' labels and seals must be intact upon delivery of packaged materials. Keep samples of labeling for Heritage Consultant's review.

1.13 MAINTENANCE SERVICE

1.13.1 Provide maintenance data for sealant work.

PART 2 - PRODUCTS

2.1 MATERIALS

2.1.1 Sealant:

2.1.1.1 Exterior Sealant: multi-component polyurethane sealant conforming to CAN/CGSB-19.24-M90 such as Sikaflex 2c NS EZ Mix, or "Dymeric" by Tremco Manufacturing Co. (Canada) Ltd, or approved equal.

2.1.1.2 Interior Joints: Thermoplastic elastomer "TRS" by Tremco (Canda) Ltd.

2.1.1.3 Colour to be selected by Heritage Consultant.

2.1.2 Joint backing material: closed cell expanded neoprene 25% larger than joint to be filled.

2.1.3 Bond Breaker Tape: for installation where minimum specified depth of joint I unobtainable to prevent three sided adhesion. Pressure sensitive adhesive-backed polyurethane of PVC type, such as 266 or 481 by 3M Canada Ltd.

2.1.4 Joint cleaning solvent shall be type recommended by manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

3.1.1 Before commencing work, verify on site that joint configuration and surfaces have been provided as specified under the work of other Sections to meet the intent of sealant specification.

3.1.2 Defective work resulting from application to unsatisfactory joint conditions will be considered the responsibility of those performing the work of this Section.

3.2 PREPARATION

3.2.1 Ensure that surfaces to be sealed are structurally sound and free of contaminants such as mortar, oil or grease, which may adversely affect the adhesion of the sealing materials. Remove rust, mill scale by wire brushing.

3.2.2 Test sealant in contact with samples of materials to be caulked to ensure that proper adhesion will be obtained and no staining of the material will result.

3.2.3 Painted surfaces to be sealed shall be fully cured and dry.

3.2.4 Clean surfaces with cellulose sponges, or solvents such as ethyl alcohol, ketone or xylol. Clean pre-finished surfaces with a solution compatible with finish, primer and sealant.

3.2.5 Prime all joint surfaces by method recommended by the manufacturer to provide full adhesion and to prevent straining of face surfaces at joint.

3.2.6 Take proper precautions to prevent adjacent surfaces from becoming stained, marked or soiled during installation. Where necessary to prevent contamination of adjacent surfaces, mask areas adjacent to joints with masking tape. Remove tape immediately when joint is completed.

3.2.7 Install only when surfaces and ambient temperatures are suitable for the materials used.

3.2.8 Provide bond breaker between sealant and other materials spanning joint where backup rod cannot be provided because proper depth cannot be attained.

3.3 INSTALLATION

3.3.1 Install joint-backing material to ensure constant depth of sealant in the joint. Where the joint is less than 1/2” (13 mm) wide the depth of the sealant is to be equal to the width. Where the joint is 1/2” to 1” (13 mm to 25 mm) wide the sealant depth is to be approximately half of the joint width. Where the joint is greater than 1” (25 mm) wide, contact the manufacturer for instruction.

3.3.2 Ensure that a constant depth of sealant is maintained.

3.3.3 For non-porous materials such as metal and glass, both joint depth and width shall be not less than 1/4” (6 mm).

3.3.4 Ensure that a constant depth of sealant is maintained.

3.3.5 Sealant is to be kept back of the face of the metal and masonry 1/16” (2 mm).

3.3.6 Finish joints with full bead so that they are smooth and free from ridges, wrinkles, air pockets or embedded foreign materials.

3.3.7 Tool surface of joints to slight concave profile.

3.3.8 Use sealing materials of gun grade or tool grade consistency to suit joint condition.

3.3.9 Remove excess sealant or droppings that might set up or become difficult to remove from finished surfaces. Do not use chemicals, metal tools or scrapers that might affect the finished surfaces.

3.3.10 At painted surfaces, apply sealant after painting, matching sealant colour to that of paint and to Departmental Representative’s approval.

3.3.11 The following shall be judged defective work:

3.3.11.1 Leakage through joint.

3.3.11.2 Hardening, crumbling, melting, shrinkage, or running of the sealant.

3.3.11.3 Loss of adhesion or bond.

3.3.11.4 Staining of adjacent surfaces or work.

3.4 SEALANT APPEARANCE WITHIN EXISTING MORTAR JOINT

3.4.1 Where sealant is being provided in an existing mortar joint, sealant to match appearance of existing mortar.

3.5 APPLICATION

3.5.1 Install joint-backing material to ensure constant depth of 10 mm of sealant in joints less than 20 mm in width, and a constant 15 mm in depth for joints wider than 20 mm, at all locations as detailed or required. For non-porous materials such as metal and glass, both joint depth and width shall be not less than 6 mm.

3.5.2 Ensure that a constant depth of sealant is maintained.

3.5.3 Sealant is to be kept back of the face of the metal and masonry 2 mm.

3.5.4 Finish joints with full bead so that they are smooth and free from ridges, wrinkles, air pockets or embedded foreign materials.

3.5.5 Tool surface of joints to slight concave profile.

3.5.6 Use sealing materials of gun grade or tool grade consistency to suit joint condition.

3.5.7 Remove excess sealant or droppings, which might set up or become difficult to remove from finished surfaces. Do not use chemicals, metal tools or scrapers that might affect the finished surfaces.

3.5.8 At painted surfaces, apply sealant after painting, matching sealant colour to that of paint and to Heritage Consulant's approval.

3.6 CLEANING

3.6.1 Remove sealant smears, droppings, masking tape and any garbage resulting from the work of this Section immediately after completion of sealant work.

3.6.2 Do not use chemicals, scrapers, or other tools, which would damage surfaces of sealed materials when excess compounds or droppings are removed. Make good work damaged by cleaning by the Trade Contractor who has installed the damaged work and at the expense of this Section.

END OF SECTION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

1.1.1 Division 1, General Requirements, is part of this Section and shall apply as if repeated here.

1.2 SECTION INCLUDES

1.2.1 The Work of this Section covers the provision of all labour, materials, equipment, plant and products for the paint removal, cleaning, and repair of all steel windows in the South Building and select steel windows in the Bridge Section, replacement of select steel windows in the Bridge Section, as well as cleaning and repair of skylights in the South Building as indicated on the drawings, and including but not limited to:

1.2.1.1 Removal of all existing lead paint and asbestos putty from heritage steel windows and skylights down to bare metal substrate. Refer to Section 02 26 00;

1.2.1.2 Repair of broken and deteriorated steel window and skylight components;

1.2.1.3 Replacement of steel elements, as required;

1.2.1.4 Refurbishment of steel operator hardware;

1.2.1.5 Fastener replacement, as required;

1.2.1.6 Replacement of non-original and missing windows in Bridge Section with new to match original;

1.2.1.7 Recording and reporting of any damaged elements discovered during the work.

1.3 RELATED SECTIONS

1.3.1	Section 01 33 00	Heritage Procedures and Submittals
1.3.2	Section 02 26 00	Heritage Hazardous Materials
1.3.3	Section 07 90 00	Heritage Sealants
1.3.4	Section 08 81 00	Heritage Glass and Glazing
1.3.5	Section 09 90 00	Heritage Preparation and Painting

1.4 REPAIR INTENT

1.4.1 The intent of this Section is to:

1.4.1.1 Remove paint, soiling and-rust from all surfaces of the steel windows and skylights down to bare substrate to achieve a natural homogeneous finish without damaging the underlying surface of the material;

1.4.1.2 Provide repairs to existing steel windows and skylights to improve their soundness, stability, and operability while conserving the maximum amount of existing fabric and its existing character.

1.5 REFERENCES

1.5.1 Hazardous waste disposal: Comply with the requirements of the Ontario Environmental Protection Act and Regulation 309 covering the generation, transport and receipt at a designated disposal site of residue containing lead-based paint.

1.5.2 Steel work in accordance with CSA W47.1,W55.3, and W-59.

1.5.3 Steel Structures Painting Council Surface Preparation Standard SSPC-SP2.

1.5.4 Steel Structures Painting Council Surface Preparation Standard SSPC-SP10-63.

1.6 REGULATORY REQUIREMENTS

1.6.1 Hazardous waste disposal:

1.6.1.1 The underlying layers of the paint build-up on elements contain lead-based compounds.

1.6.1.2 Comply with the requirements of the Ontario Environmental Protection Act and Regulation 345, covering the generation, transport and receipt at a designated disposal site of lead-based paint residue.

1.6.1.3 Refer to the guidelines prepared by the Ministry of Labour, Occupational Health and Safety Branch for "Lead on Construction Projects" - April 2011

1.6.1.4 Consult the “Hazardous Building Materials Assessment” from Martech for information regarding hazardous materials.

1.6.1.5 Consult Martech for abatement procedures and specifications.

1.7 SUBMITTALS

1.7.1 Submit Technical Data Sheets and MSDS of all products proposed for use as part of this section for review of Department Representative prior to beginning work on site.

1.8 SAMPLES

1.8.1 Submit samples in accordance with Section 01 33 00 – Procedures and Submittals or review samples on site with Heritage Consultant.

1.8.2 Submit sample sections for each required steel profile Heritage Consultant for review.

1.8.3 Submit sample sections of steel welding to Heritage Consultant for review.

1.8.4 Submit samples of all replacement fasteners, brackets, plates, filler pieces, or other components to Heritage Consultant for review.

1.8.5 Do not proceed with work without written review.

1.9 SHOP DRAWINGS

1.9.1 Submit shop drawings for fabrication of replacement steel sections for repair of steel windows with missing components, showing the profile and dimensions of the elements to Heritage Consultant for review. Do not proceed with work without written review.

1.9.2 Check all dimensions of existing steel window frames on site before submitting shop drawings.

1.10 MOCK-UPS

1.10.1 Provide mock-ups on site for review by Heritage Consultant and Heritage Staff:

1.10.2 Clean down to bare substrate one square meter (1m2) of window frame;

1.10.3 Typical replacement of steel filler piece for steel windows with missing components;

1.10.4 Product sample of replacement steel windows installed in existing masonry opening.

1.10.5 Provide additional mock-ups on-site for review by Heritage Consultant if initial tests prove unsatisfactory.

1.10.6 Agree upon location and size of each mock-up with Heritage Consultant.

1.10.7 Provide 48 hour notice to Heritage Consultant of intent to commence mock-ups.

1.10.8 No work shall proceed until the mock-ups have been accepted by Heritage Consultant and Owner. The mock-ups shall establish the quality of the work against which all other work shall be performed.

1.11 QUALIFICATIONS

1.11.1 The contractor and personnel undertaking the Work of this Section shall specialize in commercial/industrial steel windows and be known to have been responsible for satisfactory installations equal to that specified for a period of at least the immediate past 5 years.

1.11.2 Manufacturer of new steel windows to have not less than 5 years of documented experience in manufacture of commercial/industrial steel windows.

1.11.3 Pre-qualified sub-contractors for the steel window repair work of this Section include:

1.11.3.1 Albion Glass Co., Rocky Bruno, rocky@albionglass.ca, (416) 749-2777

1.11.4 Pre-qualified sub-contractors for the replacement steel window manufacturing:

1.11.4.1 Bliss Nor-Am Doors & Windows Ltd., (416) 755-0880

1.12 DELIVERY, STORAGE, AND HANDLING

1.12.1 Protect windows during delivery and store in a dry, well ventilated place indoors and protect from injury.

1.12.2 Protect primed and painted components from damage to coating.

1.13 PROTECTION

1.13.1 Provide temporary protection to prevent wind and rain entering the building while windows are being repaired.

PART 2 - PRODUCTS

2.1 MATERIALS

2.1.1 Shop applied and on-site touch-up primer: Refer to Section 09 91 00 - Heritage Preparation and Painting

2.1.2 Metal filler for steel elements only: epoxy type with high proportion of metal particles

2.1.3 Steel for replacement: Steel, Structural Shapes, Plate, Bar: CAN/CSA-G40.20M and CAN/CSA-G40.21M. Dimensions and profiles to match existing.

2.1.4 Replacement fastener and connector elements: Stainless steel to match existing types and sizes.

2.1.5 Solvents: Varsol or similar, lacquer thinner, methanol, acetone.

2.1.6 Tools for paint removal:

2.1.6.1 Mechanical tools: Round off all sharp edges;

2.1.6.2 Scrub brushes: Wire brush;

2.1.6.3 Paint Stripper: To be a paste-type, heavy duty paint remover, that is formulated without methylene chloride or caustic. Product to be water-based, low-VOC, biodegradable, low-odor, and non-flammable.

2.1.7 Tools for repairs:

2.1.7.1 Reciprocating saw equipped with metal blades;

2.1.7.2 Rotating grinder tool;

2.1.7.3 Hammer and metal chisels;

2.1.7.4 Hand tools, scrapers, hook knives.

2.1.8 New window frames: Historic/Industrial Pivot Vent sections by Bliss Nor-Am Doors and Windows Ltd., from solid, hot-rolled carbon steel, minimum thickness 3 mm (1/8"), shop primed for site painting.

2.2 PAINT AND PUTTY REMOVAL

2.2.1 Remove all existing lead paint and asbestos putty from heritage steel windows and skylights down to bare metal substrate. Refer to Section 02 26 00 and consult Martech for abatement procedures.

2.3 FABRICATION AND ASSEMBLY OF NEW COMPONENTS

2.3.1 Fabricate work with materials, component sizes, metal gauges, reinforcing, anchors and fasteners of to match existing, unless specifically noted otherwise.

2.3.2 Ensure work remains free of warping, buckling, opening of joints and seams, distortion and permanent deformation.

2.3.3 Accurately cut, machine and fit joints, corners, copes and miters so that junctions between components fit tightly and in true planes.

2.3.4 Provide weld repair or connections where indicated on the drawings.

2.3.5 Provide fastener connection as indicated on the drawings.

2.3.6 Countersink bolt heads, and provide method to prevent loosening of nuts.

2.3.7 Weld joints tight, and in true planes. Make welds continuous at joints where entry of water into building or joint voids is possible.

2.3.8 Grind welds smooth where exposed to view.

2.3.9 Provide for differential movement within assemblies and at junctions with surrounding work.

2.3.10 Fit and shop assemble in largest practical sections for delivery to site.

2.3.11 Fabricate items with joints tightly fitted and secured.

2.3.12 Provide continuous welds at joined members where indicated on the drawings.

2.3.13 Grind exposed joints flush and smooth with adjacent finished surface. Make exposed joints butt tight, flush and hairline. Ease exposed edges to small uniform radius.

2.3.14 Make mechanical fastenings consistent with specification of component with which they are combined.

2.3.15 Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.4 REPAIR OF EXISTING MILD STEEL WINDOW FRAMES

2.4.1 Repair existing steel window frames on site, as shown on drawings and described in schedule.

2.4.2 Remove all glazing units prior to commencing repair work. Refer to Section 02 26 00 and consult Martech for abatement procedures.

2.4.3 As far as possible remove all spatted, delaminated or heavily rusted components (more than 25% of original section thickness lost) from frames to be repaired.

2.4.4 Replace missing, bent or otherwise defective components of frames, matching the existing configuration and assembly of elements. Refer to line 2.1.3 for information on material requirements for replacement steel components.

2.4.5 Finish metal surfaces smooth, even and free of nicks and scratches. Weld spatters and burrs must all be removed.

2.4.6 Grind exposed joints flush and smooth with adjacent existing and salvaged component surfaces. Make exposed joints butt tight, flush and hairline.

2.4.7 Ease all exposed edges to small uniform radius.

2.4.8 Wire brush areas of rusted metal down to sound, stable material in accordance with Steel Structures Painting Council standard SSPC-SP2.

2.4.9 At interior surfaces only, for non-structural surface damage, up to 2.5 mm (3/32") deep, make good with specified filler, restoring original profile and surfaces flush.

2.4.10 Cutting-out:

2.4.10.1 Cut out corroded elements where corrosion has diminished the thickness of the original material by more than 50%.

2.4.10.2 Cut-out areas to be rectangular in shape. Do not cut out patchwork-shaped areas. Remove smallest amount of original material possible within the confines of a rectangular cut-out.

2.4.10.3 Infill cut-out areas with material identical in size and thickness to the original material.

2.4.10.4 Infill material to be secured by continuous welds and ground flush.

2.5 FABRICATION OF NEW MILD STEEL WINDOW FRAMES

2.5.1 Shop fabricate new window frames in accordance with approved shop drawings, using specified shapes to match the frame assembly and configuration of the existing fixed frame and sash as closely as possible.

2.5.2 Fabricate new window frames square, true and free of distortions.

2.5.3 Join components with plug welds at 6" centres or as otherwise agreed with Consultant. Weld frame corners solidly.

2.5.4 Make tee muntins continuous from head to silt and from jamb to jamb and weld securely as junctions.

2.5.5 Finish metal surfaces, grind exposed joints and ease exposed edges.

2.6 REPLACEMENT OF MILD STEEL ELEMENTS

2.6.1 Replace mild steel elements as indicated on the Drawings.

2.6.2 Match original material type, sheet thickness, section sizes, and details when fabricating replacement pieces.

2.6.3 Match original methods of attachment for re-securing replacement pieces.

PART 3 - EXECUTION

3.1 EXAMINATION

3.1.1 Take site measurements of existing construction to which work of this Section must conform.

3.2 PREPARATION

3.2.1 Before installing replacement components, ensure that existing frames are securely fastened to the window jambs.

3.3 PAINT REMOVAL

3.3.1 Coordinate preparation and review of field samples with Heritage Consultant to ensure that testing work is carried out in a timely manner.

3.3.2 Do not use power tools on curved or moulded surfaces without prior approval of Heritage Consultant.

3.3.3 Perform work in a manner to reduce dust creation to lowest levels possible. All work will be subject to visual inspection and possible air monitoring. Any contamination of the surrounding areas indicated by visual inspection or air monitoring will require the complete enclosure and clean up of the affected areas.

3.3.4 Consult with Martech for removal of all hazardous material.

3.4 GENERAL REPAIR AND OVERHAUL OF EXISTING WINDOWS

3.4.1 Wire brush areas of rusted metal down to firm substrate in accordance with Steel Structures Painting Council Surface Preparation Standard SSPC-SP2.

3.4.2 At interior surfaces only, for non-structural surface damage, up to 2.5 mm (3/32") deep, make good with specified filler, restoring original profile and surfaces flush.

3.5 INSTALLATION OF NEW MILD STEEL WINDOW FRAMES

3.5.1 Cut anchoring lugs built into masonry, if necessary, to avoid damaging the frames when removing for repair.

3.5.2 Install frames to suit existing conditions, and plumb, level and straight to line, without warp or rack.

3.5.3 Anchor units securely to reveal masonry to support themselves and any anticipated superimposed loads using minimum of 6 - 4 mm (3/16") diameter x 75 mm minimum coated masonry screws at head, sill and midpoint.

3.5.4 Existing window reveals are straight so that frames can be inserted from interior or exterior.

3.6 CLEAN UP

3.6.1 Leave new and repaired window frames clean and ready to receive finish, glazing, hardware, sealants, etc., as applicable.

3.6.2 Remove from site all debris resulting from the Work of this Section, and leave finished work area clean and ready for other trades.

END OF SECTION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

1.1.1 Comply with Division 1, General Requirements, and all documents referred to therein.

1.2 SECTION INCLUDES

1.1.2 The Work of this Section covers the provision of all labour, materials, equipment, plant and products needed for provision of new glass and glazing units in the refurbished steel windows and skylights, as indicated on the Drawings.

1.3 RELATED SECTIONS

1.3.1	Section 01 33 00	Heritage Procedures and Submittals
1.3.2	Section 07 92 00	Heritage Sealants
1.3.3	Section 08 51 23	Heritage Steel Window Repair
1.1.3	Section 09 90 00	Heritage Preparation and Painting

1.4 RELATED DOCUMENTS

1.4.1 CAN/CGSB-12.1-M90 – Tempered or Laminated Safety Glass.

1.4.2 CAN/CGSB-12.3-M91 – Flat, Clear Float Glass.

1.5 SUBMITTALS

1.5.1 Conform to the requirements of Section 01 33 00, Submittal Procedures.

1.5.2 Submit shop drawings showing full scale glazing details for each type of frame or other element to be glazed under this Section. Details shall show frame and stop profiles, glass and glazing materials.

1.5.3 Submit duplicate 300 mm x 300 mm (12” x 12”) samples and assembly of each type and thickness of glass specified and fully representing the physical properties of the materials to be supplied. Samples to be reviewed onsite by Heritage Consultant and Heritage Staff.

1.5.4 Submit adequate written instructions for protection of completed work, for reglazing, and for proper methods and materials to be used in cleaning.

1.6 QUALIFICATIONS

1.6.1 The contractor and personnel undertaking the Work of this Section shall specialize in commercial/industrial steel windows and be known to have been responsible for satisfactory installations equal to that specified for a period of at least the immediate past 5 years.

1.6.2 Pre-qualified sub-contractors for the glass and glazing work of this Section include:

1.6.2.1 Albion Glass Co., Rocky Bruno, rocky@albionglass.ca, (416) 749-2777

1.7 DELIVERY, STORAGE AND HANDLING

1.7.1 Handle and store materials and products according to the manufacturer's recommendations, and so as to prevent damage. Deliver and store packaged materials and products in original, undamaged containers with manufacturer's labels and seals intact.

1.8 WARRANTY

1.8.1 Submit a ten (10) year warranty against defects in the insulating glass units and warrant them to be free from material obstruction of vision as a result of dust or film formation on the internal glass surfaces by any cause, under normal conditions, other than extrinsic glass breakage, but including breakage due to thermal shock and temperature differential due to inherent glass faults.

1.8.2 Warrant that glazing work is water and weather tight and free from distortion; that glazing materials will not deteriorate from exposure to the atmosphere and weather, will not be displaced, and will be free from permanent deformation under load; and that glass and insulating glass units will not be broken, cracked or scratched by causes resulting from defects in material, workmanship or design of glazing installation.

1.8.3 Cracked or scratched glass, shrinking, cracking, staining, hardening, sagging of glazing materials; loosening or rattling of glass; leaking of glazed joints will be considered defective work.

1.8.4 Warrant that glazing work is free from distortion; that glazing materials will not be displaced, and will be free from permanent deformation under load.

1.8.5 Warranty to be in a form acceptable to both the Owner and the Consultant.

PART 2 - PRODUCTS

2.1 MATERIALS

2.1.1 Glass: each unit bearing the manufacturer's label indicating quality, and thickness.

2.1.2 Tempered safety glass: CAN/CGSB-12.1, Type 2, Class B. Tempering shall be performed using the horizontal tong-free method. If roller lines are apparent within acceptable limits as determined by the Consultant, they shall be in horizontal direction after installation.

2.1.3 Laminated (tempered) safety glass: CAN/CGSB-12.1, Type 1, Class B, with 1.5 mm (0.060") thick clear polyvinylbutyral interlayer laminate.

2.1.4 Float Glass: CAN/SGSB-12.3, polished

2.1.5 Glazing Materials:

2.1.5.1 Shims: Pressure sensitive resilient extruded synthetic rubber and as recommended by the insulating glass unit manufacturer.

2.1.5.2 Spacers and setting blocks: 50 and 70 Durometer A hardness plus/minus 5 respectively, neoprene rubber. Resistance to sunlight, weathering, oxidation and permanent deformation under load are the prime essentials of the spacers and setting blocks.

2.1.5.3 Glazing Tape: Extruded ribbon shaped, non-drying, non-skinning, non-oxidizing polyisobutylene tape with continuous synthetic rubber spacer rod, sufficiently wide and thick a to completely cover the bite area of the glazing unit when the unit is pushed into place, “Polyshim” by Tremco Ltd., “Visionstrip” by Tremco Ltd., or other approved manufacture.

2.1.6 Glass Types:

2.1.6.1 Glass Type GL-1: Single glazed, ~490mm high x 340mm wide x 6 mm (1/4”) thick clear tempered glass with Low-E coating, for windows.

2.1.6.2 Glass Type GL-2: Single glazed, 12 mm (1/2”) thick clear tempered glass with Low-E coating, for skylights.

2.2 GLASS LOCATIONS

2.2.1 Glass type GL-1: All existing perimeter steel windows in the South Building and select steel framed punched windows in the Bridge Section, as indicated in the Drawings.

2.2.2 Glass type GL-2: Existing skylights in the South Building, as indicated in the Drawings.

2.3 FABRICATION

2.3.1 Accurately sized glass to fit openings allowing the clearances shown on the following tables.

2.3.1.1 Minimum glass clearances:

Thickness	Edge Clearances	Face Clearances
2 mm (18 oz. or 3/32”)	3 mm (1/8”)*	1.5 mm (1/16”)
3 mm (24 oz. or 1/8”)	3 mm (1/8”)*	3 mm (1/8”)
4 mm (32 oz.)	3 mm (1/8”)*	3 mm (1/8”)
5 mm (3/16”)	3 mm (1/8”)*	3 mm (1/8”)*
6 mm (7/32”)	5 mm (3/16”)	3 mm (1/8”)
6 mm (1/4”)	6 mm (1/4”)	3 mm (1/8”)
over 6 mm (1/4”)	6 mm (1/4”) or 3/4 times the glass thickness, whichever is greater	

*=where any dimension of glass exceeds 760 mm (30”) increase minimum edge clearance by 1.5 mm (1/16”)

2.3.1.2 Bite of glass edge on stop:

2.3.1.2.1 Up to 1270 mm united size (50 united inches): 6 mm (1/4”) minimum.

2.3.1.2.2 1270 mm to 2540 mm united size (50 to 100 united inches): 10 mm (3/8”) minimum

PART 3 - EXECUTION

3.1 EXAMINATION

3.1.1 Verify dimensions at the site before proceeding with fabrication of glazing units.

3.1.2 Ensure that the openings are free from distortion, and that the surfaces are free from protrusions that will obstruct face and edge clearances.

3.1.3 Ensure that ambient and surface temperatures are above 5°C (41°F) before, during and after application of glazing materials.

3.2 PREPARATION - GENERAL

3.2.1 Free rabbets, stops and glass edges of dust, dirt, moisture, oil and other foreign matter detrimental to glazing material adhesion.

3.2.2 Mask surfaces subject to staining, and wherever necessary to ensure neat appearance of the glazing materials, remove masking as work progresses.

3.3 INSTALLATION – GENERAL

3.3.1 Install glass according to material manufacturer's instruction, and as follows:

3.3.2 Remove and replace glazing stops in original locations, using original fasteners, securely set and undamaged.

3.3.3 Use setting blocks, spacers and, for wet glazing, shims, as required to properly support the glass, centered in place in the glazing space independent of the glazing materials and to uniformly distribute its load.

3.3.4 Use a minimum of two (2) setting blocks, located at the quarter points. Locate spacers at the jamb edges of glass, uniformly spaced at 600 mm (24") o.c. maximum, and 300 mm (12") maximum from top to bottom.

3.3.5 Prevent nicks, abrasion and other damage likely to develop stress on edges.

3.3.6 Set glass properly centered with uniform bite and face and edge clearance, free from twist, warp or other distortion likely to develop stress.

3.3.7 Leave labels on glass until it has been set and inspected and approved. Leave glass whole and without cracks, scratches or other defects and with settings in perfect condition at completion, to the acceptance of the Consultant. Remove rejected, broken or damaged glass due to defective materials or improper setting and replace with perfect materials. Units producing distorted vision shall be rejected and replaced at the reasonable discretion of the Consultant.

3.4 INSTALLATION – EXTERIOR GLAZING

3.4.1 Arrange for installed glass to have labels facing the interior. Ensure that sufficient space is left within the glazing space to allow thermal movement of glass without imposing stress on the glass.

3.4.2 Install heat treated safety glass with convex side facing the exterior.

3.4.3 Install wet glazing materials to obtain complete contact and adhesion over the full bite area of the unit and to be free from gaps, air bubbles and embedded foreign matter. Use primers where recommended by the glazing material manufacturer. Use sufficient bedding compound so that when glass is pressed into place, excess compound is forced well out around entire margin. Use shims to ensure maintenance of uniform face clearance. Where required on both sides of a unit, make shims coincident.

3.4.4 Install glazing tape to ensure complete contact and adhesion over the full bite area of the unit. Make joints only at corners of the unit. Use preshimmed glazing tape at glass installed with pressure plates. Fit tape accurately with tight joints, free from tension, gaps and cracks. After installation of the glass, the glazing tape shall not extend more than 3 mm (1/8”) above the line of the fixed stop. Remove and reglaze units where the glazing tape exceeds this tolerance.

3.4.5 Where visible or exposed to weather, finish gunned bead surfaces uniformly smooth and straight, to slope away from glass shedding water. Ensure a weathertight seal.

3.5 CLEANING

3.5.1 Clean and make good to the acceptance of the Consultant surfaces soiled or otherwise damaged in connection with this work. Pay the cost of replacing finishes or materials that cannot be satisfactorily cleaned.

3.5.2 Upon completion of the work, remove all debris, equipment and excess material resulting from this work from the site.

3.5.3 Leave the site in neat and tidy condition acceptable to the Consultant.

END OF SECTION

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

1.1.1 Division 1, General Requirements, is part of this Section and shall apply as if repeated here.

1.2 SECTION INCLUDES

1.2.1 The Work of this Section covers the provision of all labour, materials, equipment, plant and products necessary for the completion of heritage preparation and painting as indicated on the Drawings, as required to complete the project including but not limited to:

1.2.1.1 Preparation and painting of all steel windows, steel skylights and operating hardware;

1.2.1.2 Preparation and painting of the two heritage metal exterior lighting units on the south and west facades of the South Building;

1.2.1.3 Preparation and painting of interior masonry walls. Removal of loose and flaking existing lead paint - refer to Section 02 26 00.

1.2.1.4 Preparation and painting of interior wood structure (beams, columns, and decking). Removal of loose and flaking existing lead paint - refer to Section 02 26 00.

1.2.1.5 Preparation and painting of exterior wood fascia. Removal of loose and flaking existing lead paint - refer to Section 02 26 00.

1.3 RELATED SECTIONS

1.3.1	Section 02 26 00	Heritage Hazardous Materials
1.3.2	Section 07 90 00	Heritage Sealants
1.3.3	Section 08 80 00	Heritage Glass & Glazing
1.3.4	Section 08 51 00	Heritage Steel Window Repair

1.4 QUALIFICATIONS

1.4.1 The contractor and personnel undertaking the Work of this Section shall specialize in the area of work specified and be known to have been responsible for satisfactory work equal to that specified for a period of at least the immediate past 5 years.

1.5 INTENT

1.5.1 The intent of this Section is to:

1.5.1.1 Completely remove the existing steel finish down to bare clean metal to provide a clean surface ready for new coatings;

1.5.1.2 Apply to coatings to the steel that will protect the substrate;

1.5.1.3 Remove loose all loose or defective paint from the interior masonry walls to provide a clean, firm substrate ready for new coatings;

1.5.1.4 Apply to coatings to the masonry that will encapsulate existing lead paint and protect the substrate;

1.6 REFERENCES

1.6.1 Hazardous waste disposal: Comply with the requirements of the Ontario Environmental Protection Act and Regulation 309 covering the generation, transport and receipt at a designated disposal site of residue containing lead-based paint.

1.6.2 General: All paint, stains, thinners, cleaners and pigments shall conform to CGSB 1-GP-1 to 1-GP-189 where applicable, and to CGSP 1-GP-72 specification selection on use basis.

1.6.3 Comply with the recommended practices, as applicable, described in Architectural Painting Specification Manual as endorsed by the Ontario Painting Contractors Association.

1.6.4 Steel Structures Painting Council (SSPC) Handbook.

1.7 REGULATORY REQUIREMENTS

1.7.1 Hazardous waste disposal:

1.7.1.1 The underlying layers of the paint build-up on elements contain lead-based compounds.

1.7.1.2 Comply with the requirements of the Ontario Environmental Protection Act and Regulation 345, covering the generation, transport and receipt at a designated disposal site of lead-based paint residue.

1.7.1.3 Refer to the guidelines prepared by the Ministry of Labour, Occupational Health and Safety Branch for “Lead on Construction Projects” – April 2011

1.7.1.4 Consult the “Hazardous Building Materials Assessment” from Martech for information regarding hazardous materials.

1.7.1.5 Consult Martech for abatement procedures and specifications.

1.8 SAMPLES

1.8.1 Submit three 100 mm x 230 mm (4" x 9") "draw-downs" of each paint formula type and colour specified on applicable materials for Heritage Consultant’s and Heritage Staff’s review prior to commencement of the work.

1.8.2 Submit "draw-downs" with sufficient lead-time not to disrupt or cause delay to the Construction Schedule.

1.9 DELIVERY, STORAGE AND PROTECTION

1.9.1 Deliver materials to site in original unbroken containers bearing brand labels with maker's name. The presence of any unspecified materials on site shall be sufficient cause for rejection of all surfaces repainted under the contract at that time.

1.9.2 Store materials in dry, well-ventilated, safe place. Keep covered at all times and take all necessary precautions against fire.

1.9.3 Arrange with the Owner and Contractor for adequate enclosed space to store paint or finish products.

1.9.4 Protect adjacent surfaces and surfaces not to be painted from splashes and residues.

1.9.5 Ensure fire and health hazards are the absolute minimum and provide fire extinguishers at all paintwork areas and storage areas.

1.10 ENVIRONMENTAL REQUIREMENTS

1.10.1 Do not paint during or immediately following foggy, rainy or frosty weather, nor when the temperature is expected to go below 10˚C before the coating is dry.

1.10.2 Do not paint in excessively humid or windy weather, in direct sunlight above 27˚ C or on damp surfaces.

1.10.3 For winter working, maintain 10˚ C in enclosure for minimum of three days after painting to allow paint to set up.

1.11 WORKERS PROTECTION

1.11.1 Protective clothing and goggles: Workers shall wear personal protective equipment described in paint removal product data and authorities having jurisdiction.

1.11.2 Eating, drinking, chewing, and smoking are not permitted in the work area.

1.11.3 Workers shall wash hands and face when leaving the work area.

PART 2 – PRODUCTS

2.1 MATERIALS

2.1.1 General: Apply materials in strict accordance with manufacturer's printed instructions. All paint, stains, thinners, cleaners and pigments shall conform to CGSB 1-GP-1, to 1-GP-189 where applicable and to CGSB 1-GP-72 specification selection on use basis.

2.1.2 Interior masonry and wood primer: Benjamin Moore Fresh Start Multi-purpose Primer or approved equivalent.

2.1.3 Interior masonry and wood paint: Benjamin Moore Aura Waterborne Interior Paint or approved equivalent.

2.1.4 Exterior wood primer: Benjamin Moore Fresh Start Multi-purpose Primer or approved equivalent.

2.1.5 Exterior wood paint: Benjamin Moore Aura Waterborne Exterior Paint or approved equivalent.

2.1.6 Steel primers: Single-component zinc rich primer; Two-component mastic epoxy,

2.1.7 Steel paint: Two-component urethane topcoat;

2.1.8 Colours and finishes: As selected by Architect and Heritage Consultant.

2.1.9 Paints, enamels, fillers, primers and varnishes shall be ready-mixed products of listed manufacturers. Use thinners and cleaners as recommended by the paint manufacturer.

2.1.10 Do not mix products from different manufacturers.

2.1.11 Mineral Spirits: Varsol or similar.

2.1.12 Washing solution:

2.1.12.1 1 part Tri-sodium phosphate (TSP);

2.1.12.2 ¼ (one quarter) part Household dish washing liquid;

2.1.12.3 5 parts Bleach: 109% Sodium Hypochlorate solution (such as Javex);

2.1.12.4 15 parts warm water.

2.2 PAINT FORMULAE

2.2.1 Painting coats are intended to cover surfaces thoroughly; if, in the Painter's opinion the formulae specified are inadequate to provide a first-class fished surface, review with Heritage Consultant before commencing work. Surfaces imperfectly covered without such review shall receive additional coats at no additional cost.

2.2.2 For all interior masonry and wood prepared to firm substrate and indicated to receive new paint finish, as indicated on the Drawings, apply the following coatings: 1 coat primer; 2 coats paint.

2.2.3 For all exterior wood (fascia) prepared to firm substrate and indicated to receive new paint finish, as indicated on the Drawings, apply the following coatings: 1 coat primer; 2 coats paint.

2.2.4 For all steel elements prepared to clean, bare metal and indicated to receive new paint finish, as indicated on the Drawings, apply the following coatings: 1 coat single-component zinc rich epoxy primer; 1 coat mastic epoxy; 2 coats urethane topcoat.

2.3 EQUIPMENT

2.3.1 Mechanical tools: Round off all sharp edges.

2.3.2 Brushes: Natural bristle or soft plastic type only. Do not use metal brushes on masonry or wood.

2.3.3 Scrapers: Wood or plastic with rounded edges only. Do not use metal scrapers on masonry.

2.3.4 Abrasive pads: Light plastic type only. Do not use metal abrasive pads on masonry or wood.

2.3.5 Scrub brushes general: Natural bristle or soft plastic type.

2.3.6 Scrub brushes for metal work: Wire brush (for use on steel only).

2.3.7 Sandpaper: Garnet paper 180 grit to 220 grit, used with sanding block (for use on wood only).

PART 3 – EXECUTION

3.1 PAINT REMOVAL GENERALLY

3.1.1 Remove all existing loose and flaking lead paint from interior masonry walls down to firm substrate. Refer to Section 02 26 00 and consult Martech for abatement procedures.

3.2 SURFACE PREPARATION - GENERAL

3.2.1 Ensure surfaces to be painted are dry, clean and free of dust, dirt or foreign matter.

3.2.2 Perform work in a manner to reduce dust creation to lowest levels possible. All work will be subject to visual inspection and possible air monitoring. Any contamination of the surrounding areas indicated by visual inspection or air monitoring will require the complete enclosure and clean-up of the affected areas.

3.3 SURFACE PREPARATION – STEEL

3.3.1 Ensure all steel surfaces are prepared to bare substrate as indicated on the drawings. Refer to Section 08 51 00 - Heritage Steel Window Repair.

3.3.2 Wash existing metalwork to be finished after preparation to remove grease and dirt and to etch surface using specified washing solution.

3.3.3 Any surface rust shall be removed with a clean wire brush just before priming.

3.3.4 New cleaned iron shall be painted immediately with specified primer to avoid the formation of new rust.

3.4 SURFACE PREPARATION – MASONRY AND WOOD

3.4.1 Refer to the Designated Substances and Hazardous Materials Report before removal of any existing paint.

3.4.1.1 Use appropriate abatement methods for any paint removal.

3.4.2 Remove all loose and flaking paint from the interior masonry walls, interior wood structure, and exterior wood fascia

3.4.3 Clean existing masonry and wood surfaces before applying any primer.

3.4.3.1 For repainting, surfaces must be dry, clean and free of grease, wax, dust, fine particles and mildew.

3.5 PAINTING – GENERAL

3.5.1 Apply materials in strict accordance with manufacturer's printed instructions. Mix paints thoroughly to a uniform consistency.

3.5.2 Apply paint coats with even uniform sheen, colour and texture, free of runs, brush marks, sags, crawls and other defects. Patching will not be acceptable.

3.5.3 Mix paints thoroughly to a uniform consistency.

3.5.4 Remove all dust and fine particles from all surfaces before painting.

3.5.5 Mask, cover, protect and ventilate as required.

3.5.6 Cut straight, neat and true junction lines.

3.5.7 Finish concealed edges with 2 coats of finish.

3.5.8 Sand lightly between coats of paint and reseal knots. Do not fill surface imperfections unless they trap water or allow water into the substrate.

3.5.9 After first coat on wood, fill nail holes, splits or cracks with latex filler and rub smooth.

3.5.10 Do not paint when the temperature is 10˚ C or lower or on damp surfaces.

3.5.11 Any areas exhibiting incomplete or unsatisfactory coverage shall have the entire surface painted. Patching will not be acceptable.

3.5.12 Post "wet paint " signs adjacent to freshly painted elements in reach of the general public and remove when finishes are dry.

3.6 CLEAN-UP

3.6.1 Clean spatters, droppings, and smudges, caused by this work from adjacent surfaces upon completion.

3.6.2 Remove any hazardous materials as required for safe disposal.

3.6.3 Remove debris resulting from this work from the site.

END OF SECTION

PROJECT SPECIFICATIONS: 1352 LAKESHORE ROAD EAST, MISSISSAUGA SMALL ARMS HERITAGE BUILDING

PART 1: GENERAL

1.1 General and Related Work

.1 Read this section in conjunction with all other sections so as to comply with the requirements of Division 1, Division 2 and the General Conditions of the Contract.

.2 Related Work Specified Elsewhere:

-Division 02, Section 02 82 11 Asbestos Abatement - Type 2
-Division 02, Section 02 82 12 Asbestos Abatement - Type 3
-Division 02 Section 02 83 12 Type 3B Lead Abatement
-Division 01 Section 09 90 01 Heritage Paint Removal

Supplementary Guidelines:

Ontario Regulation 278/05 - Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations

Ontario Regulation 347 - General - Waste Management

.3 The site conditions identify the location and condition of all known Asbestos-Containing Materials (ACM) to be disturbed by the work of this section (Phase I Project Area). The specification fulfils the requirements of the report required by Ontario Regulation 278/05.

.4 Unless otherwise shown or specified it is the intent that work performed as per this section will result in the removal and disposal or decontamination of all friable and non-friable ACM included in work of this section and all materials which have been contaminated by friable ACM either during or prior to work of this section.

1.2 Site Conditions

.1 Asbestos-containing grey window putty in the gaps of the heritage window frames and glass on the interior and exterior of the perimeter walls.

.2 Asbestos-containing Transite panels were identified on the north and west walls of the former welding room. They are damaged and in poor condition.

.3 Asbestos-containing Transite debris in the old battery room.

.4 Asbestos-containing mechanical systems insulation (anti-sweat wrap) on pipe straights in the warehouse and leading to the north section of the first floor.

.5 Asbestos-containing mechanical systems insulation (cement parging) on pipe fittings in the warehouse and leading to the north section of the first floor.

.6 Asbestos-containing mechanical systems insulation (air-cel) on pipe straights leading to the north section of the first floor.

.7 Asbestos-containing thermal insulation panel on the bottom section of the boiler in the boiler room/basement.

.8 Asbestos-containing gasket material around the chimney door in the boiler room/basement at the bottom of the stairs. The material is damaged.

.9 Asbestos-containing vinyl floor tiles (12" x 12", beige with grey streaks), in the north section of the first floor, but within the Phase I area as well.

.10 Asbestos-containing black mastic beneath the vinyl floor tiles on the heritage concrete slab foundation in the north section of the first floor, but within the Phase I area as well.

.11 Asbestos-containing light grey caulking material in the gaps between the heritage window frames and exterior walls.

.12 Asbestos-containing grey caulking material in the gaps between sections of the exterior window ledges.

.13 Asbestos-containing dark grey caulking in the gaps between the doorframe and east exterior wall.

.14 Asbestos-containing black window putty in the gaps between the doorframe and east exterior wall.

.15 Pipes insulated with friable asbestos insulations may be present in inaccessible spaces such as above solid ceilings, in chases, in column enclosures and within shafts.

.16 Any existing Heat and Smoke detectors to remain live throughout work.

.17 Sprinklers may be live throughout work.

1.3 Outline of Work

.1 Many of the areas in the building are asbestos containing and lead paint containing. Due to the high concentrations of lead throughout the work area, including the ceiling, and the large amount of asbestos abatement that needs to be done in the same areas, it is likely that the contractor will choose to do all the abatement work at once. This would be done under an all-encompassing Asbestos Type 3 Operation, which would enable all work throughout the Phase I area to be done at one time, under one containment. The containment will be both indoors and outdoors. The contractor should be aware that the work is being done in a heritage building and as such care should be taken where heritage items are noted. The outline of work and specifications in this document are following specifications of a Type 3 Operation as regulated under Ontario Regulation 278/05. These specifications are in conjunction with the lead abatement specifications additionally submitted.

1.4 Schedule

.1 This building is vacant and there is no limit on working hours.

.2 Packaging and removal of light fixtures, lamps and PCB ballasts to be completed prior to commencement of specified Type 3 asbestos abatement work.

.3 Work schedule to comply with the City of Mississauga tender package.

1.5 Definitions

.1 Asbestos: Any of the fibrous silicates defined in Regulation 278/05 including: actinolite, amosite, anthophyllite, chrysotile, crocidolite and tremolite.

.2 Asbestos Abatement Consultant: Owner’s Representative providing inspection and air monitoring.

.3 Asbestos Abatement Contractor: Contractor or sub-contractor performing work of this section.

.4 Asbestos-Containing Material(s) (ACM): Material(s) identified under Site Conditions including debris, fallen material and settled dust.

.5 Asbestos Work Area: Area where work takes place which will, or may, disturb ACM.

.6 Authorized Visitors: Prime Contractor, Building Owner or Representatives, Asbestos Abatement Consultant, and persons representing regulatory agencies.

.7 Competent Worker: A worker who is qualified because of knowledge, training and experience to perform the work, is familiar with Regulation 278/05 and the Occupational Health and Safety Act, and has knowledge of the potential or actual danger to health and safety in the work.

.8 DOP Testing (or HEPA Integrity Test): Testing performed on HEPA Filtered Negative Pressure Machines and HEPA vacuums using DOP or equivalent. Testing shall ensure that total penetration from the unit does not exceed 0.03%, or 99.97% efficient of airborne particulate removal. DOP Testing must be in compliance with ASME N510-1989 (1995) and must be performed using a Temporary Mixing Chamber with installed baffles to allow uniform mixing of challenge aerosol.

.9 Fitting: Section of pipe other than straight uninterrupted sections including elbows, valves, tees, hangers, nipples, union or ends.

.10 Friable Material: means a material when dry can be crumbled, pulverized or powdered by hand pressure or is crumbled, pulverized or powdered.

.11 HEPA Filter: High Efficiency Particulate Arresting filter that is at least 99.97 percent efficient in collecting a 0.3 micrometre aerosol.

.12 PCM: Phase Contrast Microscopy.

.13 Polyethylene: Either polyethylene sheeting or rip-proof polyethylene sheeting (as specified) with tape along edges, around penetrating objects, over cuts and tears, and elsewhere as required to provide a continuous polyethylene membrane to protect underlying surfaces from damage, and to prevent escape of asbestos fibres through sheeting into Occupied Areas.

.14 Occupied Area: Any area of the building outside the Asbestos Work Area.

.15 Personnel: All contractors' employees, sub-contractors employees, supervisors.

.16 Remove: Remove means remove and dispose of (as applicable type of waste) unless followed by other instruction (e.g. remove and turn over to Owner).

.17 TEM: Transmission Electron Microscopy.

.18 ULPA filter: Ultra-low particulate airfilters are closely related to HEPA filters but are even more efficient. ULPA filters are specified to remove 99.999% of contaminants 0.12 μm or larger in diameter.

1.6 Submittals

.1 Submit prior to starting work:

.1 Workplace Safety and Insurance Board Clearance Certificate.

.2 Insurance certificates.

.3 Copy of Company Health and Safety Policy and applicable Programs.

.4 Copy of Certificate of Approval for transportation of asbestos waste and location

of landfill.

.5 Ministry of Labour Notice of Project form.

.6 Copy of Certificate of Approval for transportation of asbestos waste and location of landfill.

.2 Submit the following information regarding personnel prior to starting work:

.1 Proof in the form of a certificate that supervisory personnel have attended the Ministry of Training, Colleges and Universities course 253S.

.2 Proof in the form of a certificate that workers have been certified under the Ministry of Training, Colleges and Universities course 253W.

.3 WHMIS training certificates for all personnel.

.4 Certificate proving that each worker on site has been fit tested for the respirator appropriate for the work being performed.

.3 Submit the following information regarding HEPA filtered devices prior to construction of enclosure or asbestos abatement:

.1 Performance data on HEPA filtered vacuums including DOP tests no more than 3 months old.

.2 Performance data on negative air units including DOP tests which must be no more than 3 months old if the unit is vented outdoors or which must be performed on site immediately prior to initial usage and when HEPA filters are changed or the unit is vented indoors.

.3 DOP tests to be performed by an independent testing company.

.1 DOP testing company is required to submit a detailed technical report of testing protocol, including Introduction, Methodology, Results, Conclusions, and Recommendations, including results of the Air-Aerosol Mixing Uniformity test as per ASME N510-1989 (1995).

.2 DOP testing company must also provide calibration certificates from an independent calibration firm or from the manufacturer of the testing equipment for both the aerosol photometer and the pressure gauge on the aerosol generator dated within 1 calendar year from the on-site testing date.

.3 DOP testing company must also provide the National Sanitation Foundation (NSF) certification name and number of the on-site technician performing the testing.

.4 Submit the following prior to isolating the work area:

.1 Written statement that the Ground Fault Interrupter Panels use CSA approved parts and has been inspected by the Electrical Safety Authority.

.2 Material Safety Data Sheets for chemicals or material used in the course of the Asbestos Abatement Project.

.5 Submit the following upon completion of the work.

.1 Manifests, waybills, bills of ladings etc. as applicable for each type of waste.

1.7 Regulations

.1 Comply with Federal, provincial, and local requirements, provided that in any case of conflict among those requirements or with these Specifications the more stringent requirements shall apply. Work shall be performed under regulations in effect at the time work is performed. Regulations include but are not limited to the following:

.2 Ministry of Labour Occupational Health and Safety Act Regulations for Construction

Projects including Revised Statutes of Ontario 1990, Chapter 0.1 and Ontario Regulation 278/05.

.3 Ministry of Transportation Regulations for the transport of asbestos waste, including the Transportation of Dangerous Goods Act.

.4 Ministry of the Environment Regulations for the disposal of asbestos waste, including R.R.O. 1990, Reg. 347 as amended.

1.8 Supervision

.1 Provide on-site, a supervisor, with authority to oversee all aspects of the work, including but not limited to, health and safety, methods, scheduling, labour and equipment requirements.

.2 The supervisor must be on site at all times during work at risk of disturbing ACM. Failure to comply with this requirement may result in a stoppage of work, at no cost to the City of Mississauga.

.3 Provide a minimum of one supervisor for every 10 workers.

.4 Replace supervisory personnel, with approved replacements, within 3 working days of a written request from the Asbestos Abatement Consultant. Asbestos Abatement Consultant reserves the right to request replacement of supervisory personnel without explanation.

.5 Do not replace supervisory personnel without written approval from the Asbestos Abatement Consultant.

.6 The owner reserves the right to interview potential superintendents. The owner may reject or accept any superintendent without explanation.

1.9 Quality Assurance

.1 Ensure the removal and handling of ACM and asbestos contaminated materials is performed by persons experienced in the methods, procedures and industry practices of asbestos and lead paint abatement.

.2 Complete work so that at no time airborne asbestos, visible solid residue, or water runoff contaminates areas outside Asbestos Work Area. Asbestos Abatement Consultant is empowered to order a shutdown of work when a leak has occurred or is likely to occur. Cost of additional work by Asbestos Abatement Contractor and/or Asbestos Abatement

Consultant to rectify unsatisfactory conditions shall be charged to the Asbestos Abatement Contractor.

.3 Perform all work involving other trades such as electrical, mechanical, carpentry, glazing etc. using licensed persons experienced and qualified for the work required.

.4 The Asbestos Abatement Consultant will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs required for the Work in accordance with the applicable construction safety legislation, other regulations or general construction practice. The Asbestos Abatement Consultant will not be responsible for or have control or charge over the acts or omissions of the Asbestos Abatement Contractor, his Subcontractors or their agents, employees or other persons performing any of the Work.

1.10 Notification

.1 Before commencing work, notify orally and in writing, an inspector at the office of the Ontario Ministry of Labour nearest the project site.

.2 Notify Sanitary Landfill site as per Ontario Regulation 347 as amended.

.3 Inform all sub trades of the presence of ACM identified in the contract documents.

.4 Notify the City of Mississauga or the City of Mississauga 's Representative, the Joint Occupational Health and Safety Committee and the Ontario Ministry of Labour, as required by Regulation 278/05, if friable materials not identified in the contract documents are discovered during the course of the work. Stop work in these areas immediately.

1.11 Insurance

.1 Maintain a Commercial General Liability Policy with an insurance company acceptable to THE CITY OF MISSISSAUGA. The intent of this policy is to hold THE CITY OF MISSISSAUGA harmless as it relates to claims for Bodily Injury or Property Damage or both, relating to the contract. Commercial General Liability insurance shall be provided on an “occurrence” basis to cover injury or damage (whether detected or not during the policy period) which happens during the policy period.

.2 Maintain an Automobile or Fleet Policy, and Non-owned Automobile Policy with an insurance company acceptable to THE CITY OF MISSISSAUGA. The intent of these policies is to hold THE CITY OF MISSISSAUGA harmless as it relates to claims for Bodily Injury or Property Damage or both, relating to the contract.

.3 Maintain a Pollution Liability Policy (or asbestos liability policy or specific coverage under the CGL for asbestos abatement) with an insurance company acceptable to THE CITY OF MISSISSAUGA. The intent of this policy is to hold THE CITY OF MISSISSAUGA harmless as it relates to claims for Bodily Injury or Property Damage or both, relating to the contract. Pollution Liability shall be provided on an "occurrence" basis to cover injury or damage (whether detected or not during the policy period) which happens during the policy period. Without limiting the generality of the foregoing, the policy shall insure the operations of asbestos abatement and shall not contain any environmental and/or health hazard exclusions relating to remediation operations including asbestos abatement.

.4 Forward all certificates to THE CITY OF MISSISSAUGA before work is commenced, showing THE CITY OF MISSISSAUGA as additional insured as their interest may appear.

.5 THE CITY OF MISSISSAUGA may request a certified true copy of the policies.

.6 The limits will not be less than:

.1 Commercial General Liability $5,000,000.00
.2 Automobile $2,000,000.00
.3 Pollution Policy (Asbestos Liability) $2,000,000.00

1.12 Instruction and Training

.1 Provide instruction and training to all workers including the following:

.1 Hazards of asbestos.

.2 Use, care and disposal of protective equipment (including but not limited to respirators and filters) and clothing that would be used and worn during abatement work, including:

.1 Limitations of equipment.
.2 Inspection and maintenance of equipment.
.3 Proper fitting of equipment.
.4 Disinfecting and cleaning of equipment.

.3 Personal hygiene to be observed when performing the work.

.4 The measures and procedures prescribed by this section.

.2 Instruction and training must be provided by a competent person.

1.13 Personal Protection

.1 Protect all personnel at all times when possibility of disturbance of ACM exists.

.2 Provide the following respiratory protection to all personnel:

.1 Full Face Powered Air Purifying Respirators with P100 high efficiency (HEPA) cartridge filters during project when performing wet abatement of all friable ACM and lead paint specified in this section.

.2 Non-powered half-face respirators with P100 high efficiency (HEPA) cartridge filters for dismantling of Type 3 enclosures, using Type 2 Procedures.

.3 Respirators shall be:

.1 Certified by the National Institute of Occupational Safety and Health (NIOSH) or other testing agency acceptable to the Ministry of Labour.

.2 Fitted so that there is an effective seal between the respirator and the worker's face. Ensure that no person required to enter an Asbestos Work Area has facial hair which affects the seal between respirator and face.

.3 Assigned to a worker for their exclusive use.

.4 Maintained in accordance with manufacturer's specifications.

.5 Cleaned, disinfected and inspected by a competent person after use on each shift, or more often if required.

.6 Repaired or have damaged or deteriorated parts replaced.

.7 Stored in a clean and sanitary location.

.8 Provided with new filters as necessary, according to manufacturer's instructions.

.1 Replace cartridge filters for negative pressure respirator every 16 hours of wear unless tested on site.

.2 Replace PAPR cartridge filters every 8 hours of wear unless tested on site.

.3 Mark filters for rotation and regular replacement.

.9 Worn by personnel who have been fit checked by qualitative or quantitative fit testing. Instruction must be provided by a competent person as defined by the Occupational Health and Safety Act.

.4 Provide protective clothing, to all personnel which:

.1 Is made of a material that does not readily retain nor permit penetration of asbestos fibres.

.2 Consists of head covering and full body covering that fits snugly at the ankles, wrists and neck.

.3 Is replaced or repaired if torn or ripped.

.4 Is disposed of as ACM.

.5 Wear hard hats, safety shoes and other personal protective equipment required by applicable construction safety regulations.

.6 Provide site specific instruction to workers before allowing entry to Asbestos Work Area. Instruction shall include training on entry and exit from Asbestos Work Areas. Instruction must be provided by a competent person as defined by the Occupational Health and Safety Act.

.7 Provide soap, shampoo and towels for use by all personnel when leaving the Asbestos Work Area.

.8 Prohibit smoking, eating, drinking, chewing in the Asbestos Work Area and Decontamination Facilities.

1.14 Asbestos Abatement Work Area Entry Procedures

.1 Use the following procedure to enter contaminated Asbestos Work Area:

.1 Remove street clothes in Clean Change Room.

.2 Put on respirator with new or tested filters, and protective clothing in Clean Change Room or clean side of Shower Room.

.3 Store all street clothes, uncontaminated footwear, towels, etc. in the Clean Change Room.

1.15 Asbestos Abatement Work Area Exit Procedures

.1 Use the following procedure to exit contaminated Asbestos Work Area:

.1 Remove gross contamination from protective clothing using HEPA/ULPA vacuum or by wet wiping.

.2 Proceed to Equipment and Access Room and remove all contaminated clothing and equipment except respirator.

.3 Store contaminated footwear, hard hats, etc. in Equipment and Access Room.

.4 Proceed naked to shower while still wearing respirator.

.5 Shower, cleaning outside of respirator with soap and water. Thoroughly wet body, head and hair, remove respirator and wash body, head and hair. Wet clean inside of respirator face piece.

.6 Remove filters for testing or dispose of in container provided for this purpose. Remove after leaving the Shower but prior to entering the Clean Change Room.

.7 Proceed to the Clean Change Room, dry off and dress in street clothing.

.8 Maintain and disinfect respirator.

1.16 Authorized Visitor Protection

.1 Provide clean protective clothing and equipment, and approved respirators to Authorized Visitors.

.2 Ensure Authorized Visitors have received required training prior to granting entry into Asbestos Work Area.

1.17 Air Monitoring

.1 Air monitoring will be performed following the National Institute for Occupational Safety and Health method 7400, Asbestos and other fibres by PCM (Phase Contrast Microscopy).

.2 Co-operate with the Asbestos Abatement Consultant in collection of air samples, including providing workers to wear sampling pumps for up to full-shift periods. Asbestos Abatement Contractor to exercise care with Asbestos Abatement Consultant's equipment. The City of Mississauga reserves the right to back-charge the Asbestos

Abatement Contractor for further collection of samples damaged by tampering or abuse. In addition, the Asbestos Abatement Contractor will be responsible for the cost of testing equipment repairs resulting from the actions of the Asbestos Abatement Contractor's forces.

.3 Results of air monitoring of 0.05 fibres per millilitre of air (fibre/mL) or greater, outside of Asbestos Work Area, will indicate asbestos contamination of these areas and result in the following actions:

.1 Suspend Work within the adjoining Asbestos Work Area until written authorization to resume Work has been received from the Asbestos Abatement Consultant.

.2 Isolate and clean area in the same manner applicable to the Asbestos Work Area.

.3 Maintain Work area isolation, and repeat clean-up operations until visual inspection and air monitoring results are at a level equal to that specified.

.4 Install additional negative air units at locations specified in response to elevated fibre levels being detected in the Clean Change Room or Occupied Areas at the discretion of the Asbestos Abatement Consultant.

.4 Perform the following where results of air monitoring within the Asbestos Work Area show airborne fibre levels have exceeded the respirator protection factor:

.1 Immediately stop Work within the Asbestos Work Area.

.2 Instruct workers to exit the Asbestos Work Area via the Worker Decontamination Facility while observing specified personal decontamination procedures.

.3 Contractor's forces shall not re-enter the Asbestos Work Area until authorized by the Asbestos Abatement Consultant.

.4 Upon re-entry to the Asbestos Work Area, mist any fallen debris or exposed surfaces with amended water using an airless sprayer.

.5 If PCM monitoring shows repeated failure, change respiratory protection to suitable alternative and change unsatisfactory methods used.

.5 PCM samples will be collected from within the Asbestos Work Area, after the site has passed a visual inspection and an acceptable coat of post removal sealant has been applied. These airborne fibre levels must be less than 0.01 fibre/mL, after forced air monitoring and PCM analysis (Air Monitoring Clearance Inspection).

If these results show fibre levels in excess of 0.01 fibre/mL:

.1 Maintain Asbestos Work Area isolation.

.2 Re-clean entire Asbestos Work Area.

.3 Apply another acceptable coat of post removal sealant to exposed surfaces throughout the Work area.

.4 Repeat above measures until visually inspected and air monitoring results are at a level equal to that specified.

.5 Alternate to items 2-4 above, the Asbestos Abatement Contractor can pay for analysis of samples by Transmission Electron Microscopy (TEM). Laboratory performing TEM analysis is to be NVLAP accredited.

.6 Cost of additional inspection and sampling performed as a result of elevated fibre levels may be charged to the Asbestos Abatement Contractor at the City of Mississauga's discretion.

1.18 Inspection

.1 From commencement of work until completion of clean-up operations, the Asbestos Abatement Consultant will be present periodically on site both inside and outside the Asbestos Work Area.

.2 The following Milestone Inspections will take place, at the City of Mississauga's cost:

.1 Milestone Inspection A - Clean Site Preparation
.1 Inspection of preparations and set-up prior to contaminated work in the Asbestos Work Area.

.2 Milestone Inspection B - Contaminated Perimeter Preparation
.1 Inspection of preparations at perimeter of Asbestos Work Area.

.3 Milestone Inspection C - Before Bulk Removal
.1 Inspection of Asbestos Work Area prior to start of major ACM removal.

.4 Milestone Inspection D - Visual Clearance
.1 Inspection of Asbestos Work Area after removal of all asbestos, but prior to application of lock-down agent.

.5 Milestone Inspection E - Air Monitoring Clearance

.1 Inspection and air monitoring after the application of lock-down agent, but prior to removal of Polyethylene from within the Asbestos Work Area.

.6 Milestone Inspection F - Dismantling Inspection

.1 Inspection after removal of Polyethylene prior to dismantling perimeter seal and decontamination facility.

.3 Do not proceed with next phase of Work until written approval of each milestone is received from the Asbestos Abatement Consultant.

.4 In addition to the Milestone Inspections, inspection of the Asbestos Work Area may be performed to confirm the Asbestos Abatement Contractor's compliance with the requirements of the contract documents and governing authorities. Any deviations from these requirements that have not been approved in writing, may result in a stoppage of work, at no additional cost to the City of Mississauga.

.5 The Asbestos Abatement Consultant is empowered by the Owner to inspect for final cleanliness at completion. Additional labour or materials expended by the Asbestos Abatement Contractor to provide satisfactory performance to the level specified shall be at no additional cost.

.6 Inspection and air monitoring performed as a result of Asbestos Abatement Contractor's failure to perform satisfactorily regarding quality, safety, or schedule may be charged to the Asbestos Abatement Contractor at the City of Mississauga's discretion.

1.19 Differential Pressure Monitoring

.1 Install differential pressure monitor at a location chosen by the Asbestos Abatement Consultant.

.2 Replace damaged or non-functional equipment at the request of the Asbestos Abatement Consultant.

.3 Co-operate with the Asbestos Abatement Consultant in collection of pressure monitoring data.

.4 Maintain specified differential pressure at monitoring location. Negative air pressure is to be -0.02 inches of water, relative to the area outside the enclosed area

.5 Record data at start and end of shift and maintain records on file.

.6 Stop contaminated work and take corrective action if pressure differential drops below the specified level. Notify Asbestos Abatement Consultant immediately.

END OF SECTION

PART 2: PRODUCTS AND FACILITIES

2.1 Materials and Equipment

.1 All materials and equipment brought to work site must be in good condition and free of asbestos, asbestos debris, lead debris and fibrous materials.

.2 Airless Sprayer: AC powered pressure washer that allows wetting agent to mix with water, uses no air or compressed air, and has a nozzle to regulate power and pressure.

.3 Amended Water: Water with wetting agent added for purpose of reducing surface tension to allow thorough wetting of ACM.

.4 Asbestos Waste Container: An impermeable container acceptable to disposal site and Ministry of the Environment comprised of one of the following:

.1 A 6 mil (0.15 mm) labelled yellow sealed polyethylene bag, inside a second clear 6 mil (0.15 mm) sealed polyethylene bag.

.2 A 6 mil (0.15 mm) sealed polyethylene bag, positioned inside or outside a rigid sealed container of sufficient strength to prevent perforation of the container during filling, transportation and disposal.

.3 Labelled containers as required by the Ontario Ministry of the Environment Reg. 347 as amended and Regulation 278/05.

.5 Differential Pressure Monitor: a high precision instrument for measuring and controlling pressure differences in the low range, between the Asbestos Work Area and occupied area. Acceptable Product: Magnehelic gauge (Cat. No. 2000-00) manufactured by Dwyer Instruments Inc. or equivalent. Calibrate regularly to manufacturer's instructions.

.6 Discharge Ducting: Polyethylene Tubing. Reinforced with wire. Diameter equal to negative pressure machine discharge. Not to be longer than required, or so long that negative pressure is compromised.

.7 Ground Fault Panel: Electrical panel as follows:

.1 Ground fault circuit interrupters of sufficient capacity to power temporary electrical equipment and lights in Asbestos Work Area.

.2 Interrupters to have a 5 mA ground fault protection.

.3 Necessary accessories including main switch disconnect, ground fault interrupter lights, test switch to ensure unit is working, and reset switch.

.4 Openings sealed to prevent moisture or dust penetration.

.5 Inspected by the Electrical Safety Authority.

.6 Panel uses CSA approved parts and been constructed, inspected and installed by a licensed electrician.

.8 HEPA Filtered Negative Pressure Machine: Portable air handling system which extracts air directly from the Asbestos Work Area and discharges the air to the exterior of the building. Equipped as follows:

.1 Prefilter and HEPA filter. Air must pass HEPA filter before discharge.

.2 Pressure differential gauge to monitor filter loading.

.3 Auto shut off and warning system for HEPA filter failure.

.4 Separate hold down clamps to retain HEPA filter in place during change of prefilter.

.9 HEPA Vacuum: High Efficiency Particulate Arresting (HEPA) filtered vacuum equipment with a filter system capable of collecting and retaining 0.3 micron spherical particles greater than 0.3 microns at 99.97% efficiency.

.10 Hose: Leak-proof, minimum busting strength of 200 PSI or greater if required, abrasion resistant covering, reinforcing, and machined-brass couplings. Maintained and tested. Hose to be temperature resistant if it is to carry domestic hot water.

.11 OSB: Oriented Strand Board.

.12 Polyethylene Sheeting: 6 mil (0.15 mm) minimum thickness unless otherwise specified in sheet size to minimize joints. New materials only.

.13 Post Removal Sealant (or Lockdown): Sealant that when applied to surfaces serve the function of trapping residual asbestos fibres or other dust. Product must have flame spread and smoke development ratings both less than 50. Product shall leave no stain when dry. Post Removal Sealant shall be compatible with replacement insulation or fireproofing where required and capable of withstanding service temperature of substrate. Apply to manufacturer’s instructions.

.14 Protective Clothing: Disposable full body coveralls complete with hoods manufactured of a material which does not permit penetration of asbestos fibres. Coveralls to fit snugly at ankles, wrists and neck. Acceptable materials: Dupont Tyvek or Kimberly Clark Kleenguard.

.15 Rip-Proof Polyethylene Sheeting: Minimum requirements 8 mil (0.20 mm) fabric made up from 5 mil (0.13 mm) weave and 2 layers of 1.5 mil (0.05 mm) poly laminate or approved equal. In sheet size to minimize on-site seams and overlaps. New materials only.

.16 Shower Hose: Water lines for supply of hot & cold water to shower facilities to be rated for use at 200 PSI (1380 kPa) or twice the working pressure whichever is greater. Supply lines to be continuous and free of fittings, joints or couplings.

.17 Sprayer: Garden type portable manual sprayer or water hose with spray attachment if suitable.

.18 Tape: Duct tape or tape suitable for sealing polyethylene to surfaces under both dry and wet conditions in the presence of Amended Water.

.19 Wetting Agent: Non-sudsing surfactant added to water to reduce surface tension and increase wetting ability.

2.2 Hoarding Walls

.1 Type A Hoarding Wall: 38 mm x 89 mm wood or metal studs at 400 mm o/c with continuous sill and top plate, covered with one layer of rip-proof polyethylene sheeting on each side of wall.

.2 Windows: Install sufficient transparent windows in hoarding walls to allow observation of entire work area from outside the enclosure where existing solid walls do not make up the perimeter.

2.3 Decontamination Facilities

.1 Workers' Decontamination Facility: A decontamination facility comprised of three linked rooms, Contaminated Change Room, a Shower Room, and a Clean Change Room.

> .1 Rooms, Occupied Areas and Asbestos Work Areas, shall be separated by curtained doorways at each door.

.2 Contaminated Change Room: Room between Shower Room and Asbestos Work Area.

.1 Locate on contaminated side of Shower Room.

.2 Install asbestos waste container for asbestos contaminated protective clothing.

.3 Install storage facilities for any personal protective equipment to be reused in Asbestos Work Area including boots, hard hats, etc., but excluding respirators.

.4 Install hooks and shelves as required for personal protective equipment.

.5 Minimum size of generally 2 m x 2 m. Increase size accordingly to accommodate number of workers.

.3 Shower Room: Room between Clean Change Room and Contaminated Change Room.

.1 Install one walk through shower unit for every six workers.

.2 Install constant supply of hot and cold water, controllable at each shower. Water supply must be sufficient to provide water at a minimum temperature of 40 degrees Celsius (maximum 50 degrees) in a volume required for all workers to properly decontaminate.

.1 Install individual hot and cold shut-off valves on water supply located on clean side of Shower Room. Connect shower to these valves.

.2 Install individual controls inside the shower to regulate water flow and temperature.

.3 Install rigid piping or Shower Hose with watertight connections for supply and drains.

.4 Install a sealed drip pan under and around the showers, 150 mm deep.

.5 Install sump pumps, sufficient for volume of waste shower water from showers and drip pan. Direct waste shower water to sanitary drains.

.6 Install ground fault protected power switch on clean side of shower for sump pumps, or timed for shut off.

.7 Provide adequate quantity of soap, shampoo, clean towels

.8 Install an Asbestos Waste Container for disposal of used respirator filters, on the contaminated side of the Shower Room.

.4 Clean Change Room: A room between the Shower Room and Occupied Areas.

.1 Install hooks and shelves on clean side of shower in clean Change Room for storage of respirators.

.2 Install lockers or hangers for workers' street clothes and personal belongings.

.3 Install hose bib on domestic cold water pipe for connection on clean side of Asbestos Work Area.

.4 Install electric hot water heater/tank for showers in decontamination facility.

.5 Provide ground fault protected power supply to hot water tanks, sump pump, battery chargers.

.6 Install a fire extinguisher, mount to wall.

.7 Minimum size of generally 2m x 2m. Increase size accordingly to accommodate number of workers.

.5 Waste and Equipment Decontamination Facility: Waste and Equipment Decontamination Facility comprised of three linked rooms: a Container Cleaning Room, a Holding Room and a Transfer Room.

.1 Purpose of Waste and Equipment Decontamination Facility is to provide a means to decontaminate asbestos waste containers, scaffolding, vacuums, and other tools and equipment and materials required in the Asbestos Work Area.

.2 Rooms, Occupied Areas and Asbestos Work Areas, shall be separated by curtained doorways at each door.

.6 Container Cleaning Room: Room between Asbestos Work Area and Holding Room of sufficient size to allow proper washing of equipment and waste containers or double bagging of asbestos waste. All wash water shall be treated as asbestos contaminated waste.

.7 Holding Room: Room between Container Cleaning Room and Transfer Room, of sufficient size to accommodate at least two asbestos waste containers and two workers double bagging waste, or for largest item of equipment used.

.1 Install a fire extinguisher mounted to wall.

.8 Transfer Room: Room between Holding Room and Occupied Area, acting as an air lock for the transfer of waste.

.9 Construction of Decontamination Facilities

.1 Install floor protection as follows:

.1 Install one layer of rip-proof polyethylene sheeting over two layers of 6 mil polyethylene sheeting beneath entire decontamination facility.

.2 Turn 600 mm of polyethylene up the sides of the decontamination facility and overlap with the polyethylene sheeting covering the walls.

.3 Install plywood with taped and caulked joints between layers of 6 mil polyethylene where required to protect surfaces from water damage (e.g. carpet).

.2 Install walls as follows:

.1 Around all rooms, between all rooms, at entrance to Asbestos Work Area and at entrance to Occupied Area.

.2 Install 38 x 89 mm wood framing at 610 mm o/c with continuous top and sill plates.

.3 Install one layer rip-proof polyethylene sheeting on interior walls of Decontamination Facility.

.4 Install one layer rip-proof polyethylene sheeting both sides on interior dividing walls of Decontamination Facility.

.5 Install one layer rip-proof polyethylene sheeting over one layer of 6 mil polyethylene sheeting on walls exposed to the Asbestos Work Area.

.6 Install one layer rip-proof polyethylene sheeting over one layer of 6 mil polyethylene sheeting on walls exposed to the Occupied Area.

.3 Install roof as follows:

.1 Install joists. Size of joists is to be determined by clear span. Consult Ontario building Code (Table A-1). For clear spans up to 2850 mm use SPF Select 38 x 140 mm wood joist at 400 mm o/c with continuous 38 x

140 mm wood headers, and install strapping beneath joists.

.2 At the Contaminated Change Room and where roof is exposed to the Asbestos Work Area, install 19 mm plywood or OSB over joists. Caulk and tape joints and install one layer rip-proof polyethylene sheeting over 2 layers of 6 mil polyethylene sheeting.

.3 Where roof is not exposed to the Asbestos Work Area, install one layer rip-proof polyethylene sheeting over joists.

.4 Turn 600 mm of polyethylene down the sides over polyethylene on the perimeter walls.

.5 At underside of joists in all rooms, install one layer of polyethylene sheeting.

.6 Minimum interior clear height 2000 mm to underside of joist.

.10 Curtained Doorways

.1 Construct as follows:

.1 Install two flap doors, full width and height of door opening at all doors between chambers, facilities and Asbestos Work Area.

.2 Construct each flap door of two layers of polyethylene sheeting with all edges reinforced with tape. Use wood strapping to securely fasten flap doors to head and alternate jambs.

.3 Install weights attached to bottom edge of each door flap.

.4 Provide direction arrows on flaps to indicate opening.

2.4 Signage

.1 Work Area Signs: Post signs in both official languages at access points to the Asbestos Work Area and on hoarding walls as follows:

.1 CAUTION.

.2 Asbestos Dust Hazard Area.

.3 Unauthorized Entry Prohibited.

.4 Wear Assigned Protective Equipment.

.5 Breathing Asbestos Dust May Cause Serious Bodily Harm.

.2 Vehicles, Bins and Asbestos Waste Containers: Post signs on both sides of every vehicle used for the transportation of asbestos waste and on every asbestos waste container. Signs must display thereon in large, easily legible letters that contrast in colour with the background the word “CAUTION” in letters not less than ten centimetres in height and the words:

.1 CONTAINS ASBESTOS FIBRES

.2 Avoid Creating Dust and Spillage

.3 Asbestos May be Harmful to Your Health

.4 Wear Approved Protective Equipment.

.3 Place placards in accordance with Transportation of Dangerous Goods Act.

END OF SECTION

PART 3: REMOVAL METHODOLOGY

3.1 Asbestos Removal - General

.1 Do not use powered tools or non-hand held tools.

.2 Do not use compressed air to clean or remove dust or debris.

.3 Do not break, cut, drill, abrade, grind, sand or vibrate ACM if it cannot be wetted.

.4 Wet ACM with amended water prior to work and keep ACM wet throughout the removal process.

.5 Frequently and at regular intervals during the work, clean up dust and waste using HEPA vacuums and/or wet sweeping or mopping.

.6 Frequently and at regular intervals, place all waste in Asbestos Waste Containers.

.7 Immediately upon completion of work, clean area with HEPA vacuum and/or wet sweeping or mopping.

3.2 Asbestos Removal - Boiler Room

.1 Two asbestos containing materials are present in this room; the thermal insulation panel on the bottom section of the boiler, and the gasket material around the chimney door at the bottom of the stairs.

.2 A Type 2 enclosure should be used on the asbestos containing gasket material to be removed in the room. A Type 3 enclosure can be used for the asbestos containing thermal insulation panel, to be able to remove the silver lead containing paint below this panel and on the doors of the boiler before the panel removal begins. All silver paint on the boiler is considered lead containing.

.3 Gasket material should be wetted, and removed using a scraping tool and with manual force from around the perimeter of the chimney door.

.4 The thermal insulation panel should be wetted, break material only if unavoidable, and wet material if broken during work.

.5 Deposit waste into Asbestos Waste Container.

.6 HEPA vacuum floor on completion of work in area.

3.3 Asbestos Removal - Vinyl Asbestos Tile

.1 Manually wedge a heavy duty scraper in seam of two adjoining tiles and gradually force edge of one tile up and away from floor. Do not break off pieces of tile, but continue to force balance of tile up.

.2 Place tile, without breaking into smaller pieces, into Asbestos Waste Container.

.3 Force scraper through tightly adhered areas by striking scraper handle with a hammer.

.4 Clean and prepare the area for mastic removal. All debris is to be put into Asbestos Waste Container.

.5 Apply BEAN-e-doo, according to manufacturer's instructions, directly onto mastic.

.1 BEAN-e-doo is an environmentally safe product that is made for mastic removal on concrete floors.

.6 Re-apply BEAN-e-doo as many times a required following manufacturer's instructions.

.7 Remove all BEAN-e-doo and detached mastic. Use recommended cleaners to remove all excess BEAN-e-doo . Put all product into Asbestos Waste Container.

.8 Scrape up adhesive remaining on floor with a hand scraper until only a thin smooth film remains.

.9 Deposit scrapings into Asbestos Waste Container.

.10 HEPA vacuum floor on completion of work in area.

3.4 Asbestos Removal – Transite Panels

.1 Mist surface of panels with amended water.

.2 Remove panels intact. Do not break or pulverize.

.3 Place directly into Asbestos Waste Container.

.4 HEPA vacuum grid and surrounding area.

3.5 Asbestos Removal - Putty and Caulking Materials

.1 Wet all material to be disturbed.

.2 Wedge a heavy duty scraper into the seam of where the caulking/ putty meets the substrate that it is adhered to. Place all scrapings into Asbestos Waste Container.

.3 Force scraper through tightly adhered areas by striking scraper handle with a hammer. Deposit scrapings into Asbestos Waste Container.

.4 Repeat as many times as needed to remove all of the Asbestos containing material

.5 Clean the area and ensure that all debris and dust has been removed and disposed of all material into Asbestos Waste Container.

.6 HEPA vacuum floor on completion of work in area.

3.6 Asbestos Removal - Pipe Wrap and Pipe Wrap with Parging Cement

.1 Wet all material to be disturbed.

.2 Cut into manageable pieces, remove material.

.3 Parging cement will be found on pipe elbows. Material can be chiseled away by using a chisel tool and if wrapping remains underneath, it can be cut into manageable pieces and removed.

.3 Without breaking into smaller pieces, place into Asbestos Waste Container.

.4 Repeat as many times as needed to remove all Asbestos containing material has been removed.

.5 Alternatively, a glove-bag removal procedure can also be used to help contain Asbestos Waste.

.6 HEPA vacuum floor on completion of work in area.

3.7 Waste and Material Handling

.1 Waste bins must be placed on grade or in receiving.

.2 All bins must be locked and covered when waste transfer is not being performed.

.3 Ensure redundant non-ACM, rubble, debris, etc. removed during contaminated work are treated, packaged, transported and disposed of as asbestos waste.

.4 Clean and wash equipment prior to removal from Asbestos Work Area if removed prior to completion.

.5 Place all equipment, tools and unused materials that cannot be cleaned in Asbestos Waste Containers.

.6 As work progresses, and at regular intervals, transport the sealed and labelled asbestos waste containers from the Asbestos Work Area to waste bin.

.7 Place items in bins according to waste classification. Place asbestos waste, metals, non-asbestos waste, etc. in separate bins.

.8 Removal of waste containers and decontaminated tools and materials from the Asbestos Work Area shall be performed as follows:

.1 Remove any visible contamination from the surface of the non-porous or sealable item being removed from the Asbestos Work Area. If the item can be cleaned, remove it from the site. If it cannot be cleaned thoroughly, place it in an Asbestos Waste Container.

.2 Place waste or item in Asbestos Waste Container and seal closed.

.3 Wet wipe outside of Asbestos Waste Container.

.4 At entrance to Asbestos Work Area, place in second Asbestos Waste Container. Seal closed.

.5 Remove the item from the Asbestos Work Area.

.9 Transport waste and materials via the predetermined routes and exits. Arrange waste transfer route with Owner. Use a closed, covered cart to transport through Occupied Areas.

.10 Provide workers transporting waste with means to access full personal protective equipment and all tools required to properly clean up spilled ACM in the case of a rupture of an Asbestos Waste Container.

.11 Pick-up and drop off of garbage bin shall be at pre-approved times, and must not interfere with the City of Mississauga's operations.

.12 Transport asbestos contaminated waste to landfill licensed by Ontario Ministry of the Environment.

.13 Co-operate with Ministry of the Environment inspectors and immediately carry out instructions for remedial work at dump to maintain environment, at no additional cost to the City of Mississauga.

3.8 Asbestos Work Area Dismantling

.1 Wash or HEPA vacuum equipment used in Asbestos Work Area, seal vacuum hoses and fittings.

.2 Place tools and equipment used in contaminated work site but not cleaned in 6 mil polyethylene bags prior to removal from Asbestos Work Area.

.3 Seal openings in HEPA vacuums.

3.9 Re-Establishment of Items

.1 Upon completion of work:

.1 Move items that were removed from Asbestos Work Area prior to work, back same location within Asbestos Work Area.

.2 Clean, mop and vacuum Asbestos Work Area.

END OF SECTION

PART 4: EXECUTION

4.1 Clean Site Preparation

.1 Remove stored or non-fixed items from the Asbestos Work Area, including but not limited to equipment, furniture, waste etc. Store in area provided by Owner.

.2 Remove visible dust and friable material from all surfaces in the work area including those to be worked on, using HEPA Vacuums or wet wiping using Type 2 Procedures as required by O. Reg. 278/05.

.3 Maintain emergency and fire exits from Asbestos Work Area, or establish alternative exits satisfactory to Provincial Fire Marshall and local authorities having jurisdiction. Maintain extra routes from occupied areas. Place emergency exit signs at locations to clearly mark exit route. Seal emergency exit doors so as not to impede use of door during emergency evacuation.

.4 Remove surface mounted fixtures specified to be reused or turned over to Owner.

.5 Install Hoarding Walls between Asbestos Work Area and Occupied Area.

.6 Install Worker Decontamination facility.

.1 Worker Decontamination Facility to be located within the Asbestos Work Area.

.7 Install Waste Decontamination facility.

.1 Waste Decontamination Facility to be located within the Asbestos Work Area.

.8 Install signage in clearly visible locations and in sufficient numbers to adequately warn of an asbestos dust hazard.

.9 Post Ministry of Labour Notice of Project.

.10 Install one layer of rip-proof polyethylene sheeting over two layers of 6 mil polyethylene sheeting so as to protect all equipment and finishes in the Asbestos Work Area that may be damaged. Items to remain include but are not limited to:

.1 Millwork.

.2 Doors.

.3 Bulkheads.

.4 Toilet Partitions.

.5 Plumbing fixtures.

.6 Electrical Equipment.

.7 Mechanical Equipment.

.8 Kitchen Equipment.

.9 Protect pneumatic control lines located in Asbestos Work Area. Notify Asbestos Abatement Consultant if lines are or become damaged.

.11 Seal openings (excepting electrical trenches) in floor using tape, caulking, polyethylene, etc. Openings in floor are to be sealed independently prior to installation of polyethylene sheeting on floor. Include floors of duct and service shafts.

.1 Large openings in floor to be covered. Construction to comply with loading requirements of Ontario building Code and secured in place. Surround with guard rails as per the Occupational Health and Safety Act. Install one layer of rip proof polyethylene over two layers of 6 mil polyethylene over cover. Mark as opening to below. No personnel are to walk or stand on covered opening unless constructed to support live and dead load.

.12 Seal openings in walls below ceiling level using polyethylene, tape, caulking, etc. including but not limited to windows, doors, vents, diffusers, etc.

.13 Seal openings in ceiling, using polyethylene, tape, caulking, etc. including diffusers, grills, etc.

.14 Establish negative pressure in Asbestos Work Areas as follows:

.1 Install HEPA Filtered Negative Pressure Machines sufficient to maintain pressure differential of -0.02 inches of water between contaminated Asbestos Work Area and Occupied Areas.

.2 Arrange HEPA Filtered Negative Pressure Machines to maximize differential pressure in Asbestos Work Area.

.3 Install weighted flaps in perimeter Hoarding Walls as necessary to provide makeup

air.

.4 Operate HEPA Filtered Negative Pressure Machines continuously from first disturbance of ACM until completion of dismantling.

.5 Replace prefilters frequently to maintain specified flow rate.

.6 Replace HEPA filters as required to maintain flow rate and integrity of unit.

.7 Discharge HEPA filtered negative pressure machines as follows:

.1 To building exterior.

.1 Remove existing glazing where necessary and replace with a 19 mm plywood panel. Salvage three (3) panes of original window glass in good condition from the steel windows of the South Building. These panes are to be carefully removed, abated, and submitted to Heritage Staff for archiving purposes.

.2 Install panel securely on the exterior side of the window frame and make weather-tight with caulking.

.3 For each negative pressure unit, provide a 300 mm diameter, duct opening through panel.

.4 Cover duct opening with chicken wire.

.5 Direct discharge away from building access points.

.6 Reinstall glazing to match existing upon completion of work.

.2 Use polyethylene discharge ducting or metal reinforced polyethylene discharge ducting in locations where the ducting must be protected from damage or collapse.

.3 Install and make airtight all negative air discharge ducting.

.4 Discharge ducting is not to be longer than required, and to be straight, so that the length of the ducting does not reduce the flow from negative pressure machines.

.8 DOP test all HEPA Filtered Negative Pressure Machines.

.15 Provide one Ground Fault Panel for each 5,000 square feet (500 square metres) of Asbestos Work Area.

.1 Ground Fault Interrupter Panel to use CSA approved equipment and be inspected by the Electrical Safety Authority.

.2 Ensure safe installation by licensed electricians.

.3 Connect to building power at electrical panel outside Asbestos Work Area.

.4 Cable to be completely jacketed with no defects. Tag/mark cable as Live.

.5 All electrical equipment used during work shall be supplied power from a Ground Fault Panel.

.16 Install temporary lighting in all work areas at levels that will provide for a safe and efficient use of the work area.

.17 Isolate, at panel, and disconnect existing power supply to Asbestos Work Area. Power supply to remaining areas of building must not be disrupted during work of this section.

.1 Lock-out/tag-out power at electrical panels.

.2 Mark/tag any items within or passing through the Asbestos Work Area that are to remain live including but not limited to cable, conduit, wire, fixtures, equipment panels, etc.

.18 Install hose bib on domestic cold water pipe for connection of hoses for wetting.

.1 Install hoses with watertight connections and airless sprayers to wet asbestos containing materials.

.19 Shut down HVAC systems serving the Asbestos Work Area.

.1 Leave induction units at building exterior walls on lowest supply setting when temperatures are below 0°C so windows and exterior walls do not ice.

.2 Disable any exhaust/return systems at induction units, washrooms, etc.

.3 Seal and protect induction units with one layer of 6 mil polyethylene sheeting.

4.2 Contaminated Perimeter Preparation - Asbestos

.1 Perform the following using Type 3 procedures including using the required personal protective equipment specified.

.1 Perform preparation work at perimeter during Quiet Hours after shutting down HVAC systems affecting the Asbestos Work Area, or during normal hours if complete HVAC system is isolated.

.2 Remove tiles to access remaining ducts requiring capping. Cut and cap ducts as close as possible to perimeter of Asbestos Work Area. Cap with metal of gauge equal to sheet metal being capped. Seal seams of cap with duct sealant, tape and polyethylene sheeting. Smoke test seal after system is reactivated. Reseal and retest as required.

.3 Remove ceiling including grids, support and channels, or other obstructions around perimeter of Asbestos Work Area. Remove ceilings in sections equal to the work that can be performed in one shift.

.4 To complete:

.1 Remove top course of block at masonry walls if ACM is present above wall. HEPA vacuum to remove any debris on top of wall and in cavity. Immediately install one layer of rip-proof polyethylene over one layer of 6 mil polyethylene sheeting extending from below ceiling to top of wall, and over top to cover cavity. Do not allow asbestos-containing material to fall down block cavities.

.2 Remove drywall from walls/partitions from deck to 12” below at perimeter stud walls. HEPA vacuum to remove any debris. Immediately install one layer of rip-proof polyethylene over one layer of 6 mil polyethylene sheeting extending from below ceiling to top of wall, and over top to cover cavity. . Remove top plate from deck. Do not allow asbestoscontaining material to fall down wall cavities.

.3 Install a layer of 6 mil polyethylene on all drywall at upper perimeter, above ceiling after cleaning of overspray or dust from wall.

.4 Install upper perimeter seal from front of wall to deck above using one layer of rip-proof polyethylene sheeting. Seal completely.

.5 Seal any remaining holes in existing perimeter walls, columns, deck, etc. exposed by removal of tile at perimeter of Asbestos Work Area.

.6 Notify Asbestos Abatement Consultant at least 24 hours prior to the need for Milestone Inspection B (Contaminated Perimeter Preparation). Obtain written approval for this Milestone Inspection before proceeding.

4.3 Maintenance Of Contaminated Asbestos Work Area

.1 Inspect Asbestos Work Area perimeter Hoarding Walls and Upper Perimeter Seals at the beginning and end of each working period and once on each day work does not take place. Inspection must be performed by competent person.

.2 Inspect HEPA filtered negative pressure machines including discharge ducting at the beginning and end of each working period. Inspection must be performed by competent person.

.3 Perform Differential Pressure Monitoring on a frequent basis and record pressure at start and end of shift at a minimum.

.4 Inspect polyethylene sheeting and ensure it is effectively sealed and taped. Repair damage and remedy defects immediately.

.5 Inspect electrical panels and ensure locks and tags are on panels prior to entering the Asbestos Work Area.

.6 Maintain Asbestos Work Area in tidy condition.

.7 Remove waste and debris frequently.

.8 Remove standing water on polyethylene/floor at the end of every shift.

.9 Turn off water supply to hoses and reduce pressure in hose, prior to leaving the Asbestos Work Area at end of shift.

.10 Turn off water supply to showers, at the end of every shift.

.11 Ensure shower pans are pumped out at the end of every use and shift.

4.4 Wet Removal

.1 Do not use compressed air to clean or remove dust or debris.

.2 Remove and dispose of remaining non-asbestos items before, during or after wet removal.

.3 Spray asbestos-containing sprayed or trowelled material with Amended Water using airless spray equipment prior to removal. Saturate ACM to prevent release of airborne fibres during removal.

.4 Remove asbestos-containing sprayed or trowelled material specified to be removed, clean substrate.

.1 Fully saturated ACM may be scraped directly into waste containers or may be allowed to fall to floor.

.2 ACM cannot be allowed to fall from one level to the next.

.5 Spray asbestos-containing pipe insulations with Amended Water using airless spray equipment.

.6 Remove pipe insulations specified to be removed and clean substrate. Maintain exposed surfaces of insulation or lagging in a wet condition.

.1 Full saturation of insulation will not be required if material is immediately bagged and not allowed to fall to floor.

.2 ACM cannot be allowed to fall from one level to the next.

.7 Spray asbestos-containing duct and mechanical equipment insulations with Amended Water using airless spray equipment.

.8 Remove exterior duct and mechanical equipment insulations specified to be removed and clean substrate. Maintain exposed surfaces of insulation in a wet condition.

.1 Full saturation of insulation will not be required if material is immediately bagged and not allowed to fall to floor.

.2 ACM cannot be allowed to fall from one level to the next.

.9 Remove obstructions as required to remove the ACM.

.1 Notify asbestos abatement consultant if item is not specified to be removed and inhibits removal of ACM.

.2 Do not demolish any existing walls etc. that form the perimeter of the Asbestos Work Area without prior written permission from Asbestos Abatement Consultant.

.10 Clean the inside of ducts remaining in place.

.11 All dislodged ACM shall be maintained in wet state until placed in asbestos waste containers for disposal.

.12 As work progresses, and at regular intervals, place waste in asbestos waste containers and remove from the Asbestos Work Area.

.13 After completion of gross asbestos removal work, perform the following:

.1 Wet clean surfaces from which ACM has been removed with stiff bristle brushes, vacuums, wet-sponges etc. to remove all visible residue and asbestos-containing materials.

.2 Wet clean surfaces which ACM has fallen on using stiff bristle brushes, vacuums, wet-sponges etc. to remove all visible residue and asbestos-containing materials

.3 Wet clean other surfaces in the Asbestos Work Area, including the decontamination facilities, scaffolding, equipment, polyethylene sheeting on floor and walls surfaces etc., ducts and similar items not covered with polyethylene sheeting.

.4 Remove wash water as contaminated waste.

.5 Remove waste.

.6 Level of cleanliness must be acceptable to Asbestos Abatement Consultant.

.7 Remove and dispose of the pre-filters from all negative air units as asbestos contaminated waste.

.14 Notify Asbestos Abatement Consultant at least 24 hours prior to the need for Milestone Inspection D (Visual Clearance). Obtain written approval for this Milestone Inspection before proceeding.

4.5 Waste and Material Handling

.1 Waste bins must be placed on grade or in receiving. Ensure approval of bin location has been given, by consultants, prior to bin arriving on site.

.2 All bins must be covered and locked when waste transfer is not being performed.

.3 Ensure redundant non-ACM, rubble, debris, etc. which was not cleaned and which was

removed during contaminated work are treated, packaged, transported and disposed of as asbestos waste.

.4 Fluorescent lamps contain mercury and are to be recycled. Do not dispose of fluorescent lamps.

.5 Clean, wash and apply Post Removal Sealant to metal waste prior to removal from Asbestos Work Area.

.1 Recycle metals or dispose of metals as clean waste.

.6 Clean, wash and apply Post Removal Sealant to non-porous materials prior to disposal as clean waste.

.1 Obtain prior written approval from the Asbestos Abatement Consultant for each individual type of material.

.7 Clean and wash equipment prior to removal from Asbestos Work Area if removed prior to completion.

.8 Place all equipment, tools and unused materials that cannot be cleaned in Asbestos Waste Containers.

.9 As work progresses, and at regular intervals, transport the sealed and labelled asbestos waste containers from the Asbestos Work Area to waste bin.

.10 Place items in bins according to waste classification. Place asbestos waste, metals, non-asbestos waste, etc. in separate bins.

.11 Removal of waste containers and decontaminated equipment and materials from the Asbestos Work Area shall be performed using the Waste and Equipment Decontamination Facility as follows:

.1 Prior to entering the Waste and Equipment Decontamination Facility Container Cleaning Room, the first worker (fully protected inside the Asbestos Work Area) shall remove any visible contamination from the surface of the item or waste container being removed from the Asbestos Work Area.

.2 The first worker then carries the item into the Container Cleaning Room and wet sponges the item prior to passing the item through the curtained doorway to a second worker in the Holding Room. (The second worker shall be fully protected with respirator and disposable clothing and may only leave the decontamination

facility via the Asbestos Work Area.)

.3 The second worker in the Holding Room double bags or wraps and seals the item. Without entering the Transfer Room, the second worker passes the item through the curtained doorway into the Transfer Room.

.4 A third worker enters the Transfer Room from the clean area. (The third worker must never enter the Holding Room.) The third worker removes the item from the Transfer Room and transports it to the disposal bin.

.12 Dispose of plaster debris, lath, hangers and other asbestos-contaminated waste that could tear a 6 mil (0.15 mm) polyethylene bag in sealed rigid Asbestos Waste Container.

.13 Transport waste and materials via the predetermined routes and exits. Arrange waste transfer route with Owner. Use a closed, covered cart to transport through Occupied Areas.

.14 Provide workers transporting waste with means to access full personal protective equipment and all tools required to properly clean up spilled ACM in the case of a rupture of an Asbestos Waste Container.

.15 Bin loading area and waste routes shall be kept clean at all times. Use Type 2 asbestos abatement procedures if appropriate or requested by Owner's Representative.

.16 Pick-up and drop off of garbage bin shall be at pre-approved times, and must not interfere with the City of Mississauga's operations.

.17 Transport asbestos contaminated waste to landfill licensed by Ontario Ministry of the Environment.

.18 Co-operate with Ministry of the Environment inspectors and immediately carry out instructions for remedial work at dump to maintain environment, at no additional cost to the City of Mississauga.

4.6 Application Of Post Removal Sealant

.1 Wet Removal

.1 Obtain Asbestos Abatement Consultant's written permission to proceed.

.2 Apply one coat of Post Removal Sealant with an airless sprayer, in accordance with Manufacturer’s Instructions, to cover all surfaces on all items in the Asbestos

Work Area, including but not limited to polyethylene, ACM substrate, structural steel, and surfaces scheduled for demolition.

.1 Do not apply post removal sealant to materials that will be damaged by its application.

.3 Notify Asbestos Abatement Consultant at least 24 hours prior to the need for Milestone Inspection E (Air Monitoring Clearance). Obtain written approval of this Milestone Inspection before proceeding.

4.7 Air Clearance Monitoring

.1 Site must be dry prior to Air Clearance Monitoring.

.2 The number of Air Clearance Monitoring samples will be as follows:

.1 5 samples for more than 500 square metres.

.3 Prior to air clearance monitoring, install clean 20-inch fans for air circulation during Air Clearance Monitoring.

.1 At least one fan per 10,000 cubic feet of space in Asbestos Work Area.

.2 Install in centre of Asbestos Work Area and space evenly.

.3 The fan exhaust shall be directed upwards or toward the ceiling.

.4 The fans shall be operated on the lowest speed setting.

.4 Restrict access to Asbestos Work Area and operate negative air units for a 12 hour period prior to Milestone Inspection E.

.5 The HEPA filtered negative pressure machines shall be in operation during clearance air monitoring.

.6 In the presence of the Asbestos Abatement Consultant, immediately prior to air clearance monitoring, use a leaf blower to dislodge loose fibre.

.1 Direct leaf blower against walls, ceilings, floors, and other surfaces.

.2 Perform this for at least five minutes per 1,000 sq. ft. of Asbestos Work Area.

.7 PCM samples will be collected as per Air Monitoring Section.

4.8 Asbestos Work Area Dismantling

.1 Use Type 2 worker precautions during dismantling.

.2 Operate negative air units during dismantling.

.3 Polyethylene, tape, cleaning material, etc. to be treated as asbestos waste.

.4 Wash remaining equipment and tools used in contaminated Asbestos Work Area to remove all asbestos contamination, or place in Asbestos Waste Containers prior to being removed from Asbestos Work Area.

.5 Clean Asbestos Work Area, Equipment and Access area, washing/Showering Room.

.6 Remove upper seals, and seals over tops of walls, on deck, at columns, etc. within the Asbestos Work Area.

.7 Remove top layer of polyethylene on walls, finishes, and equipment.

.8 Remove remaining polyethylene sheeting.

.9 Remove water hoses and shut off at source.

.10 Remove Signs, Hoarding Walls, Decontamination Facilities, Equipment Enclosures, Tunnels, Platforms.

.11 Seal vacuum hoses and fittings, flexible ductwork and all tools used in contaminated work site in 6 mil polyethylene bags prior to removal from Work Area.

.12 Remove temporary lights.

.13 Remove negative air unit prefilters. Dispose of as asbestos contaminated waste.

.14 Remove HEPA filtered negative pressure machines and discharge ducting.

.15 Immediately upon shutting down negative air units, seal air inlet grill and exhaust vent with polyethylene and tape.

.16 Notify Asbestos Abatement Consultant at least 24 hours prior to the need for Milestone Inspection F (Dismantling Inspection). Obtain written approval of this Milestone

Inspection before proceeding.

4.9 Re-Establishment of Items

.1 Upon completion of work:

.1 Move items that were removed from Asbestos Work Area prior to work, back into same location within Asbestos Work Area.

.2 Remove and disconnect Ground fault Panel, tags and locks from electrical panels and re-energize equipment and items.

.3 Remove hose bibs installed and repair pipe.

.4 Remove negative air discharge panel and reinstall glazing to match existing.

.5 Reinstall ducts removed to perform cleaning of ducts or to access ACM.

.6 Clean, mop and vacuum Asbestos Work Area and area beneath any tunnels, platform and Decontamination Facilities.

.7 Enable building air handling systems.

5.0 On-Going Designated Substance Abatement Plan

.1 Since all Designated Substances are not being removed from the Site, the City of Mississauga is obligated under O. Reg. 278/05 to have an ongoing Designated Substance Management Plan.

END OF SECTION

PROJECT SPECIFICATIONS: 1352 LAKESHORE ROAD EAST, MISSISSAUGA SMALL ARMS HERITAGE BUILDING

PART 1: GENERAL

.1 Comply with requirements of this Section when performing the following Work:

.1 Removing or disturbance of lead-containing materials using power tools without an effective dust collection system equipped with a HEPA filter.

1.1 SCOPE OF WORK

.1 Lead paint removal from heritage items of wood, masonry and steel material shall be done in accordance with the following described specifications and applicable regulations. Complete instruction for removal can be found in Part 3: Execution of this specifications document.

.1 HERITAGE WOOD

.1 Wood surfaces of the building will be removed of loose, flaking lead paint. All wood surfaces with paint are to be prepared with specific tools and equipment. Soft scrub brushes with natural bristle or soft plastic type only can be used to clean and prepare wood surfaces coated with lead paint. Garnet paper (180-220 grit) used with sanding block may be used. Metal scrub brushes may not be used on wood surfaces. All lead painted surfaces, regardless if there is visible flaking paint, must be passed over using cleaning equipment to ensure uniformity and a properly prepared surface for the next stage.

Once wood surfaces have been prepared, the Lead Work Area must be HEPA vacuumed, free of all dusts and debris and cleaned with a wet cloth before beginning the priming and painting stage (please refer to painting specifications provided for this stage).

In areas where wood is removed, cut into or disturbed in the future must undergo full abatement/removal of lead paint.

.2 HERITAGE MASONRY

.1 Masonry surfaces of the building will be removed of loose, flaking lead paint. All masonry surfaces with paint to be prepared with specific tools and equipment. The removal will require the use of brushes, scrapers, and abrasive pads. Soft scrub brushes with natural bristle or soft plastic type only can be used to clean and prepare the masonry that is coated with lead paint. Any scrapers used will be wood or plastic

with rounded edges only. Abrasive pads will be the light plastic type only. No metal brushes, scrapper or abrasive pads will be used on the masonry. All lead painted surfaces, regardless if there is visible flaking paint, must be passed over using cleaning equipment to ensure uniformity and a properly prepared surface for the next stage.

Once masonry surfaces have been prepared, the Lead Work Area must be HEPA vacuumed, free of all dusts and debris and cleaned with a wet cloth before beginning the priming and painting stage (please refer to painting specifications provided for this stage).

In areas where masonry is removed, cut into or disturbed in the future must undergo full abatement/removal of lead paint.

.3 HERITAGE STEEL

.1 Steel surfaces, particularly the steel window framing found in the warehouse, will be removed of loose, flaking lead paint following the asbestos abatement of the asbestos containing window putty. Asbestos abatement will include removal of the asbestos containing materials associated with the windows, and include the removal of the glass and abatement related waste (please refer to the Asbestos abatement specifications for more detail). The remaining lead paint on frames will be methodically removed using dry-ice blasting equipment. All lead paint is to be removed.

Once ice-blasting has been completed, the Lead Work Area must be HEPA vacuumed, free of all dusts and debris and cleaned with a wet cloth before beginning the priming and painting stage (please refer to painting specifications provided for this stage).

.4 NON-HERITAGE SURAFACES

.1 Non-heritage surfaces of the building will be removed of loose, flaking lead paint. All lead painted surfaces, regardless if there is visible flaking paint, must be passed over using cleaning equipment to ensure uniformity and a properly prepared surface for the next stage.

The Lead Work Area must be HEPA vacuumed, free of all dusts and debris and cleaned with a wet cloth before beginning the priming and painting stage.

In areas where the surface is removed, cut into or disturbed in the future must undergo full abatement/removal of lead paint.

1.2 EXISTING CONDITIONS

.1 Information pertaining to lead containing materials to be handled, removed, or otherwise disturbed and disposed of in the renovation area has been provided. Information is for general purposes only and is not necessarily representative of all lead-containing material covered within the scope of this project.

.1 The following painted materials in the renovation area were identified as lead-containing:

.1 Green paint; south exterior wall of former shower room, warehouse with a lead concentration of 1.8% weight.

.2 Light blue paint ; south exterior wall of former shower room, warehouse with a lead concentration of 0.67 % weight.

.3 Light brown paint; west wall, warehouse with a lead concentration of 0.73 % weight.

.4 Dark brown paint; south wall, warehouse with a lead concentration of 0.90 % weight.

.5 Dark blue paint; south exterior wall of the warehouse washroom, warehouse with a lead concentration of 0.55 % weight.

.6 Blue paint; south exterior wall of the warehouse washroom, warehouse with a lead concentration of 1.2 % weight.

.7 White paint; East wall, south corridor with a lead Concentration of 6.4 % weight.

.8 Silver paint ; Boiler base, boiler room with a lead concentration of 0.85% weight.

.9 Beige paint; boiler room with a lead concentration of 0.17 % weight.

.10 Red paint; South wall, former welding room with a lead concentration of 3.1 % weight.

.11 Pink paint; East wall, treatment room #3 with a lead concentration of 0.15 % weight.

.12 Olive green paint; East wall, general office with a lead concentration of 7.0 % weight.

.13 Grey paint; Ceiling, warehouse with a lead concentration of 1.8% weight.

.14 Paint on brick below window of west wall, warehouse, with a lead concentration of 1.4% weight.

.15 Paint on brick below window of west wall, warehouse, with a lead concentration of 8.4% weight.

.16 Paint on exterior window frame, east side of building, with a lead concentration of 5.5%.

.17 Paint on clay brick wall in warehouse, immediately left of the main corridor with a lead concentration of 7.9%.

.3 Paints described above have been analyzed to determine whether they meet the requirements under Ontario Regulation 347, General - Waste Management (O. Reg. 347) to be disposed of as a non-hazardous waste. They have been found to be non-leachate toxic and can be disposed of as non-hazardous waste.

.4 Specifications are not provided for removal of piping with lead solder. If piping with lead solder must be removed then complete work such that the areas of the piping containing solder are not disturbed. Send removed piping, complete with soldered sections, for recycling.

.5 Figures, tables and reports pertaining to lead containing materials (LCM) to be handled, removed, or otherwise disturbed and disposed of during this project are provided for general information only and are not necessarily representative of all LCM covered within the sc ope of this project. Contractors are to satisfy themselves as to the exact quantity and location of LCM for disturbance or removal as part of the current project PRIOR TO BID CLOSE.

1.3 SECTION INCLUDES

.1 Requirements and procedures for major removal or disturbance of lead-containing materials.

1.4 REFERENCES

.1 Department of Justice Canada (Jus).

.1 Canadian Environmental Protection Act, 1999 (CEPA)

.2 Health Canada/Workplace Hazardous Materials Information System (WHMIS).

.1 Material Safety Data Sheets (MSDS).

.3 Transport Canada (TC).

.1 Transportation of Dangerous Goods Act, 1992 (TDGA).

.2 Transportation of Dangerous Goods Regulations (SOR/2012-245)

.4 Underwriters' Laboratories of Canada (ULC).

.5 Ontario Ministry of Labour (MOL).

.1 Occupational Health and Safety Act, 1990 (OHSA).

.2 EACO Lead Guideline – For Construction, Renovation, Maintenance or Repair (2014).

.6 Ontario Ministry of Environment and Climate Change (MOECC).

.1 Environmental Protection Act, 1990 (EPA).

.2 Ontario Regulation 347, General - Waste Management (O. Reg. 347).

1.5 DEFINITIONS

.1 HEPA vacuum: High Efficiency Particulate Air filtered vacuum equipment with filter system capable of collecting and retaining fibres greater than 0.3 microns in any dimension at 99.97% efficiency.

.2 Lead Work Area: area where work takes place which will, or may disturb lead-containing paint.

.3 Authorized Visitors: Architect, Engineer, Consultant or designated representatives, and representatives of regulatory agencies.

.4 Occupied Area: any area of building or work site that is outside the Lead Work Area.

.5 Polyethylene: polyethylene sheeting or rip-proof polyethylene sheeting with tape along edges, around penetrating objects, over cuts and tears, and elsewhere as required to provide protection and isolation.

.6 Sprayer: garden reservoir type sprayer or airless spray equipment capable of producing mist or fine spray. Must have appropriate capacity for scope of work.

.7 DOP Test: testing method used to determine integrity of Negative Pressure unit using dioctyl

phthalate (DOP) HEPA-filter leak test.

.8 Negative pressure: system that extracts air directly from Work Area, filters such extracted air through High Efficiency Particulate Air filtering system, and discharges this air directly outside Work Area to exterior of building.

.1 System to maintain minimum pressure differential of 0.02 inches of water relative to adjacent areas outside of Work Areas, be equipped with alarm to warn of system breakdown, and be equipped with instrument to continuously monitor and automatically record pressure differences.

.9 Airlock: system for permitting ingress or egress without permitting air movement between contaminated area and uncontaminated area, typically consisting of two curtained doorways at least 2 m apart.

.10 Curtained doorway: arrangement of closures to allow ingress and egress from one room to another while permitting minimal air movement between rooms, typically constructed as follows:

.1 Place two overlapping sheets of polyethylene over existing or temporarily framed doorway, secure each along top of doorway, secure vertical edge of one sheet along one vertical side of doorway, and secure vertical edge of other sheet along opposite vertical side of doorway.

.2 Reinforce free edges of polyethylene with duct tape and weight bottom edge to ensure proper closing.

.3 Overlap each polyethylene sheet at openings not less than 1.5 m on each side.

1.6 SUBMITTALS

.1 Submit to Owner necessary permits for transportation and disposal of lead-containing waste and proof that lead-containing waste has been received and properly disposed including, but not limited to, MOECC certificates of Approval for carrier and receiver and waste manifests.

.2 Submit proof satisfactory to Owner that employees have had instruction on hazards of lead exposure, respirator use, dress, entry and exit from Lead Work Area, and aspects of work procedures and protective measures.

.3 Submit Worker's Compensation Board status and transcription of insurance.

.4 Submit documentation including test results, fire and flammability data, and Material Safety

Data Sheets (MSDS) for chemicals or materials.

.5 Written work procedure for disturbance of lead-containing materials.

1.7 QUALITY ASSURANCE

.1 Regulatory Requirements: comply with Federal, Provincial and local requirements pertaining to lead, provided that in case of conflict among these requirements or with these specifications more stringent requirement applies. Comply with regulations in effect at the time work is performed.

.2 Health and Safety:

.1 Safety Requirements: worker and visitor protection.

.1 Protective equipment and clothing are worn by workers and visitors while in the Lead Work Area:

.1 Lead removal using power tools (not equipped with HEPA filter): Full facepiece supplied-air respirator operated in demand mode.

.2 Lead removal using abrasive blasting: Type CE abrasive-blast supplied air respirator operated in a positive pressure mode with a tight-fitting half-mask facepiece.

.3 Disposable-type protective clothing that does not readily retain or permit penetration of lead dust, consisting of full-body covering including head covering with snug-fitting cuffs at wrists, ankles, and neck.

.2 Requirements for workers:

.1 Remove street clothes in clean change room and put on respirator with new filters or reusable filters, clan coveralls and head covers before entering Equipment and Access Rooms or Work Area. Store street clothes, uncontaminated footwear, towels and similar uncontaminated articles in clean change room.

.2 Remove gross contamination from clothing before leaving Work Area. Place contaminated work suits in receptacles for disposal with other lead contaminated materials. Leave reusable items except respirator in Equipment and Access Room. When not in use in Work Area, store work footwear in Equipment and Access Room. Upon completion of

lead abatement, dispose of footwear as contaminated waste or clean thoroughly inside and out using soap and water before removing from Work Area or from Equipment and Access Room.

.3 Enter unloading room from outside dressed in clean coveralls to remove waste containers and equipment from Holding Room of Container and Equipment Decontamination Enclosure system. Workers not to use this system as means to leave or enter Work Area.

.3 Eating, drinking, chewing, and smoking are not permitted in Lead Work Area.

.4 Before leaving Lead Work Area, dispose of protective clothing as contaminated waste as specified.

.5 Ensure workers wash hands and face when leaving Lead Work Area. Facilities for washing shall be located in proximity to each work area and in a location that does not interfere with building day to day operations.

.6 Ensure that no person required to enter a Lead Work Area has facial hair that affects seal between respirator and face.

.2 Visitor Protection:

.1 Provide protective clothing and approved respirators to Authorized Visitors to Work Areas.

.2 Instruct Authorized Visitors in the use of protective clothing, respirators and procedures.

.3 Instruct Authorized Visitors in proper procedures to be followed in entering into and exiting from Lead Work Area.

1.8 WASTE MANAGEMENT AND DISPOSAL

.1 Notify intended waste disposal facility of lead in waste materials.

.1 Provide copies of laboratory test results, if requested.

.2 Complete and submit Contaminants Release Form and any other required paperwork to facilitate disposal.

.2 Dispose of building materials containing lead and identified as non-leachate toxic (Please refer to Section 3.3 below) as solid non-hazardous waste.

.3 Dispose of building materials containing lead and identified as leachate toxic (Please refer to Section 3.3 below) as hazardous waste. Leachate toxic waste must be transported by a properly licensed carrier to a licensed disposal facility as per the requirements of O. Reg. 347.

.4 Where possible, separate lead painted metals from regular waste stream for recycling.

.5 Dispose of lead materials in accordance with federal, provincial and municipal requirements.

1.9 SCHEDULING

.1 Contractor is responsible for scheduling of lead abatement work in order to achieve the desired renovation schedule.

.2 Co-ordinate with Consultant, Owner, Owner's representatives and other contractors when scheduling work.

1.10 OWNER'S INSTRUCTIONS

.1 Before beginning Work, provide Owner satisfactory proof that every worker has had instruction and training in hazards of lead exposure, in personal hygiene and work practices, in the use, cleaning, and disposal of respirators and protective clothing.

.2 Instruction and training related to respirators includes, at minimum:

.1 Fitting of equipment.

.2 Inspection and maintenance of equipment.

.3 Disinfecting of equipment.

.4 Limitations of equipment.

.3 Instruction and training must be provided by competent, qualified person.

PART 2: PRODUCTS

2.1 MATERIALS, GENERAL

.1 Drop and Enclosure Sheets.

.1 Polyethylene: 0.15 mm thick.

.2 FR polyethylene: 0.15 mm thick woven fibre reinforced fabric bonded both sides with polyethylene.

.2 Waste Containers: contain waste in two separate containers.

.1 Inner container: 0.15 mm thick sealable polyethylene bag.

.2 Outer container: sealable metal or fibre type where there are sharp objects included in waste material; otherwise outer container may be sealable metal or fibre type or second 0.15 mm thick sealable polyethylene bag.

.3 Labelling requirements: affix preprinted cautionary lead warning, in both official languages, that is visible when ready for removal to disposal of recycling site.

2.2 MATERIALS, WOOD

.1 Tools and Equipment

.1 Mechanical tools such as scrapers: Wood, plastic or metal scraper with rounded edges.

.2 Scrub brushes: Natural bristle or soft plastic type only. Do not use metal scrub brushes on wood.

.3 Sandpaper: Garnet paper 180 grit to 220 grit, used with sanding block.

2.3 MATERIALS, MASONRY

.1 Tools and Equipment

.1 Scrub brushes: Natural bristle or soft plastic. Do not use metal brushes on masonry.

.2 Scrapers: Wood or plastic with rounded edges only. Do not use metal scrapers on masonry.

.3 Abrasive pads: Light plastic type only. Do not use metal abrasive pads on masonry.

2.4 MATERIALS, STEEL

.1 Tools and Equipment

.1 Mechanical tools: Round off all sharp edges.

.2 Scrub brushes: Wire brush (for use on steel only).

.3 Dry-ice blaster.

2.5 MATERIALS, NON-HERITAGE

.1 Tools and Equipment

.1 Mechanical tools

.2 Scrub brushes

.3 Scrapers

.4 Sandpaper

PART 3: EXECUTION

3.0 QUALIFICATIONS

.1 The personnel of the company undertaking the Work of this Section shall possess WHMIS training and is qualified because of knowledge, training and experience to perform the work, is familiar with the Occupational Health and Safety Act, and has knowledge of the potential or actual danger to health and safety in the work.

2. All work to be done by qualified and experienced trades people, preferably with a minimum of 5 years' experience in the type of heritage work, but is not mandatory as long as job can be done competently.

3.1 HERITAGE AND NON-HERITAGE ITEMS

.1 HERITAGE WOOD

.1 Preparation of wood surfaces

.1 All wood surfaces with lead paint to be identified.

.2 All identified wood surfaces within the building to be cleaned of loose, flaking lead paint.

.2 Paint removal

.1 Wood surfaces of the building will be cleaned of loose, flaking paint using non-aggressive procedures and tools. All wood surfaces to be prepared with specific tools and equipment described in Part 2 of these specifications for wood surfaces. This includes soft bristle brushes and specified grit sanding blocks. All painted surfaces are to be passed over, even if loose or flaking paint is not clearly identified.

.2 Once all painted surfaces have been passed over using specified equipment, the debris is to be collected using a vacuum equipped with a HEPA filter and free of all dusts and debris before beginning the priming and painting stage (please refer to painting specifications provided for directions on this stage). All collected debris must be disposed of according to regulation.

.3 In areas where mechanical systems are to be installed and/or areas of wood that must be removed, cut into, or disturbed, full abatement/removal of lead paint must be completed before work can begin.

.2 HERITAGE MASONRY

.1 Preparation of masonry surfaces

.1 All masonry surfaces with lead paint to be identified.

.2 All identified masonry surfaces within the building to be cleaned of loose, flaking lead paint.

.2 Paint removal

.1 Masonry surfaces of the building will be cleaned of loose, flaking paint using non-aggressive procedures and tools. All masonry surfaces to be prepared with specific tools and equipment described in Part 2 of these specifications for masonry surfaces. The removal will require the use of brushes, scrapers, and abrasive pads. The brushes used are to be natural bristle or soft plastic. Any scrapers used will be wood or plastic with rounded edges only. Abrasive pads will be the light plastic type only. No metal brushes, scrapper or abrasive pads will be used on the masonry. All painted surfaces are to be passed over, even if loose or flaking paint is not clearly identified.

.2 Once all painted surfaces have been passed over using specified equipment, the surfaces and surrounding area must be HEPA vacuumed and free of all dusts and debris before beginning the priming and painting stage (please refer to painting specifications provided for directions on this stage). All collected debris must be disposed of according to regulation.

.3 In areas where masonry must be removed, cut into, or disturbed, full abatement/removal of lead paint must be completed before work can begin.

.3 HERITAGE STEEL

.1 Preparation of steel surfaces

.1 All steel surfaces with lead paint to be identified.

.2 All identified steel surfaces within the building to be cleaned of loose, flaking lead paint.

.2 Paint removal

.1 Before paint removal can begin on the steel window frames, asbestos abatement of the asbestos containing putty on the steel window frames must be completed. Following the removal of the asbestos containing materials associated with the

windows, and the removal of the glass and abatement related waste (please refer to the Asbestos abatement specifications for more detail), the remaining lead paint on frames will be methodically removed using dry-ice blasting equipment.

Steel surfaces of the building will be cleaned of all lead paint using the dry-ice blasting method.

.2 Once all paint has been removed from the steel frames using specified equipment, the surfaces and surrounding area must be HEPA vacuumed and free of all dusts and debris before beginning the priming and painting stage (please refer to painting specifications provided for directions on this stage). All collected debris must be disposed of according to regulation.

.3 NON-HERITAGE

.1 Preparation of surfaces

.1 All surfaces with lead paint to be identified.

.2 All identified surfaces within the building to be cleaned of loose, flaking lead paint.

.2 Paint removal-

.1 All identified surfaces of the building will be cleaned of loose, flaking paint. All painted surfaces are to be passed over, even if loose or flaking paint is not clearly identified.

.2 Once all painted surfaces have been passed over using specified equipment, the surfaces and surrounding area must be HEPA vacuumed and free of all dusts and debris before beginning the priming and painting stage. All collected debris must be disposed of according to regulation.

.3 In areas where surfaces must be removed, cut into, or disturbed, full abatement/removal of lead paint must be completed before work can begin.

3.2 SUPERVISION

.1 Minimum of one Supervisor for every ten workers is required.

.2 Approved Supervisor must remain within Lead Work Area during disturbance, removal, or other handling of lead containing materials.

3.3 PREPARATION AND PROCEDURES

.1 Work Area:

.1 Before beginning Work, at each access to Lead Work Area, install warning signs with the following information:

.1 There is a lead dust, fume or mist hazard.

.2 Access to the work area is restricted to authorized persons.

.3 Respirators must be worn in the Work Area.

.2 Shut off and isolate HVAC system to prevent dust dispersal into other building areas.

.3 Before beginning Work pre-clean and remove visible dust from fixed casework and equipment surfaces in Work Area where dust is likely to be disturbed during course of work.

.1 Use HEPA vacuum, or damp cloths where damp cleaning does not create hazard and is otherwise appropriate.

.2 Do not use compressed air to clean up or remove dust from any surface.

.4 Cover fixed casework and equipment with polyethylene sheeting sealed with tape.

.5 Install negative pressure machine system and operate continuously from installation of polyethylene sheeting until completion of final cleanup. Provide automatic continuous monitoring and recording instrument of pressure difference.

.6 Seal off openings, corridors, doorways, windows, skylights, ducts, grilles, and diffusers with polyethylene sheeting sealed with tape.

.7 Build airlocks at entrances and exits from Work Areas to ensure Work Areas are always closed off by one curtained doorway when workers enter or exit.

.8 Maintain emergency and fire exits from Work Area, or establish alternative exits satisfactory to Authority having jurisdiction.

.2 Worker Decontamination Enclosure System:

.1 Worker Decontamination Enclosure System includes Equipment and Access Room and

Clean Room, as follows:

.1 Equipment and Access Room: construct between exit and Work Areas, with two curtained doorways, one to the rest of the suite, and one to Work Area. Install waste receptor and storage facilities for workers' shoes and protective clothing to be re-worn in Work Areas. Build large enough to accommodate specified facilities, equipment needed, and at least one worker allowing sufficient space to change comfortably.

.2 Clean Room: construct with curtained doorway to outside of enclosures. Provide lockers or hangers and hooks for workers' street clothes and personal belongings. Provide storage for clean protective clothing and respiratory equipment. Install mirror to permit workers to fit respiratory equipment properly.

.2 Construction of Decontamination Enclosures:

.1 Construct framing for enclosures or use existing rooms. Line enclosure with polyethylene and seal with tape, apply two layers of FR polyethylene on floor.

.2 Construct curtain doorways between enclosures so when people move through or waste containers and equipment are moved through doorway, one of two closures comprising doorway always remains closed.

.3 Shower room in decontamination facility to be provided with the following:

.1 Hot and cold water or water of constant temperature not less than 40 degrees Celsius or more than 50 degrees Celsius.

.2 Individual controls inside to regulate water flow and temperature.

.3 Filtration unit for shower drain (to prevent the release of contaminated water).

.4 Prior to each shift in which a decontamination facility is being used, a competent person should inspect the facility to ensure that there are no defects that would allow lead-containing dust to escape. Defects should be repaired before the facility is used. The decontamination facility should be maintained in a clean and sanitary condition.

.3 Separation of Work Areas from Occupied Areas

.1 Barriers between Work Area and occupied area to be constructed as follows:

.1 Build suitable floor to ceiling lumber or metal stud framing, cover with polyethylene sheeting sealed with tape, and apply 9 mm minimum thick plywood. Seal joints between plywood sheets and between plywood and adjacent materials with surface film forming type sealer, to create airtight barrier.

.2 Cover plywood barrier with polyethylene sealed with tape, as specified for work areas.

.4 Maintenance of Enclosures:

.1 Maintain enclosures in tidy condition.

.2 Ensure that barriers and polyethylene linings are effectively sealed and taped. Repair damaged barriers and remedy defects immediately upon discovery.

.3 Visually inspect enclosures at beginning of each working period.

.4 Use smoke methods to test effectiveness of barriers when directed by Consultant.

.3 Complete disturbance or removal or lead-containing materials as required.

.4 Prevent spread of dust from Lead Work Area using measures appropriate to work to be done.

.5 Work is subject to visual inspection as well as lead spot check sampling on surfaces. Contamination of surrounding areas indicated by visual inspection or spot check surface samples will require complete enclosure and clean-up of affected areas at no additional cost to the Owner.

3.4 WASTE CHARACTERIZATION

.1 For paints identified as lead-containing, but not identified positively as to their leachate toxicity, the successful contractor shall contact the consultant to characterize the waste as follows (i.e. if it will be disposed of):

.1 Collect a representative sample of material from every waste container resulting from the removal process. Each sample must contain at least 50 grams of representative waste material.

.2 Submit the collected samples under chain of custody to an accredited laboratory for lead analysis and subsequent toxicity characteristic leachate procedure (TCLP) analysis

for lead according to the requirements made under O. Reg. 347.

.3 If the results of analysis are less than 5 milligrams lead per litre (mg/L) in the leachate then the material can be disposed of as a non-hazardous waste.

3.5 CLEAN-UP

.1 Arrange for transportation and disposal of all removed lead containing materials (Please refer to Section 1.8 above).

.2 Clean-up:

.1 Frequently during Work and immediately after completion of work, clean up lead containing dust and waste using HEPA vacuum.

.2 Place lead containing dust and waste in sealed dust-tight waste bags or drums. Treat drop sheets and disposable protective clothing as lead waste and wet and fold to contain dust and then place in waste bags.

.3 Immediately before their removal from Lead Work Area and disposal, clean exterior of each filled waste bag or drum using damp cloths or HEPA vacuum. If using bags, place in second clean waste bag.

.4 Seal and remove waste from site. Dispose in accordance with requirements of Provincial and Federal authority having jurisdiction. Ensure that dump operator is fully aware of nature of material to be dumped and that guidelines and regulations for lead waste disposal are followed.

.5 Perform final thorough clean-up of Lead Work Areas and adjacent areas affected by Work using HEPA vacuum.

3.6 INSPECTION

.1 The following visual inspections will be completed by the Consultant over the duration of the work. The Contractor is to provide minimum 24 hours notice to the Consultant to arrange for the inspections. Lead Abatement Work shall not proceed until each inspection is completed and approval to proceed is obtained from the Consultant.

.1 Initial Inspection: following completion of preparation of Work Area but prior to the commencement of lead-containing material removal.

.2 Clearance Inspection: following completion of all removal work and cleaning and sealing of all surfaces within the enclosure, but prior to removing hoarding.

.2 Lead clearance testing shall be conducted upon the completion of Class 3 Operations. The purpose of clearance testing is to verify that Work Areas have been cleaned sufficiently and to demonstrate that it is safe for workers and occupants. The clearance assessment and testing must be completed by a competent person.

.1 The Work Area passes the visual inspection if it is adequately cleaned of dust and debris. Special consideration shall be given to areas that are difficult to access or clean such as corners or rough surfaces. The presence of dust, debris or residue indicates that the cleaning was insufficient and additional cleaning shall be completed. Following additional cleaning, a follow-up inspection is required.

.2 Collection and analysis of wipe samples: Wipe sampling shall not be completed until the area passes visual inspection. Wipe samples shall be collected in accordance with a validated analytical method. Wipe samples may not be required if a physical barrier will be installed over cleaned surfaces in a manner that prevents access (to the cleaned surfaces) by building occupants.

.3 Clearance Wipe Sampling: Clearance wipe sampling provides analytical confirmation that an area has been adequately cleaned. Representative sample locations and sample quantities must be collected from the project area in order to effectively demonstrate that the lead concentration is within acceptable levels. Samples shall be collected in accordance with the procedures in Section 13 in the EACO Lead Guideline 2014 Document attached to this specification document.

.2 If results of the visual inspection suggest that lead-containing materials remain in the work area, re-clean in accordance with section 3.4 and any additional direction provided by the Consultant. Re-cleaning shall be at no additional cost to the Client.

END OF SECTION

City of Mississauga
Corporate Report

MISSISSAUGA

Date: 2017/01/19

To: Chair and Members of Heritage Advisory Committee

From: Paul Mitcham, P. Eng, MBA, Commissioner of Community Services

Originator's files:

Meeting date: 2017/02/14

Subject
Removal or reduction of Cultural Landscape Properties from the City's Heritage Register

Recommendation
That the Cultural Landscape Inventory remain status quo, pending completion of Recommendation 6 of the Heritage Management Strategy (2016).

Report Highlights
- This report provides a follow up to the October 24, 2016 Heritage Advisory Committee (HAC) report regarding the removal of properties from the City's Heritage Register
- The Heritage Advisory Committee requested a recommendation of final options as a result of the discussion that ensued at HAC on November 15, 2016
- Staff recommend that a review process is required before properties are removed from the City's Heritage Register
- Both of the final options (leaving the properties on the City's Heritage Register or reviewing properties for removal) would require additional budget and staffing resources that are not currently available

Background
In July 2016, the City's Heritage Advisory Committee made the following recommendation, (HAC-0042-2016) subsequently adopted by Council:

That staff be directed to prepare a report summarizing: the current data on Mississauga's Cultural Landscapes; the "pros and cons" of the process of listing/delisting, and the impact of maintaining the list, but with a focus on the Mineola Neighbourhood.

A report responding to this request, dated October 24, 2016, was provided at the November 15, 2016 Heritage Advisory Committee. It is attached as Appendix 1. Subsequent to the discussion

that occurred as a result of the report, the Heritage Advisory Committee recommended that "Staff provide a review of the options at a future Heritage Advisory Committee meeting." This report responds to that request.

Heritage Listing

Heritage listing had no legal status when Council adopted the Cultural Landscape Inventory in early 2005. Due to applicable law, currently, building permits may not be issued without clearance from the Heritage Planning unit. Section 7.4.1.12 of the Official Plan allows staff to require a Heritage Impact Assessment for proposals that might adversely affect a cultural heritage resource (both listed and designated). However, if a satisfactory compromise cannot be negotiated, the municipality's only recourse to an adverse listed property proposal is to designate the property under the *Ontario Heritage Act*.

The *Ontario Heritage Act* provides interim protection for listed properties. It provides a mechanism to prevent the demolition of listed buildings or structures. In terms of this legislation, listing on the City's heritage register means that any application "to demolish or remove a building or structure on the property" requires 60 days notice to Council. The 60 days is legislated to allow time for Council to consider designating the property under the *Ontario Heritage Act*, which would enable it to prevent demolition.

Cultural Landscape Inventory

The purpose of the Cultural Landscape Inventory was: "to provide a working inventory of the City's cultural landscapes which will serve as a tool to assess and manage these heritage resources as the community changes and evolves."

The Cultural Landscape Inventory identified the following:

> **Cultural Landscapes** can be defined as **a setting which has enhanced a community's vibrancy, aesthetic quality, distinctiveness, sense of history or sense of place.**
>
> **Cultural Features** can be defined as **visually distinctive objects and unique places within a cultural landscape. They are not necessarily consistent with their immediate natural surroundings, adjacent landscape, adjacent buildings or structures.** These features can include objects, paths, trees, woodlands, viewpoints and may include features such as rail lines, historic highways, and airports.

Criteria were used to select the sites though "the dynamic nature of the database is intended to allow for additions and alterations to these criteria." The criteria includes the following categories: Landscape Environment, Built Environment, Historical Associations, and Other.

In terms of the *Ontario Heritage Act*, **heritage listing** provides recognition but it **only protects settings, aesthetic quality, distinctiveness, sense of history or place, objects and unique places only insofar as these are expressed in built form** and the only recourse to the removal of such built form is through, again, designation under the *Ontario Heritage Act*.

The Cultural Landscape Inventory includes a wide range of landscapes. As the original Heritage Advisory Committee recommendation requested a focus on the Mineola Neighbourhood, the focus on this report is on the landscapes largely comprised of residential properties. As mentioned in the preceding October 2016 report, a Heritage Conservation District Feasibility Study for Streetsville is noted in the City's unfunded Capital Budget. As such, it is recommended that properties in this area not be considered for removal from the City's Heritage Register. The area covered by the Historic Streetsville Design Guidelines, attached as Appendix 2, is suggested to be maintained on the Register.

Comments

Removal of Properties from the City's Heritage Register

Before any property is removed from the City's Heritage Register, it should be assessed against Regulation 9/06, the criteria for determining cultural heritage value or interest, attached as Appendix 3. Failing that, before a landscape or part of a landscape is removed from the City's Heritage Register, it should be assessed against the criteria that was used to determine that it should be added in the first place. Excerpts from the Cultural Landscape Inventory that demonstrate how the criteria were applied to the landscapes largely comprised of residential properties are attached as Appendix 4.

Because the *Ontario Heritage Act* only provides for the protection of buildings and structures, the criteria assessment could be scoped to consider structural impact. For example, "built environment" was not a criteria for several of the landscapes. However, structures may still play a role in the "historical association." Further analysis is required.

The integrity of the landscapes should also be considered. This might lead to a reduction in certain landscapes. For example, the map, attached as Appendix 5, shows where the demolitions have occurred in Mineola. The demolitions are quite scattered but the map shows that certain areas remain relatively intact.

If cultural landscapes are proposed for removal from the City's heritage register, staff recommend that the removal be effective with sufficient communications to ensure that potential heritage permit applicants are advised before dedicating resources to heritage permit applications.

The key message is that properties should only be removed from the City's Heritage Register upon review. The assessment suggested above would require additional temporary heritage planning staff resources. Maintaining the status quo requires longer term resources.

As such, the options are as follows:

1. That, save for individually listed properties, subject to review against the Cultural Landscape Inventory criteria for listing, scoped to impact to structures, the cultural landscapes largely comprised of residential properties be removed, with a communications plan, from the City's Heritage Register. These would include:
    - War Time Housing (Malton)
    - Mineola Neighbourhood
    - Lorne Park Estates
    - Trelawny Community
    - Erindale Village
    - Credit River Corridor
    - Mississauga Road Scenic Route (except for – due to the upcoming Heritage Conservation District feasibility study – Streetsville properties from Britannia Road to the CPR tracks that are not covered in the Streetsville Core)
    - Creditview Road Scenic Route

    This option requires temporary Heritage Planning staff resources in order to implement, which is not budgeted for 2017.

2. That the Cultural Landscape Inventory remain status quo, pending completion of Recommendation 6 of the Heritage Management Strategy (2016). In order for this option to be sustainable, more Heritage Planning staff resources are required to maintain the expected level of service.

The 2016 Heritage Management Strategy recommended a thorough review, as per option 2. Staff concur with this approach. However, the risk is that the current workload will continue to strain existing staff resources. Additional staff resources for 2018 will be necessary in order to keep pace with the current volume of listed applications and the Ontario Heritage Act timelines.

Financial Impact

Both options require more staff resources, which are not currently budgeted. The resources for option 1 – a review against the criteria for listing – are more temporary than those required for option 2.

Conclusion

This report builds upon discussions at the City's Heritage Advisory Committee about the removal or reduction of Cultural Landscape properties from the City's Heritage Register. The two options are to maintain the properties on the City's Heritage Register until further consideration through a comprehensive review or remove the properties largely comprised of residential properties subject to a review and the conditions outlined above. Both options require additional Heritage Planning staff resources. Because the 2016 Heritage Management Strategy recommends a thorough review of the Cultural Landscape Inventory, this is the recommendation of staff.

Attachments

Appendix 1: Corporate Report on the Removal or reduction of Cultural Landscape Properties from the City's Heritage Register, October 20, 2016
Appendix 2: Map of character areas, Historic Streetsville Design Guidelines, July 2011
Appendix 3: Regulation 9/06, Criteria for determining cultural heritage value or interest
Appendix 4: Excerpts from the Cultural Landscape Inventory
Appendix 5: Map of the Mineola west neighbourhood and surrounding heritage properties indicating house demolitions since 2005.

Paul Mitcham, P. Eng, MBA, Commissioner of Community Services

Prepared by: P. Wubbenhorst, Senior Heritage Coordinator

Appendix 1

City of Mississauga

Corporate Report

MISSISSAUGA

Date: 2016/10/24	Originator's files:
To: Chair and Members of Heritage Advisory Committee	
From: Paul Mitcham, P. Eng, MBA, Commissioner of Community Services	Meeting date: 2016/11/15

Subject

Removal or reduction of Cultural Landscape Properties from the City's Heritage Register

Recommendation

That the report regarding the Removal or reduction of Cultural Landscape Properties from the City's Heritage Register, from the Commissioner of Community Services, dated October 24, 2016, be received.

Report Highlights

- The City adopted a Cultural Landscape Inventory in 2005 and simultaneously added all (approximately 3000) of the impacted properties to the City's Heritage Register
- All of these properties are now subject to review by Heritage Planning staff for any building permit and/or development application
- The process is unmanageable with the current staff compliment and has had little impact in conserving the City's cultural heritage resources
- A revision of the Cultural Landscape Inventory is set for 2018
- In the meantime, options are discussed below for managing the City's large Heritage Register

Background

In July 2016, the City's Heritage Advisory Committee made the following recommendation, (HAC-0042-2016) subsequently adopted by Council:

That staff be directed to prepare a report summarizing the current data on Mississauga's Cultural Landscapes, the pros and cons of the process of listing/delisting, and maintaining of the list, with a focus on the Mineola Neighbourhood.

This report responds to that request.

The City of Mississauga is a leader in identifying cultural landscapes; it was the first municipality in Ontario to propose a Heritage Conservation District and to produce a Cultural Landscape Inventory. (The document is available online at: http://www5.mississauga.ca/pdfs/Cultural_Landscape_Inventory_Jan05.pdf.)

The City adopted the Cultural Landscape Inventory in 2005. Simultaneously, all of the impacted properties were added to the City's Heritage Register, then known as the Heritage Inventory. As per the original Corporate Report, attached as Appendix 1: "The purpose of the Cultural Landscape Inventory is to have it fully integrated into the City's existing Heritage Inventory. […] As with all property currently listed on the Heritage Inventory, when a development proposal is received, it will be reviewed for cultural heritage resources and appropriate comments will be made toward how the resources may be conserved." It is important to note that listing had no legal status at this time.

The Cultural Landscape Inventory included approximately sixty landscapes, which include large neighbourhoods, streetscapes and the Credit River Corridor. As such, more than 3000 properties were added to the existing 300 individually listed heritage properties. It should be noted that Mississauga's heritage register is one of the largest in the province. As a point of comparison, Toronto has 2498 listed properties versus Mississauga's 3300.

Amendments to the *Ontario Heritage Act* made in April 2005 gave legal status to the Heritage Register and amendments made in June 2006 provided interim protection for listed properties (subsections 27 (3)-(5)). Owners of listed properties must give the council of the municipality at least 60 days notice of their intention to demolish or remove a building or structure on the property. This allows time for the municipality to decide whether to begin the designation process to give long term protection to the property.

The City's 2016 Heritage Management Strategy's sixth recommendation is that the City's Cultural Landscape Inventory and its applicable policies be revised. The eleven year-old inventory needs to be re-assessed based on current Provincial definitions, the integrity of the existing landscapes, consideration of new ones, etc. More importantly, an implementation plan that focuses on planning controls is required. The implementation plan would include consideration of delisting landscapes as well as adding Part IV (individual) and Part V (district) heritage designations where warranted. Capital funding is required for such a project. The Culture Division leadership team has committed to requesting funds in the 2017 business planning process for a 2018 start date.

Present Status

Of the approximately forty heritage permits that Heritage Planning staff process annually, approximately half are redevelopment applications for properties that fall within the cultural landscapes. While some individually listed properties that **also** have cultural landscape status

have been designated under the *Ontario Heritage Act* during this time, **no property** with cultural landscape status only **has been designated under the *Ontario Heritage Act*** to date. Staff recommended one for heritage designation but Council did not uphold the recommendation.

As all demolition applications require a Heritage Impact Assessment, the process has allowed for the documentation of resources subsequently lost. Additionally, to a degree, the Cultural Landscape Inventory has provided some impetus for staff to attempt to mitigate new proposals that are not sympathetic to the character of the cultural landscapes. However, in the absence of coordinated zoning by-laws, and more specific guidelines for the areas, comments cannot be enforced. Likewise, some heritage consultants have advised that cultural landscape status helps them to influence design to be more compatible with surroundings. Simultaneously some heritage consultants have expressed frustration when their advice cannot be enforced.

In addition to managing approximately twenty heritage permits per year as a result of the Cultural Landscape Inventory, as well as corresponding site plan applications, staff also spend considerable time fielding "tire kicking" inquiries from property owners and potential property owners about redevelopment options for heritage properties. As a point of interest, 40% of the Culture Division's 311 inquiries to date this year are Heritage Planning calls. Additionally, due to applicable law, Heritage Planning staff are flagged on every building permit application that pertains to property listed on the City's Heritage Register. As such, a considerable amount of staff resources are engaged due to the fact that the Cultural Landscape Inventory is listed on the City's Heritage Register. Heritage Planning staff review over 2800 applications a year, and that number does not include informal pre-applications.

Heritage listing is an interim tool to protect buildings or structures from demolition or removal without an evaluation against Regulation 9/06, the criteria for determining cultural heritage value or interest. Without the full protection of a heritage designation by-law, heritage listing alone cannot protect the collective physical, associative and contextual cultural heritage character of an area. Over the past decade, the experience has shown **enforceable planning tools are required to preserve the character of these cultural landscapes.**

Comments

Cultural landscapes can be viewed as a precursor to heritage conservation district designation. Interest in heritage conservation district designation needs to stem from impacted property owners in order to be successful. Although staff, Heritage Advisory Committee members and others find merit – on a very preliminary basis – in designating some of these cultural landscapes under the *Ontario Heritage Act*, there has been little if any interest by affected property owners in upgrading any landscape's heritage listed status to district designation under the *Ontario Heritage Act*.

Streetsville is the exception. A feasibility study for this potential heritage conservation district is noted in the City's unfunded Capital Budget. It should be noted that staff have had some

success in conserving the character of the Streetsville Core Cultural Landscape as well as the "low stone walls" cultural features.

In summary, the pros and cons of the inclusion of the Cultural Landscape Inventory on the City's Heritage Register are as follows:

PROS	• Minimizes risk of properties that merit Part IV heritage designation being demolished
	• Provides opportunity for heritage staff and consultants to attempt to mitigate proposals that are not sympathetic to the character of the landscape
	• Documents Mississauga's property history
	• Demonstrates City belief in the cultural heritage value of the properties
CONS	• Diverts the few (2.5) staff resources available from projects that may be more effective in conserving Mississauga's cultural heritage resources, most notably implementing the Heritage Management Strategy. Additionally, other staff, i.e. Legislative Services, Planning & Building and administrative staff, are also impacted.
	• Impacts property owner resources due to Heritage Impact Assessment requirement and timelines associated with the production of same as well as the heritage permit process
	• Creates frustration for many, both internally and externally, as there is a perception that the "listed" status of a property, that is also included in the Cultural Landscape Inventory, authorizes the City to enforce the maintenance of the cultural landscape character.

Mineola Neighbourhood

As the chart attached as Appendix 2 shows, an inordinate amount of building permit and site plan work is attributed to the Mineola Neighborhood and the Mississauga Road Scenic Route cultural landscapes (2013-15). As the Heritage Advisory Committee recommendation suggests, Mineola has been particularly high in the number of heritage permit applications for demolition that have come before the Committee and Council.

Over the years, there have been attempts to mitigate the challenges associated with the high volume of heritage permit applications in the Mineola Cultural Landscape. In 2007 HAC recommended that Planning and Building be requested to examine the feasibility of strengthening planning tools for Mineola. The department found the existing policies, zoning regulations and design guidelines were sufficient. In 2009, HAC member Matthew Wilkinson spearheaded a group, including volunteers and staff photographed all of the properties in the area, for documentary purposes. These photos were subsequently uploaded into MAX, the City's planning approval process software/database. In 2012, staff investigated the feasibility of streamlining the Heritage Impact Assessment terms of reference but found that it would undermine both the objectives of the Cultural Landscape Inventory and the heritage policies in the official plan.

Options

The estimated timing for the Cultural Landscape Inventory review, as per the recommendation of the Heritage Management Strategy, is a few years away, as noted in the background of this report. Interim measures to address some of the more immediate issues discussed above could be considered. Below are some options. They all have varying degrees of feasibility, risk and resource requirements. They are offered here as a point of discussion.

Please note that any removal of properties from the heritage register would require a transition plan to ensure that applicants that are currently in the process of applying for a heritage permit are treated fairly.

Option #1

Canvas property owners in potential heritage conservation districts to determine level of interest, if any, in designating the area as a heritage conservation district. Consider removing landscapes wherein there is little interest.

Option #2

Remove cultural landscapes from the City's Heritage Register wherein the original objective of the Inventory – to conserve cultural heritage resources – is proving ineffective. Criteria would need to be determined to define "ineffective." For example, for landscapes wherein built heritage was not a major identifying criteria, our only conservation tool – preventing demolition with heritage designation – would be less effective.

Option #3

Assign Heritage Advisory Committee members in teams of three to conduct half day or day long site visits to each of the cultural landscapes with the most redevelopment pressures – including Mineola, Mississauga Road, Lorne Park Estates, Malton War Time Housing and Erindale Neighbourhood – to conduct a preliminary evaluation against the original Inventory, i.e. the criteria used to identify the landscape originally. If appropriate, recommend reduction of properties from the City's Heritage Register. The focus of this study may be on the potential to designate properties under Part IV of the *Ontario Heritage Act* rather than preserving character.

For all of these options, properties that are individually listed should remain so and, through any survey/study more properties that merit individual listing could be identified.

Some combination of the above options may be most effective. Again, these potential solutions are brought forward as a point of discussion.

Financial Impact

There is no financial impact.

Conclusion

Heritage Planning staff have processed approximately twenty heritage permit demolition applications per year in the City's Cultural Landscapes for over a decade. The only mechanism of preventing demolition is with designation of the property under the *Ontario Heritage Act*. No property with Cultural Landscape listing status only has been designated through this process.

The Inventory needs to be reassessed and, more importantly, an effective Planning implementation plan is required should there be community support. The Culture Division plans to seek funding for such a multi-year project, to begin in 2018. As a point of discussion, options on interim solutions to the challenges associated with the listing of all properties within Cultural Landscapes are included in the report.

Attachments

Appendix 1: Cultural Landscape Inventory – Supplementary Report
Appendix 2: Major Building Permits and Site Plan Applications in Cultural Landscapes, 2013-15

Paul Mitcham, P. Eng, MBA, Commissioner of Community Services

Prepared by: P. Wubbenhorst, Senior Heritage Coordinator

Appendix 1

Corporate Report

Clerk's Files

Originator's Files HAC

DATE: January 18, 2005

TO: Chairman and Members of the Heritage Advisory Committee
Meeting Date: February 22, 2005

FROM: Paul A. Mitcham, P.Eng., MBA
Commissioner of Community Services

SUBJECT: **Cultural Landscape Inventory – Supplementary Report**

ORIGIN: Community Services Department

BACKGROUND: The Heritage Advisory Committee, at its meeting of November 2003, recommended approval in principle of the initial study on a Cultural Landscape Inventory. (Exhibit 1) In addition it was recommended that a sub-committee be established to review the accuracy of the contents and possible additions or deletions to the Inventory.

At the March 2004 meeting of HAC the sub-committee to review the report was confirmed. The committee made recommendations to staff for improvements to the study which have now been incorporated in the current report. (Exhibit 2)

COMMENTS: Alterations to the report included the elimination of various transportation corridors as landscapes and/or features, greater consideration of the importance of historic and landmark woodlands and trees, as well as the clarification of the definitions of cultural landscapes and cultural features.

The definitions now read:

> **Cultural Landscapes** can be defined as **a setting which has enhanced a community's vibrancy, aesthetic quality, distinctiveness, sense of history or sense of place.**
>
> **Cultural Features** can be defined as **visually distinctive objects and unique places within a cultural landscape. They are not necessarily consistent with their immediate natural surroundings, adjacent landscape, adjacent buildings or structures.** These features can include objects, paths, trees, woodlands, viewpoints and may include features such as rail lines, historic highways, and airports.

The revised report was circulated to the Planning and Building Department and the Transportation and Works Department for a final review. Planning and Building Department comments related to editorial changes which have been incorporated into the study and issues surrounding mapping which will be reviewed through the implementation of the report. Transportation and Works had no comments on the study.

A section has been added to the report which explains the implementation process and integration of the report into the planning process. The purpose of the Cultural Landscape Inventory is to have it fully integrated into the City's existing Heritage Inventory. In this way cultural landscapes will be noted as a type of cultural heritage resource.

As with all property currently listed on the Heritage Inventory, when a development proposal is received, it will be reviewed for cultural heritage resources and appropriate comments will be made toward how the resource may be conserved The Cultural Landscape Inventory conforms to Section 3.17, Heritage Resources of the Mississauga Plan.

The Cultural and Landscape Inventory will be expanded as both the City and local communities gather more information and analysis about the landscapes within each community. As with all inventories, it is a living document and is expected to change and expand with time.

Staff have found through research and discussion with other municipalities and the Ontario Ministry of Culture that the City of Mississauga is the first municipality in Canada to complete a cultural landscape study and propose its implementation.

CONCLUSION: In order to enhance our understanding of Mississauga's past and be in a position to better preserve selected cultural heritage resources, a Cultural Landscape Inventory has been prepared.

The purpose of the Inventory is to identify and document cultural landscapes, or geographical areas that will be added to the Heritage Inventory. The addition of landscapes to the existing Heritage Inventory will provide the background for assessing development proposals and ensure that all cultural heritage resources are noted for appropriate evaluation.

RECOMMENDATION: That the City's Heritage Inventory be expanded to include the Cultural Landscape Inventory, as presented to the Heritage Advisory Committee on February 22, 2005.

Paul A. Mitcham, P.Eng, MBA
Commissioner of Community Services

MW

K:\RECOM\SECTION\GROUP\2005\Planning and Heritage\MW\Cultural Landscapes 2005

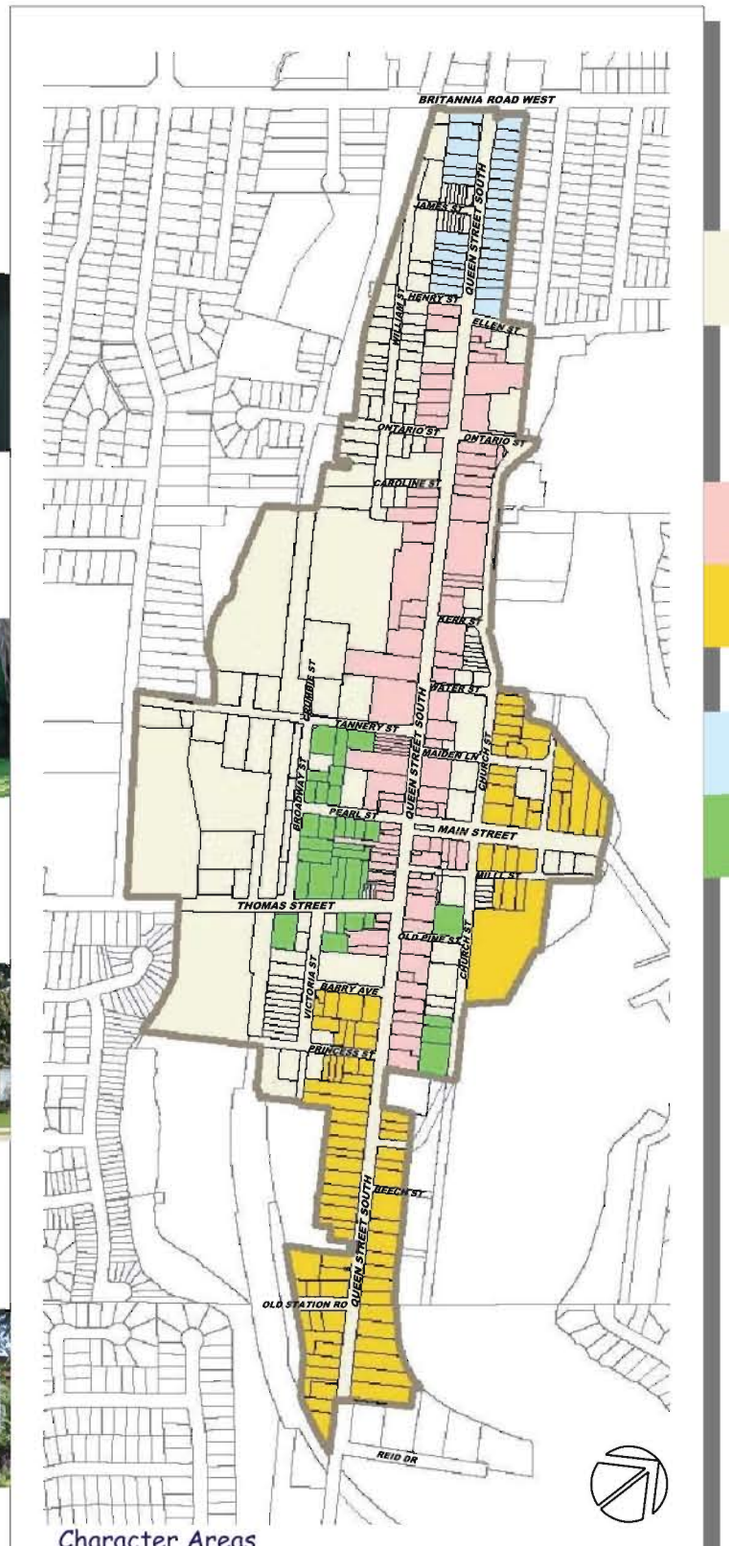
Landscape	Permits	%	Site Plan	%
Credit River Corridor	23	6	5	4.2
Creditview Road Scenic Route	16	4.2	1	0.8
Erindale Village Neighbourhood	8	2.1	0	0
Lakefront Promenade	3	0.8	1	0.8
Lorne Park Estates	6	1.6	7	5.9
Low Stone Walls	4	1	1	0.8
Mineola Neighbourhood	**82**	**21**	**66**	**55**
Civic Centre Precinct	18	4.7	0	0
Mississauga Road Scenic Route	**132**	**35**	**20**	**17**
Rattray Marsh	1	0.3	0	0
Sheridan Research Park	28	7.3	8	6.7
St. Lawrence Starch	1	0.3	1	0.8
Streetsville Memorial Park	1	0.3	0	0
Streetsville Village Core	36	9.4	9	7.6
Trelawny	7	1.8	0	0
War Time Housing	16	4.2	0	0
TOTAL	**382**	**100**	**119**	**100**

1

2

3

4



Character Areas

1. Mainstreet Character Area
2. Residential Character Areas
3-4. Areas in Transition

Character Areas

A number of recommendations for site planning, building, and landscape design are appropriate throughout Historic Streetsville.

In addition special character areas are identified on the basis of prevailing established built form. These include:

Ontario

ServiceOntario
e-Laws

Français

Ontario Heritage Act

ONTARIO REGULATION 9/06

CRITERIA FOR DETERMINING CULTURAL HERITAGE VALUE OR INTEREST

Consolidation Period: From January 25, 2006 to the e-Laws currency date.

No amendments.

This is the English version of a bilingual regulation.

Criteria

1. (1) The criteria set out in subsection (2) are prescribed for the purposes of clause 29 (1) (a) of the Act. O. Reg. 9/06, s. 1 (1).

(2) A property may be designated under section 29 of the Act if it meets one or more of the following criteria for determining whether it is of cultural heritage value or interest:

1. The property has design value or physical value because it,
   - i. is a rare, unique, representative or early example of a style, type, expression, material or construction method,
   - ii. displays a high degree of craftsmanship or artistic merit, or
   - iii. demonstrates a high degree of technical or scientific achievement.
2. The property has historical value or associative value because it,
   - i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,
   - ii. yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or
   - iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
3. The property has contextual value because it,
   - i. is important in defining, maintaining or supporting the character of an area,
   - ii. is physically, functionally, visually or historically linked to its surroundings, or
   - iii. is a landmark. O. Reg. 9/06, s. 1 (2).

CITY OF MISSISSAUGA

Cultural Landscape Inventory

Credit River Corridor

L-NA-2

Location The River runs north south and transects the City from the Brampton border to the Lake Ontario shoreline.

Heritage or Other Designation None

Landscape Type Natural Area

LANDSCAPE ENVIRONMENT

- ☑ Scenic and Visual Quality
- ☑ Natural Environment
- ☐ Horticultural Interest
- ☑ Landscape Design, Type and Technological Interest

BUILT ENVIRONMENT

- ☐ Aesthetic/Visual Quality
- ☐ Consistent Early Environs (pre-World War I
- ☐ Consistent Scale of Built Features
- ☐ Unique Architectural Features/Buildings
- ☐ Designated Structures

HISTORICAL ASSOCIATION

- ☐ Illustrates Style, Trend or Pattern
- ☑ Direct Association with Important Person or Event
- ☑ Illustrates Important Phase in Mississauga's Social or Physical Development
- ☐ Illustrates Work of Important Designer

OTHER

- ☑ Historical or Archaelogical Interest
- ☑ Outstanding Features/Interest
- ☑ Significant Ecological Interest
- ☐ Landmark Value

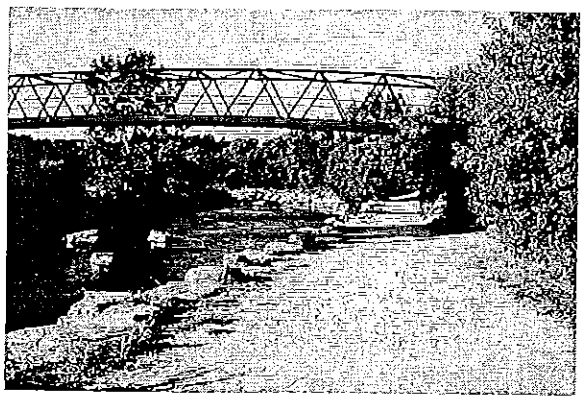
CITY OF MISSISSAUGA Cultural Landscape Inventory

Credit River Corridor

L-NA-2

SITE DESCRIPTION

The Credit River is 58 miles long in total and has a drainage area of 328 square miles. From south of Georgetown to Erindale, the river cuts through the boulder till of the Peel Plain and in some areas exposes the underlying Paleozoic bedrock of shales and sandstones. The River flows through a wide alluvial terrace at Meadowvale where its banks are gentle and tree covered. As it approaches the old Shoreline of glacial Lake Iroquois at Erindale it cuts deeper and deeper into the Peel Plain creating steep valley walls in excess of 75 feet deep. In several locations, such as on the former Bird property north of Burnhamthorpe, intermediate benches were formed as the water levels of the glacial lakes receded. These benches and alluvial terraces provide wonderful natural and recreational settings for trails and other recreational activities. South of the Iroquois shoreline the River cuts through the sands and boulder till of the Iroquois Plain. The last mile of the river is drowned and marshy. The wave action of Lake Ontario continues in its efforts to build a bar across the mouth of the river which is periodically removed by dredging. Despite its size, the River has had significant impact on the settlement of the area. At one time, Erindale had a mill and for a short while a small hydroelectric generating station. At Streetsville, four flour mills operated some of which remain today as modern mills. Two sawmills and a carding mill were built in Meadowvale. The banks of the river continue to be developed for attractive residential neighborhoods, parks and special uses such as the University of Toronto Erindale campus. The river provides the residents of Mississauga with a variety of recreational and educational opportunities. The Credit River Valley is the most significant natural feature remaining in the City of Mississauga. (excerpts from The Physiography of Southern Ontario)



CITY OF MISSISSAUGA Cultural Landscape Inventory

War Time Housing (Malton) L-RES-5

Location Located north of Pearson International Airport bounded by Derry Road on the south and Airport Road on the west

Heritage or Other Designation None

Landscape Type Residential (Neighbourhood)

LANDSCAPE ENVIRONMENT

- ☐ Scenic and Visual Quality
- ☐ Natural Environment
- ☐ Horticultural Interest
- ☐ Landscape Design, Type and Technological Interest

BUILT ENVIRONMENT

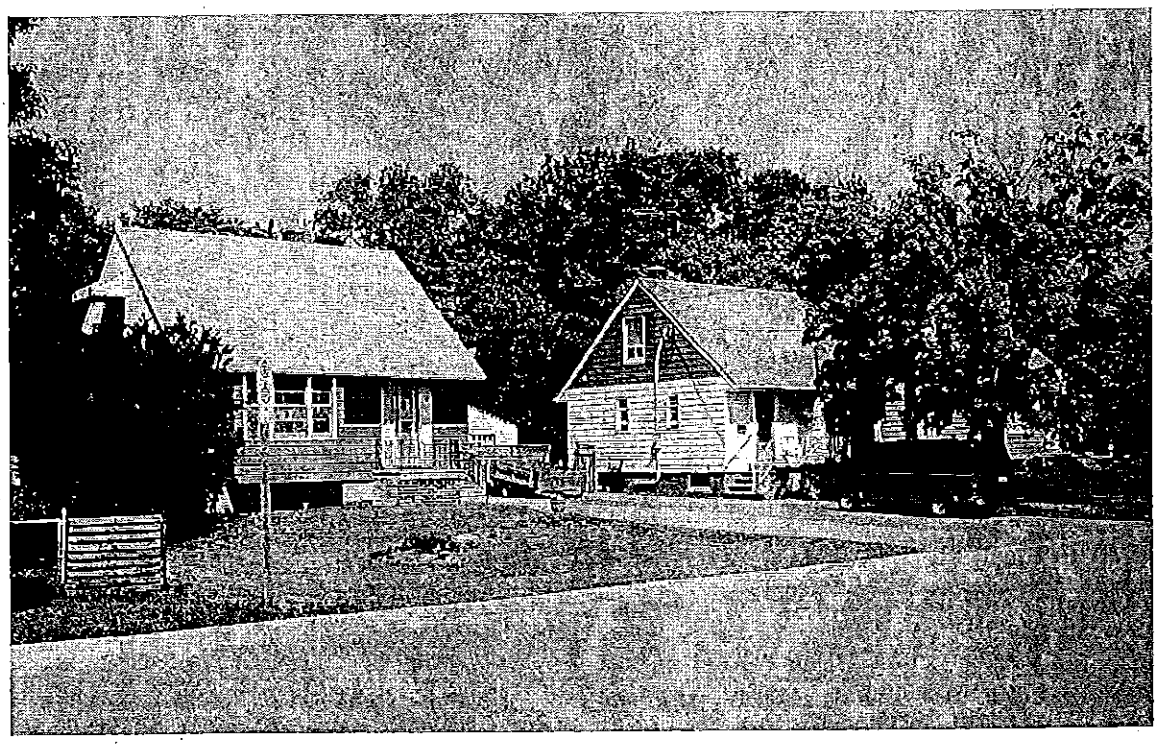
- ☐ Aesthetic/Visual Quality
- ☐ Consistent Early Environs (pre-World War I
- ☑ Consistent Scale of Built Features
- ☐ Unique Architectural Features/Buildings
- ☐ Designated Structures

HISTORICAL ASSOCIATION

- ☑ Illustrates Style, Trend or Pattern
- ☑ Direct Association with Important Person or Event
- ☑ Illustrates Important Phase in Mississauga's Social or Physical Development
- ☐ Illustrates Work of Important Designer

OTHER

- ☑ Historical or Archaelogical Interest
- ☐ Outstanding Features/Interest
- ☐ Significant Ecological Interest
- ☐ Landmark Value

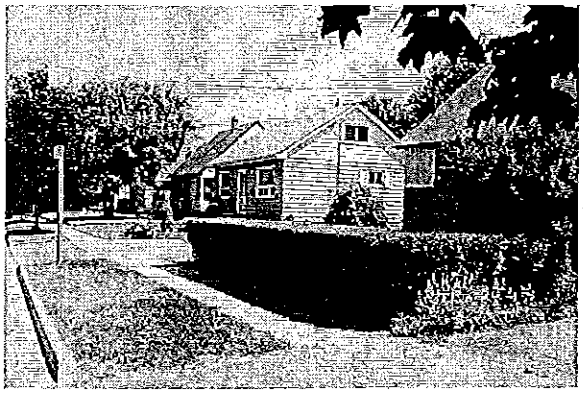


CITY OF MISSISSAUGA Cultural Landscape Inventory

War Time Housing (Malton) L-RES-5

SITE DESCRIPTION

This planned subdivision is located opposite the northeast corner of Pearson International Airport. The neighbourhood is close to where the original Malton Terminal was located and remains close to the present airplane manufacturing and service industry. Although some of the original houses have been altered with newer porches, dormers, raised basements and garages, many retain characteristics typical of the period with 1 to 1 roof pitches, central front doors, picture windowed living rooms to one side, kitchen and eating areas on the opposite side and bedrooms and bathrooms to the rear. According to local sources, one in four of the houses were moved from Bramalea Road when the airport was expanded in 1950. The relocated houses and lots sold for $2,500.00 each. The street names in the area, including Churchill Avenue and Victory Crescent, act as reminders that this area was developed during the post-war period. Its significance lies in the fact that it retains a number of post-war houses which represent some of the first mass produced housing in the GTA.



CITY OF MISSISSAUGA

Cultural Landscape Inventory

Mineola Neighbourhood

L-RES-6

Location Located north of Lakeshore Road bounded by the Credit River on the west and Hurontario on the east

Heritage or Other Designation None

Landscape Type Residential (Neighbourhood)

LANDSCAPE ENVIRONMENT

- ☑ Scenic and Visual Quality
- ☑ Natural Environment
- ☐ Horticultural Interest
- ☑ Landscape Design, Type and Technological Interest

BUILT ENVIRONMENT

- ☑ Aesthetic/Visual Quality
- ☐ Consistent Early Environs (pre-World War I
- ☑ Consistent Scale of Built Features
- ☐ Unique Architectural Features/Buildings
- ☐ Designated Structures

HISTORICAL ASSOCIATION

- ☑ Illustrates Style, Trend or Pattern
- ☐ Direct Association with Important Person or Event
- ☑ Illustrates Important Phase in Mississauga's Social or Physical Development
- ☐ Illustrates Work of Important Designer

OTHER

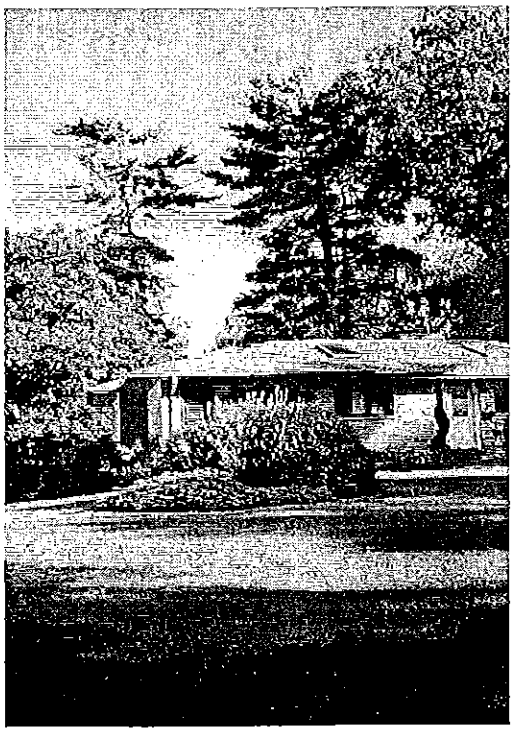
- ☐ Historical or Archaelogical Interest
- ☐ Outstanding Features/Interest
- ☑ Significant Ecological Interest
- ☐ Landmark Value

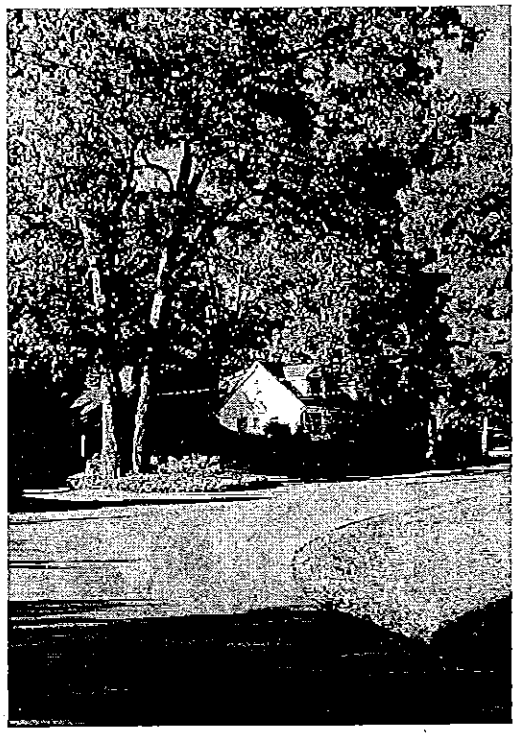
CITY OF MISSISSAUGA Cultural Landscape Inventory

Mineola Neighbourhood L-RES-6

SITE DESCRIPTION

Mineola was developed before it became standard practice to regrode top soil into large piles in the early twentieth century, level every nuance of natural topography and engineer the complete stormwater drainage system artificially. In Mineola a road system was gently imposed on the natural rolling topography of the Iroquois Plain; homes were nestled into slightly larger lots and natural drainage areas were retained. This provided greater opportunity to save existing trees and because the soils and drainage system were minimally impacted, provided fertile ground for the planting of new vegetation, the natural regeneration of native trees and landscaping of the residential landscapes. What has evolved today is a wonderful neighbourhood with a variety of quality housing stock and a rich stimulating landscape that blends the houses with their natural and manicured surroundings. There are no curbs on the roads which softens the transition between street and front yards. The roads wind, rise and fall with the natural topography and houses sit often at odd angles to take advantage of slopes and the location of large trees. A gradual infilling has increased the density over the years and care must be taken to ensure that this does not, in the end, ruin the very quality and character that makes this neighbourhood so appealing and attractive. Of the many neighbourhoods in Mississauga, the Mineola neighbourhood stands out as one of the most visually interesting and memorable. As is often the case, when new development is balanced with the protection of the natural environment, a truly livable and sustainable community evolves. Mineola is an excellent example of this type of community.





CITY OF MISSISSAUGA

Cultural Landscape Inventory

Lorne Park Estates

L-RES-7

Location Located south of Lakeshore Road at Lorne Park Road

Heritage or Other Designation None

Landscape Type Residential (Neighbourhood)

LANDSCAPE ENVIRONMENT

- ☑ Scenic and Visual Quality
- ☑ Natural Environment
- ☐ Horticultural Interest
- ☑ Landscape Design, Type and Technological Interest

BUILT ENVIRONMENT

- ☑ Aesthetic/Visual Quality
- ☐ Consistent Early Environs (pre-World War I
- ☑ Consistent Scale of Built Features
- ☐ Unique Architectural Features/Buildings
- ☐ Designated Structures

HISTORICAL ASSOCIATION

- ☐ Illustrates Style, Trend or Pattern
- ☐ Direct Association with Important Person or Event
- ☐ Illustrates Important Phase in Mississauga's Social or Physical Development
- ☐ Illustrates Work of Important Designer

OTHER

- ☐ Historical or Archaelogical Interest
- ☐ Outstanding Features/Interest
- ☑ Significant Ecological Interest
- ☐ Landmark Value

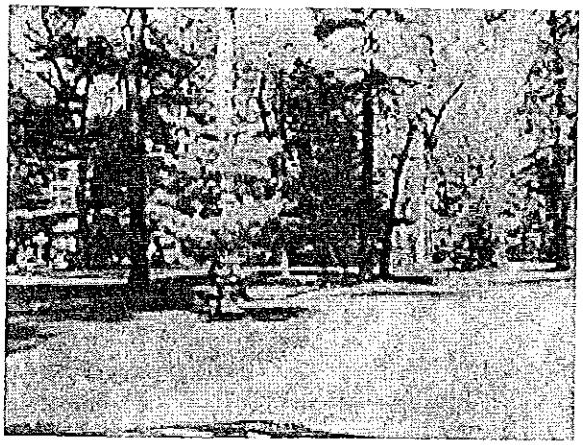
CITY OF MISSISSAUGA Cultural Landscape Inventory

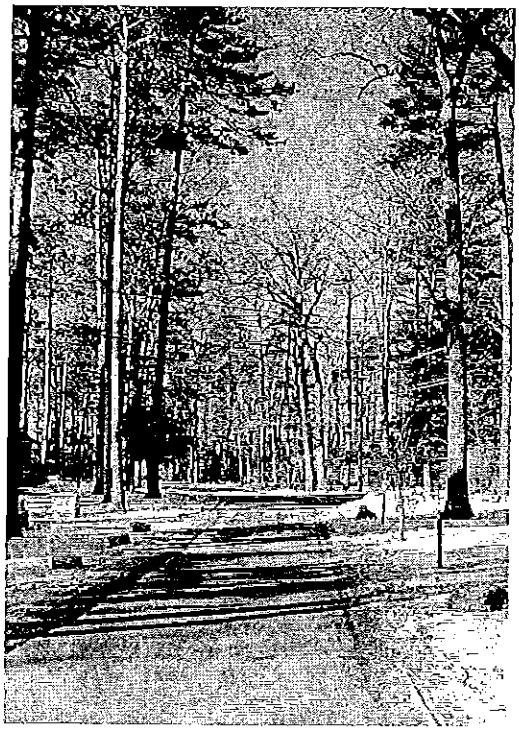
Lorne Park Estates

L-RES-7

SITE DESCRIPTION

This unique shoreline community combines a low density residential development with the protection and management of an amazing forested community representative in many ways of the pre-settlement shoreline of Lake Ontario. Mature specimens of white pine, red oak, etc. give this residential area a unique visual quality. This cultural landscape is recognized for its wonderful balance between residential development and the protection of a mature forest community. The area was initiated as the 75 acres Lorne Park pleasure resort in 1879. In 1886, the Toronto and Lorne Park Summer Resort Company acquired the property and built summer cottages. In 1999, the last remaining cottage was demolished due to damage from an earlier fire. This neighbourhood remains a privately held community.





CITY OF MISSISSAUGA

Cultural Landscape Inventory

Trelawny Community — L-RES-8

Location Located west of Tenth Line and west of the Meadowvale Town Centre

Heritage or Other Designation None

Landscape Type Residential (Neighbourhood)

LANDSCAPE ENVIRONMENT

- ☐ Scenic and Visual Quality
- ☐ Natural Environment
- ☐ Horticultural Interest
- ☑ Landscape Design, Type and Technological Interest

BUILT ENVIRONMENT

- ☐ Aesthetic/Visual Quality
- ☐ Consistent Early Environs (pre-World War I
- ☐ Consistent Scale of Built Features
- ☐ Unique Architectural Features/Buildings
- ☐ Designated Structures

HISTORICAL ASSOCIATION

- ☑ Illustrates Style, Trend or Pattern
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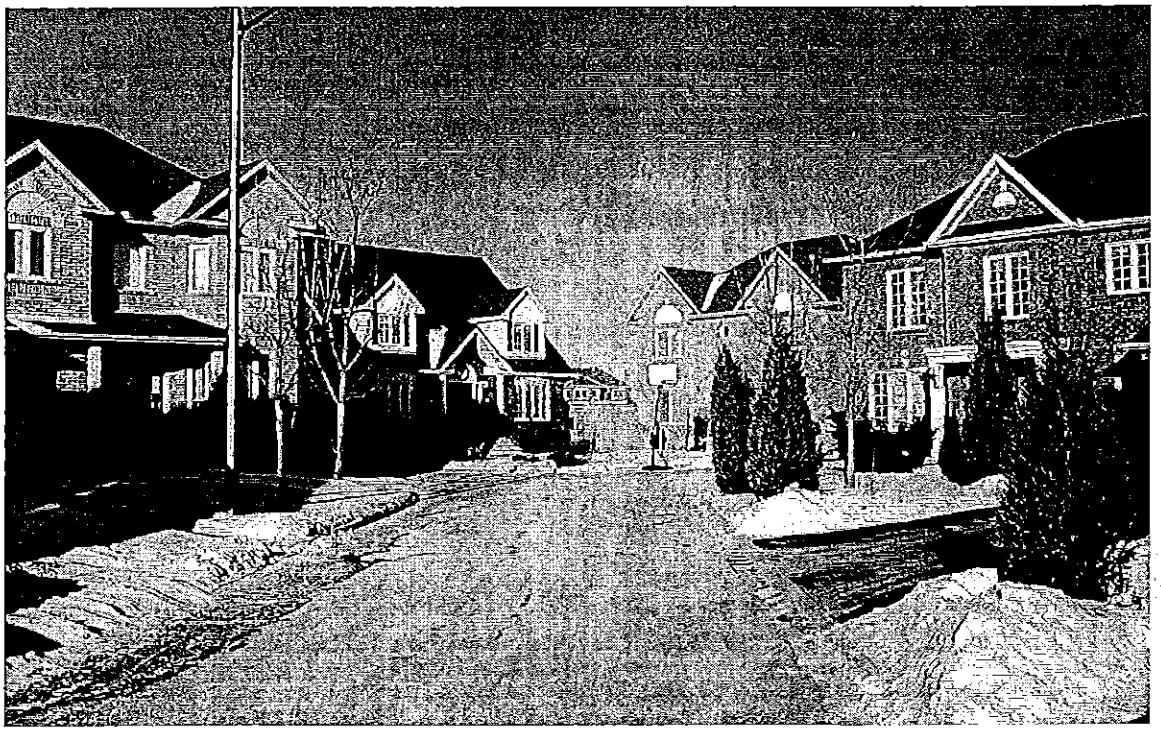
- ☐ Historical or Archaelogical Interest
- ☐ Outstanding Features/Interest
- ☐ Significant Ecological Interest
- ☐ Landmark Value

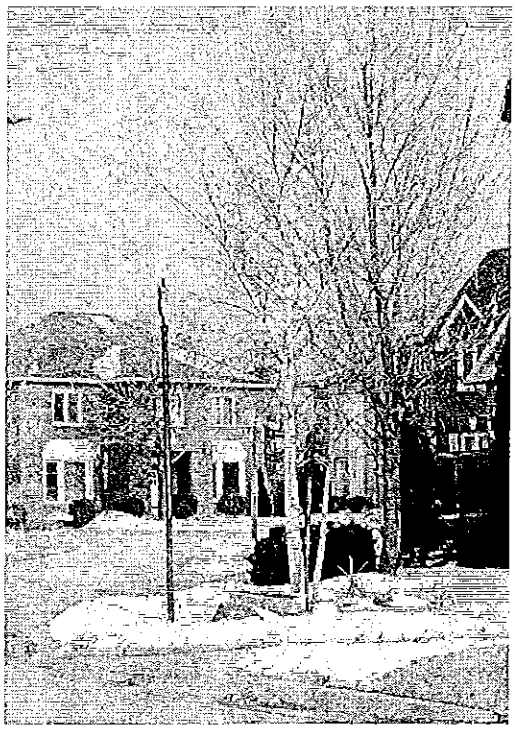


CITY OF MISSISSAUGA Cultural Landscape Inventory

Trelawny Community L-RES-8

SITE DESCRIPTION

This experimental residential neighbourhood within the larger Meadowvale new town, attempted to break the "spaghetti" mold of curvilinear streets and cul-de-sacs typical of the majority of subdivision development scattered across GTA since 1970. In a unique organization of street pattern created by arterials and hammer-headed housing clusters, this development attempted to increase housing density in a single family home format. The subdivision pattern attempted to minimize the impact of the car by reducing typical road standards and integrating vehicular access more compactly with the layout of drives, garages and smaller scaled access streets. Although it remains to be seen how successfully this community will mature as a residential area, it is recognized as a special cultural landscape for its creative attempt to more compactly integrate vehicular access with the residential component of the neighbourhood and to assist in reducing the sprawl of suburban development into neighbouring rural areas through higher densities.



CITY OF MISSISSAUGA Cultural Landscape Inventory

Erindale Village

L-RES-11

Location A small enclave south of Dundas and the former Erindale Village and just east of the Credit River

Heritage or Other Designation A number of designated properties

Landscape Type Residential (Neighbourhood)

LANDSCAPE ENVIRONMENT

- ☑ Scenic and Visual Quality
- ☐ Natural Environment
- ☑ Horticultural Interest
- ☐ Landscape Design, Type and Technological Interest

BUILT ENVIRONMENT

- ☐ Aesthetic/Visual Quality
- ☐ Consistent Early Environs (pre-World War I
- ☑ Consistent Scale of Built Features
- ☐ Unique Architectural Features/Buildings
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- ☐ Illustrates Work of Important Designer

OTHER

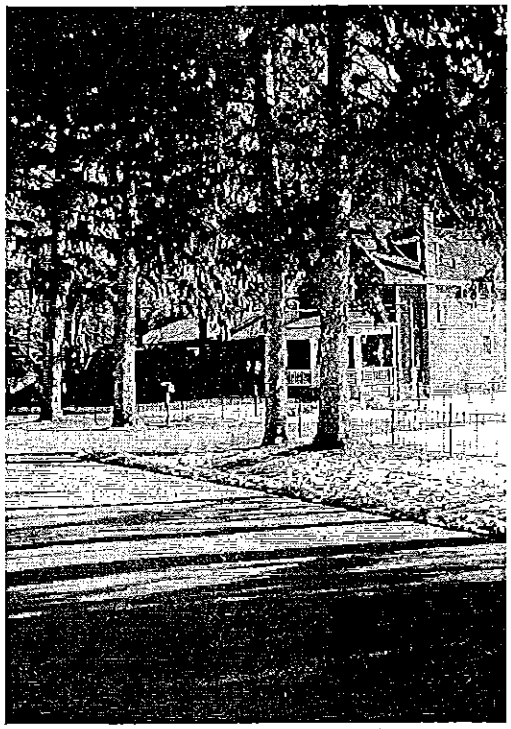
- ☑ Historical or Archaelogical Interest
- ☐ Outstanding Features/Interest
- ☐ Significant Ecological Interest
- ☐ Landmark Value

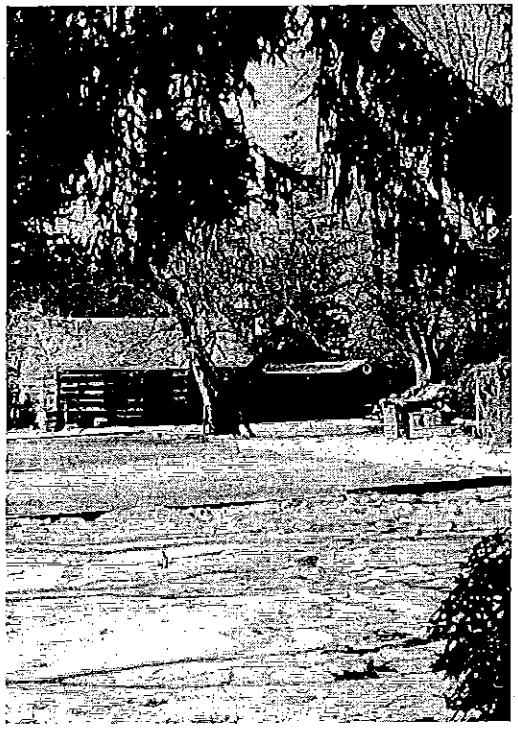
CITY OF MISSISSAUGA Cultural Landscape Inventory

Erindale Village L-RES-11

SITE DESCRIPTION

This small residential enclave has a wonderful visual appearance and special landscape character defined by mature trees and a common scale of structures. Most prominent are the rows of Norway spruce, remnants of the former agricultural fields, which predate the housing development. The preservation of these trees through the sensitive siting of housing and roads has created a unique and wonderful residential environment similar to other neighbourhoods straddling the Credit River Valley. The street pattern and scattered heritage properties are the remnants of this nineteenth century village.





CITY OF MISSISSAUGA Cultural Landscape Inventory

Creditview Road Scenic Route

F-TC-3

Location Parallels the Credit River on its east bank

Heritage or Other Designation None

Landscape Type Transportation

LANDSCAPE ENVIRONMENT

- ☑ Scenic and Visual Quality
- ☐ Natural Environment
- ☑ Horticultural Interest
- ☐ Landscape Design, Type and Technological Interest

BUILT ENVIRONMENT

- ☐ Aesthetic/Visual Quality
- ☐ Consistent Early Environs (pre-World War I
- ☐ Consistent Scale of Built Features
- ☐ Unique Architectural Features/Buildings
- ☐ Designated Structures

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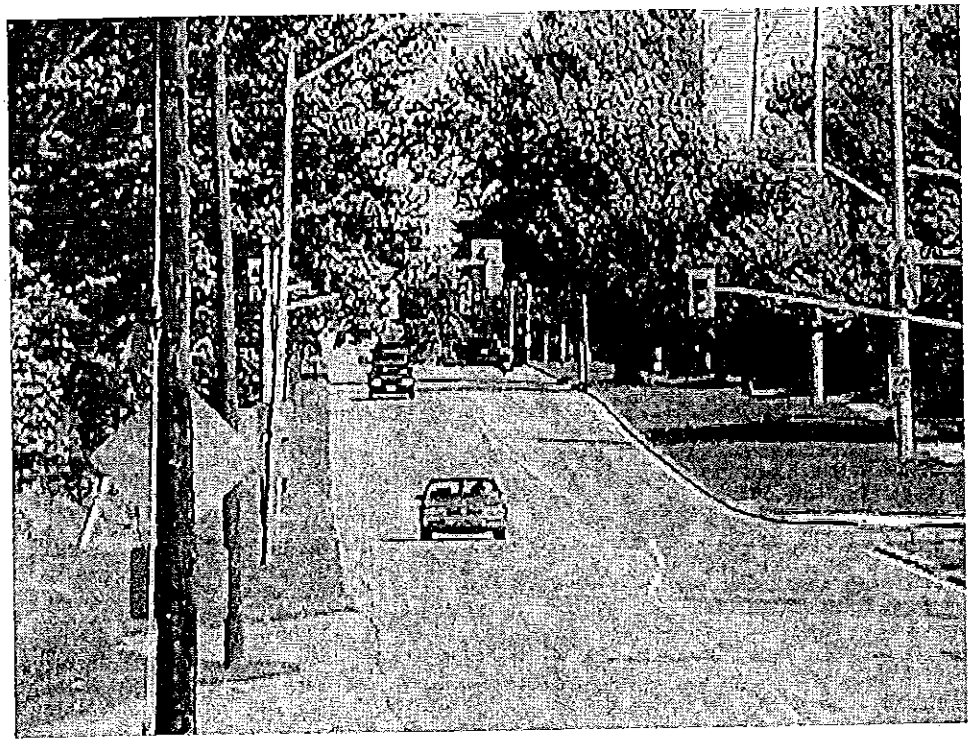
- ☐ Historical or Archaelogical Interest
- ☐ Outstanding Features/Interest
- ☐ Significant Ecological Interest
- ☐ Landmark Value

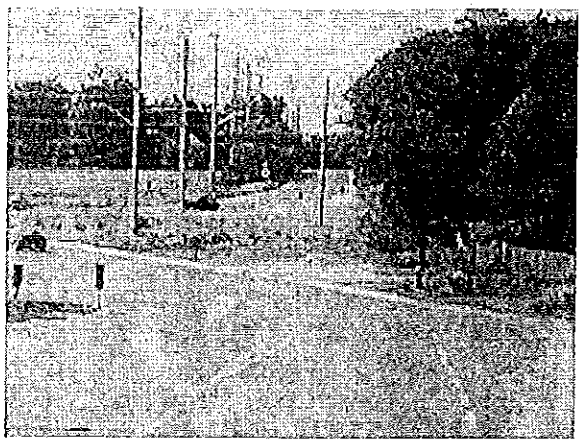


CITY OF MISSISSAUGA Cultural Landscape Inventory

Creditview Road Scenic Route F-TC-3

SITE DESCRIPTION

Creditview Road scenic route runs along the east side of the Credit River, from Britannia Road to north of the 401. Towards the the northern portion of the Creditview Road, it crosses over the the Credit River. For the most part, it follows a straight alignment from the southeast to the northwest. The road offers a scenic view of various parts of Mississauga, from recently established commercial and residential neighbourhoods to areas of significant historical, horticultural and scenic interest. An historic hedgerow and view to the Credit River south of Highway 401 make this a scenic view of note.



CITY OF MISSISSAUGA Cultural Landscape Inventory

Mississauga Road Scenic Route F-TC-4

Location Parallels the Credit River on its west bank

Heritage or Other Designation Scenic Road

Landscape Type Transportation

LANDSCAPE ENVIRONMENT

- ☑ Scenic and Visual Quality
- ☐ Natural Environment
- ☑ Horticultural Interest
- ☑ Landscape Design, Type and Technological Interest

BUILT ENVIRONMENT

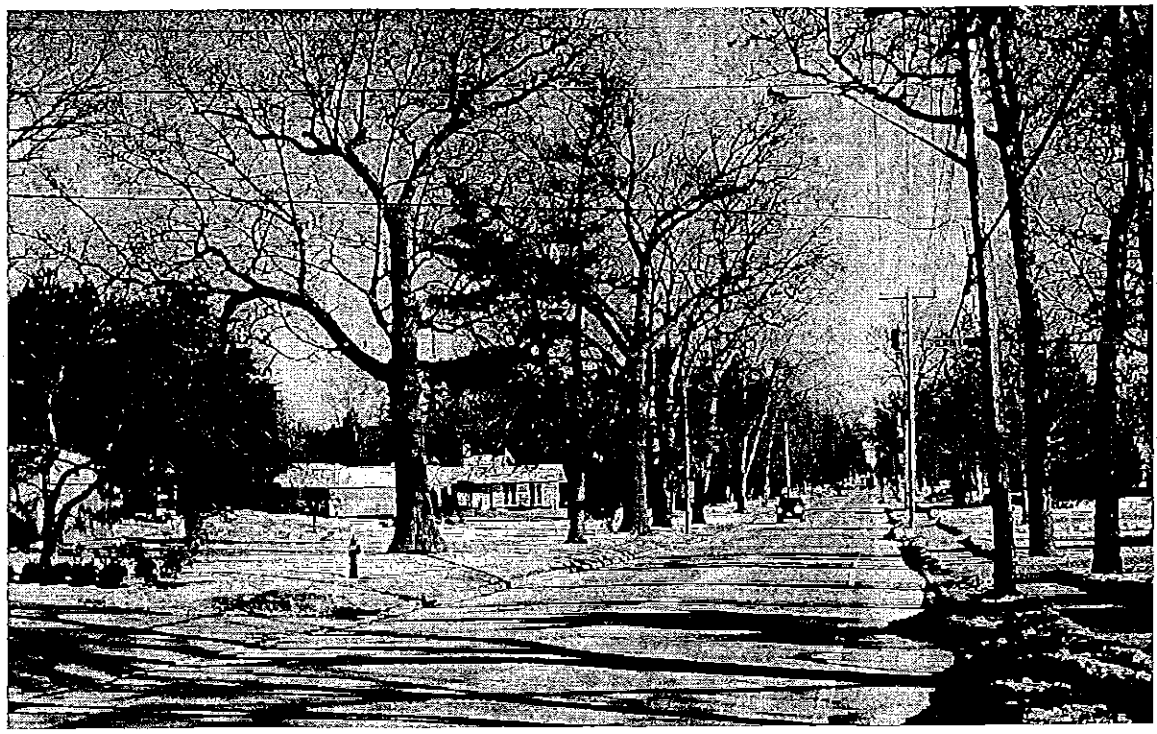
- ☐ Aesthetic/Visual Quality
- ☐ Consistent Early Environs (pre-World War I
- ☑ Consistent Scale of Built Features
- ☐ Unique Architectural Features/Buildings
- ☐ Designated Structures

HISTORICAL ASSOCIATION

- ☑ Illustrates Style, Trend or Pattern
- ☐ Direct Association with Important Person or Event
- ☑ Illustrates Important Phase in Mississauga's Social or Physical Development
- ☐ Illustrates Work of Important Designer

OTHER

- ☑ Historical or Archaelogical Interest
- ☐ Outstanding Features/Interest
- ☐ Significant Ecological Interest
- ☐ Landmark Value

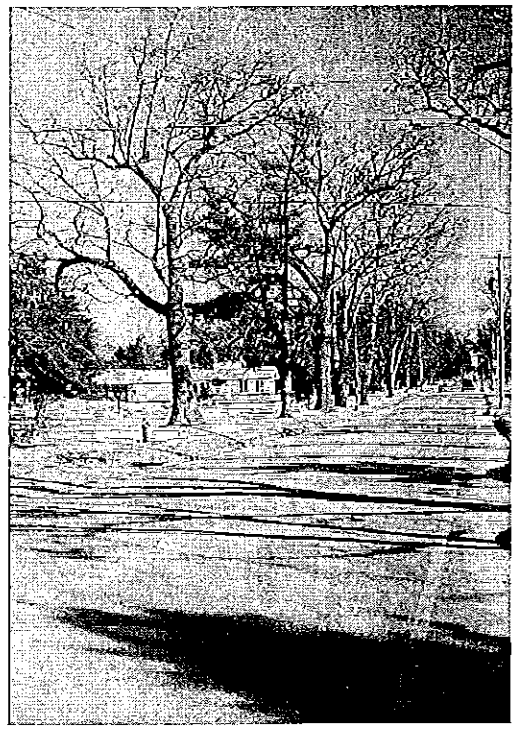


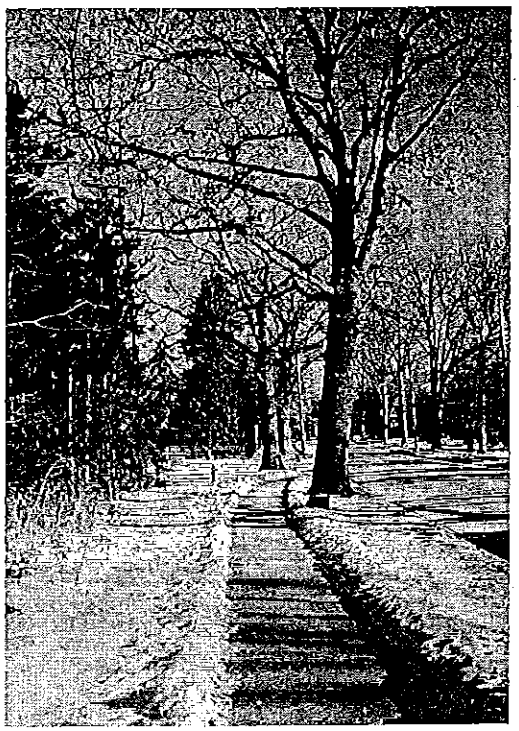
CITY OF MISSISSAUGA Cultural Landscape Inventory

Mississauga Road Scenic Route F-TC-4

SITE DESCRIPTION

Mississauga Road is one of the oldest roads in Mississauga. Its alignment varies from being part of the normal road grid in the north to a curvilinear alignment in the south following the top of bank of the Credit River. The scenic quality of the road is notable because it traverses a variety of topography and varying land use from old established residential neighbourhoods to new industrial and commercial areas. From Streetsville south the boulevards and adjacent landscapes are home to some of the oldest and most spectacular trees in the City. It is acknowledged as an important cultural landscape because of its role as a pioneer road and its scenic interest and quality.





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HERITAGE PROPERTIES WITH DEMOLITION PERMITS SINCE 2005

STUDY AREA

PROPERTIES IN STUDY AREA = 893
PROPERTIES WITH PERMITS = 99

0 30 60 90 120
metres

DRAFT

MISSISSAUGA

Produced by T&W, Geomatics

2016/12/12

apasha

I:\cadd\Projects\165289 Heritage Property Demolition Permits_CP\Vector\HeritagePropsWithDemoPermits Mineola-revised.dgn

City of Mississauga
Corporate Report

MISSISSAUGA

Date: 2017/02/06

To: Chair and Members of Heritage Advisory Committee

From: Paul Mitcham, P. Eng, MBA, Commissioner of Community Services

Originator's files:
CD.P01. PAR

Meeting date:
2017/02/14

Subject
Name Change of Cenotaph Park (P-111), 29 Stavebank Road (Ward 1)

Recommendation
That the Corporate Report dated February 6, 2017 from the Commissioner of Community Services entitled "Name change of Cenotaph Park" be received for information.

Background
April 9, 2017 marks the 100th Anniversary of the Battle of Vimy Ridge, where Canadian forces defeated German forces in a decisive battle that paved the way to the Allied victory in World War 1 (WW1). This victory has become a national symbol of achievement and sacrifice. It is viewed as a defining moment in Canadian history and the beginning of the country's evolution from dominion to independent nation.

During the WW1, local military detachments and the Red Cross posted on a weekly basis the names of soldiers (from the Port Credit area and surrounding townships) who were missing, wounded or killed in action at the bandstand which was located on the southeast corner of Stavebank Road and Park Street E (Cenotaph Park, Appendix 1). Given its significance as a community gathering area, residents and local merchants chose this location to erect a cenotaph in 1925 in memory of thirty two men from Port Credit area who fought in WW1 – including seven wounded and one who died at the battle of Vimy Ridge.

In 1946 and 1983, the names of the men who fell during World War II and the Korean Conflict were added to the cenotaph. In 1984, the "Port Credit War Memorial (Cenotaph)" was designated under the Ontario Heritage Act for its' historical and contextual importance.

The subject report outlines the renaming request of Cenotaph Park, located at 29 Stavebank Road and situated in Ward 1 (Appendix 1) to Vimy Park.

Comments
As the park name suggests, the cenotaph continues to be the focal point of Cenotaph Park. It is used as a gathering place for Remembrance Day services and throughout the year on battle

anniversary dates such as the battle of Vimy Ridge (April 9) and D-Day (June 6). In 2014, staff planted 100 poppies in the park to commemorate WW1.

The park in which the cenotaph rests has not been formally named. At the unveiling of the Cenotaph in 1925, records indicate that the land was referred to as the " Village Park". Today, the name, "Cenotaph Park", is used by the City. The name is not widely known throughout the community as there is no signage to indicate the park name. In light of this, it is requested that Cenotaph Park be given the official name of Vimy Park to coincide with the 2017 battle anniversary date. This commemoration would complement the work of the Vimy Foundation and coincide with the Canada 150th celebrations planned for 2017.

As the property is designated under the Ontario Heritage Act, staff are sharing this information with the Heritage Advisory Committee. In accordance with the City's "Property and Facility Naming and Dedications" corporate policy, staff will pursue the recommended name change through a corporate report to General Committee.

Financial Impact

There is no financial impact with this project. The costs associated with the historical plaque, installation and ceremony will be requested through the Commemorative Partnership Program, Veteran Affairs Canada.

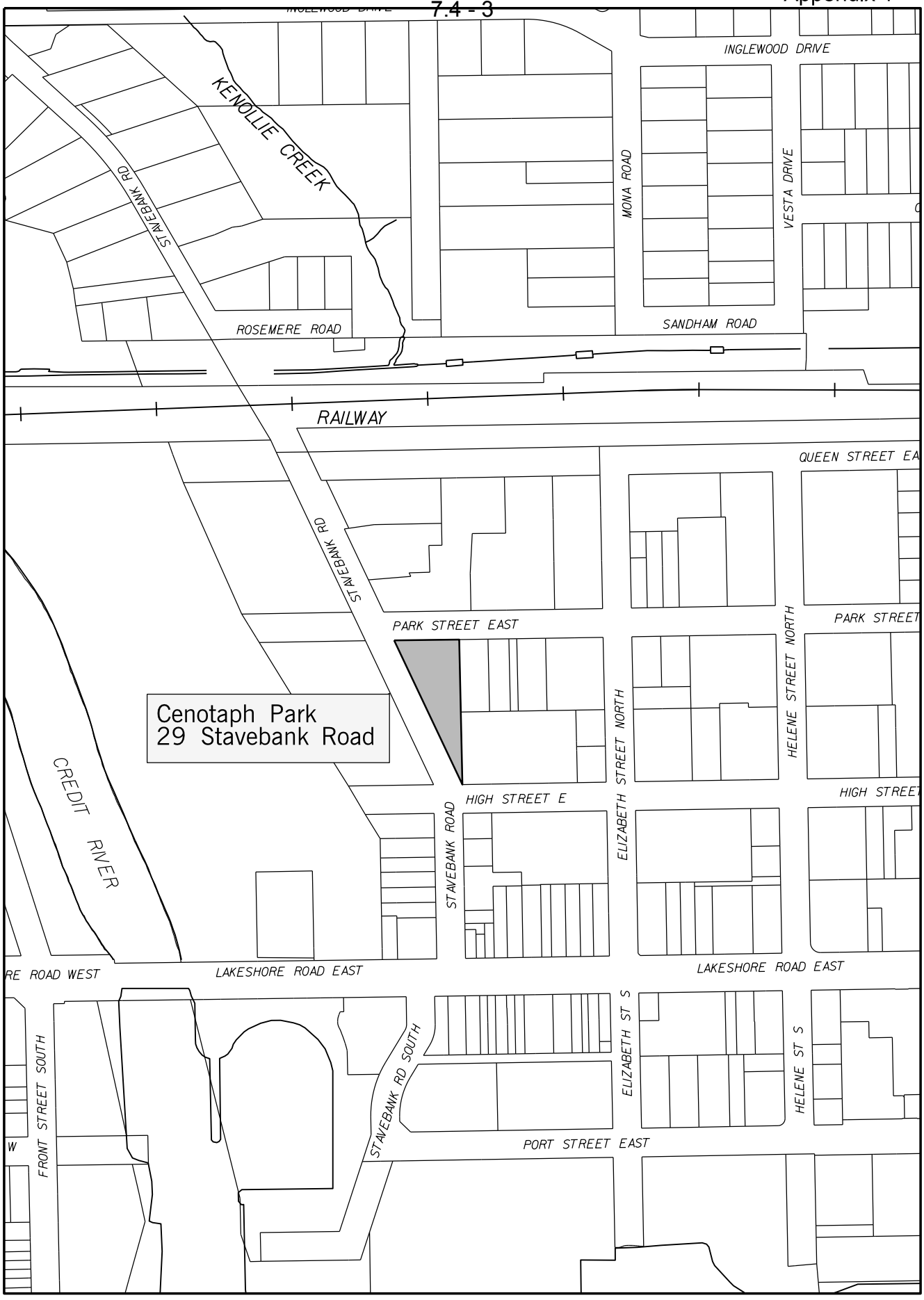
Conclusion

The proposed renaming of Cenotaph Park in Ward 1 to Vimy Park is in accordance with the City's "Property and Facility Naming and Dedications" corporate policy. The proposed name will commemorate the significance of the battle of Vimy Ridge to the people of Port Credit and Mississauga and its role in defining Canada.

Attachment

Appendix 1: Location Map for Cenotaph Park

Paul Mitcham, P. Eng, MBA, Commissioner of Community Services
Prepared by: Jane Darragh, OALA, OPPI, RPP, Planner, Park Planning



Location Map
for Cenotaph Park
29 Stavebank Road

0 10 25 50m

0 50 100 200ft

MISSISSAUGA

Produced by T&W, Geomatics

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City of Mississauga
Memorandum

MISSISSAUGA

Date: 2017/01/19

To: Chair and Members of Heritage Advisory Committee

From: Paul Damaso, Director, Culture Division

Meeting Date: 2017/02/14

Subject: Feasibility of Increasing the Designated Heritage Property Grant Envelope

In response to recommendation HAC-0020-2016 from the Heritage Advisory Committee meeting, dated May 10, 2016, staff have examined the possibility of increasing the funding for the Designated Heritage Property Grant program.

The City currently has over 280 Designated Heritage properties. Each year property owners are sent a letter informing them of the launch of the grant program. Of the eligible properties an average of 16 property owners take advantage of the grant.

Each year $75,000 is available to property owners to assist with the conservation and preservation of their property, by application to the Designated Heritage Property grant program. This amount is in line with similar heritage grants available through other municipalities in Ontario. Applications received for funding are recommended for approval by the Heritage Advisory Sub-Committee.

Over the past 4 years the average spent has been $53,000 out of the $75,000 available. The difference between the amount allocated and spent is due to property owners not undertaking the approved project, or not budgeting sufficient time for building approvals and permits. Based on these points there is currently not a strong case to increase the funding to the Designated Heritage Property grant.

City staff are undertaking three initiatives to improve the current Designated Heritage Property Grant program and improve the grant utilization rates.

- Grants are recommended based on the merit of the projects. Projects meeting or exceeding best practices, having the appropriate documentation and those that are ‘shovel ready’ are given priority

- To accommodate time required to secure the necessary City permits, applicants will be able to request a one-time extension to provide them additional time to complete the project

- An annual information session will be held to ensure that applicants are better informed of the scope of the grant, the timeline, eligibility and what is required to be successful

These initiatives will help to address the current issues with under-utilization of funds. Staff will continue to monitor the program and will advise if any changes are warranted.

Prepared by: Paul Damaso, Director, Culture Division

PETER VAN LOAN MP
YORK-SIMCOE
CHANGE FOR THE BETTER

Councillor George Carlson
City of Mississauga
Civic Centre 300, City Centre Dr., Mississauga ON
L5B 3C1

Dear Councillor Carlson,

Let's Save our Heritage Infrastructure – Contact Your MP to Support Bill C-323

As the Official Opposition Critic for Canadian Heritage and National Historic Sites, I introduced a Private Member's Bill to create a tax credit for restoration of historic places. Bill C-323 creates a 20% tax credit for rehabilitation work done on designated heritage buildings. It also creates a three year accelerated write-off period for spending on these buildings.

Built heritage creates cultural value for our communities. It enriches our lives and connects us to our history. Currently, Canada has no policy to help those who spend heavily on this public benefit. With the 150th anniversary of Confederation fast approaching, the adoption of this policy is appropriate.

I am asking for your support to get this important legislation passed so that our cultural heritage may be preserved and saved for generations to come.

You can help get Bill C-323 passed by contacting your MP to vote for Bill C-323.

This proposal will help re-connect us to our history and culture. I look forward to working to preserve our built heritage, with your support. Please find enclosed an information package about the details of Bill C-323.

Thank you,

Hon. Peter Van Loan, MP
Official Opposition Critic for Canadian Heritage and National Historic Sites
Member of Parliament for York-Simcoe

P.S. Mail may be sent postage-free to:

Name of Member of Parliament
House of Commons
Ottawa, Ontario
K1A 0A6

To find the phone number or email address for your local Member(s) of Parliament, please consult the Parliament of Canada's website at www.parl.gc.ca

Toll Free # 1-877-PETER-4-U
Tel: 613-996-7752 Fax: 613-992-8351 Email: vanloan.p@parl.gc.ca
Room 555-D, Centre Block, House of Commons, Ottawa, Ontario, K1A 0A6
Tel: 905-898-1600 Fax 905-898-4600 Email: vanlop1@parl.gc.ca
45 Grist Mill Road, Unit 10, Holland Landing, Ontario, L9N 1M7

A TAX CREDIT FOR THE RESTORATION OF HERITAGE PROPERTIES

ASK YOUR MEMBER OF PARLIAMENT TO SUPPORT BILL C-323

An Act to Amend the Income Tax Act
(Rehabilitation of Historic Property)

Peter Van Loan, MP

Bill C-323

What People are Saying about Bill C-323:

"This is an idea that has had **widespread support** from heritage advocates, federal, provincial, territorial and municipal governments, and the Federation of Canadian Municipalities over the years. **It's exciting to see it tabled in the House and given first reading**. We know that the tax system can be a powerful tool to stimulate private investment in heritage buildings. In the United States, the introduction of a 20 percent federal tax credit for rehabilitation of heritage buildings 40 years ago **revolutionized the way developers think about old buildings and launched a booming and competitive preservation industry**."

– National Trust for Canada

The Fairmont Empress Hotel—Victoria, BC

Contact Your MP, and Tell Them to Support Bill C-323

Write them at: House of Commons, Ottawa, ON K1A 0A6

Or, phone or email them.

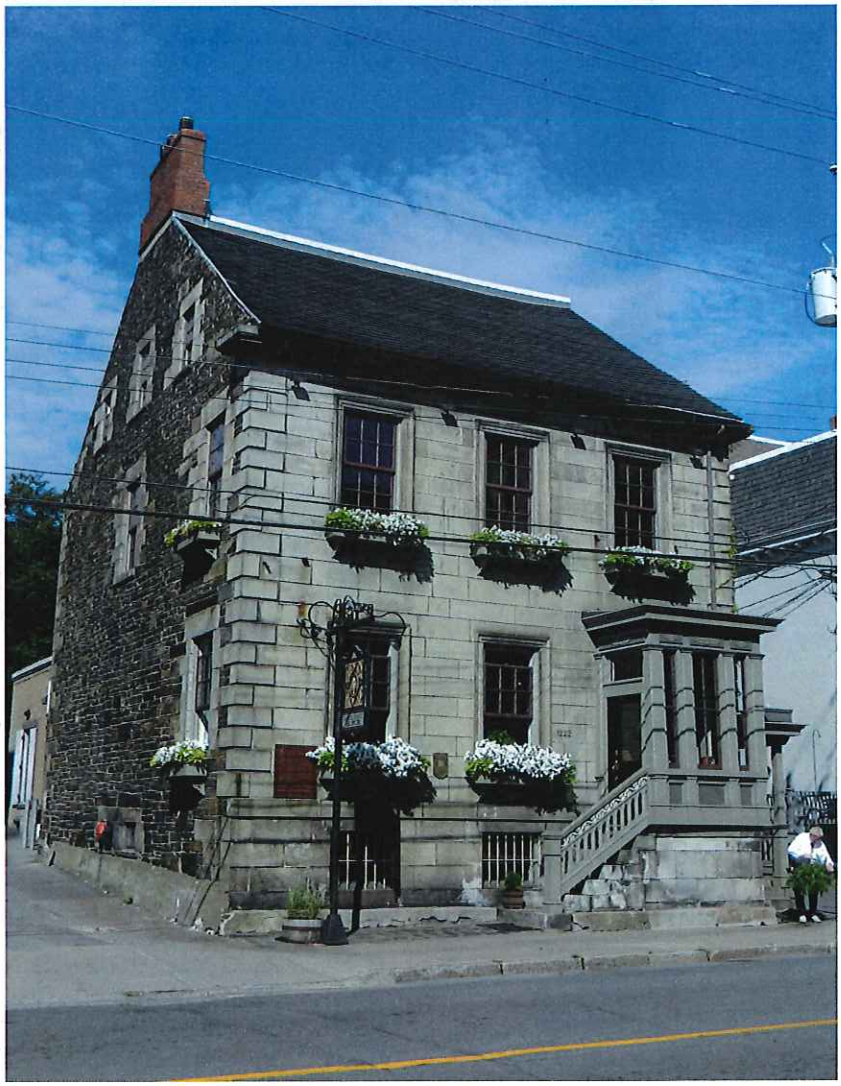
Bill C-323

What is Bill C-323?

- **A tax credit** that will seek to limit the destruction of Canada's heritage buildings, and instead encourage the rehabilitation of these culturally significant buildings
- The Bill would also allow owners to **write-off** spending on heritage restoration at a faster rate than is currently the case

Why introduce Bill C-323?

- There is a tremendous public interest in the preservation and restoration of heritage properties. But the cost burden of doing so is usually more expensive to owners than other alternatives—like demolition and new construction
- This Bill helps owners who are preserving heritage buildings with the cost of delivering this public benefit
- The pilot program for this policy was very successful in encouraging investment from private individuals and businesses. The pilot program for this Bill saw tremendous growth in property values, occupancy rates, and profits for businesses in rehabilitated buildings



Henry House—Halifax, NS

Bill C-323

Why preserve heritage infrastructure?

- This Bill will help reconnect Canadians to their cultural heritage
- Investments in our built heritage create cultural value. A similar policy in the United States is described as "the most effective Federal program to promote community revitalization"
- Large rehabilitation projects often create lots of good paying jobs

Sir John A MacDonald's Summer Home at Les Rochers—Rivière-du-Loup, QC

How does it work?

- The tax credit would be available to properties that appear on the National Register of Historic Places
- An architect must certify that the eligible building has undergone rehabilitation in accordance with the Standards and Guidelines for the Conservation of Historic Places in Canada for the project to be eligible for the credit and the accelerated write-off

Bill C-323

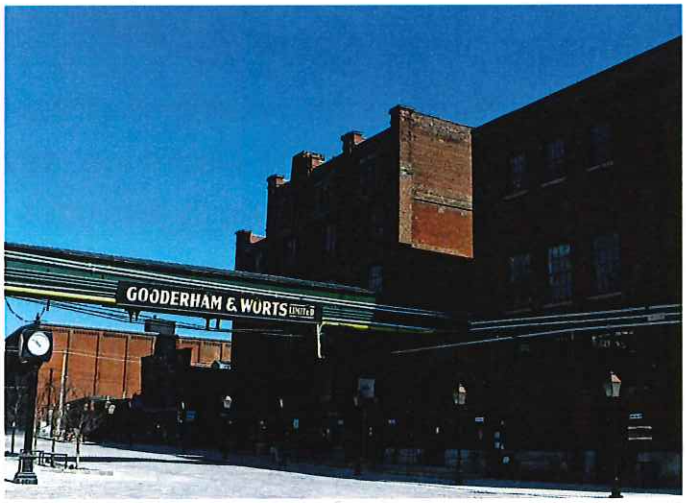
What are people saying about it?

Capitole de Québec—Québec, QC

Bill C-323 is "a **win-win**: for heritage; and for the local economy where historic preservation **creates jobs** for professionals and within the trades" – James Reid, Principal Architect, taigh Architecture, Inc.

"Peter's progressive bill represents a true **partnership** role for government in **protecting Canada's Heritage**." – Michael McClelland, ERA Architects

This bill will encourage "**historic building owners to rehabilitate rather than demolish**". This "is key for truly sustainable communities; in terms of both the embodied energy in an existing building, and for such places enhancing our shared social identity, **community pride** and *civitas*." – Eric Pattinson, Pattinson Architecture



Gooderham and Worts—Toronto, ON

Frequently Asked Questions

What does Bill C-323 do?

Bill C-323 creates a 20% tax credit on eligible costs for rehabilitation work done to a building that is designated as a historic place. The bill also creates an Accelerated Capital Cost Allowance for eligible capitalized costs incurred under the same conditions as the tax credit.

What is the purpose of Bill C-323?

The Bill aims to preserve our cultural heritage, and build a foundation upon which the policy may be expanded. Preserving our communal heritage benefits all Canadians, and with Canada 150 fast approaching, it is appropriate to introduce this policy now.

What is a "historic place"?

A historic place is defined as a property on the Register of Historic Places, a list of designated properties that have significant historic value to Canada. The enabling legislation for the Register can be found in s. 3 of the Historic Sites and Monuments Act. Bill C-323 includes a provision for the Minister to extend the definition of "historic place" to other buildings and definitions of historic places (e.g. provincial registers of historic places).

What is an "eligible cost"?

Eligible costs under the provisions of the bill are defined as costs that are construction, professional, insurance, development, site improvement, or otherwise prescribed costs. This explicitly excludes acquisition, cosmetic and furnishing costs.

What is defined as "rehabilitation work"?

Rehabilitation work is defined as work that is done in accordance with the *Standards and Guidelines for the Conservation of Historic Places in Canada*, and must be certified by a registered professional architect licensed to practice in Canada.

Over what period of time may the tax credit be claimed?

Each certified project has 10 years over which it may have a tax credit claimed, or unused portion thereof carried forward.

Frequently Asked Questions

What is an Accelerated Capital Cost Allowance?

An Accelerated Capital Cost Allowance is a tax mechanism that permits the deduction of taxable capital expenditures in a regularized fashion. For the purposes of this bill, this means that costs which are capitalized in nature, are eligible for a 3 year, 25%, 50%, 25% per year deduction, so that after 3 years, the entire value of the capital expenditure has been written-off.

Can a capitalized cost be claimed under both the tax credit and the accelerated Capital Cost Allowance regimes?

Yes, however, the taxable base will be reduced by the amount of the other policy, e.g. if the capitalized costs are claimed under the tax credit, only the remaining 80% of the capitalized costs will be eligible under the accelerated Capital Cost Allowance.

Has this policy been tested for viability in Canada?

In the early 2000's, the government implemented a pilot program. The program, whose end goal was to be converted into a tax credit such as the one this bill creates, on average doubled the market property values of historic properties, business revenue, and occupancy rates of the historic properties. These activities incentivized by the Fund generated significant GST and corporate tax revenues. The policy is considered viable in Canada.

Has this policy been tested in other countries?

Many countries have heritage grants, programs, etc. The most similar policy to the one this bill advances is the tax credit program in the United States, which provides a 20% tax credit on costs related to the rehabilitation of designated historic buildings, and a 10% credit on non-designated building built before 1936. The program, implemented in 1976, is recognized as having been hugely successful, with over 41,000 projects certified. Furthermore, the program was found to have a net-positive impact on the treasury of +$5.0 billion over the present life of the program (1976-2015).

Bill C-323

How Can We Make Bill C-323 Law?

To **make Bill C-323 law**, and to protect our built heritage, MPs have to vote for the Bill. The best way to get your MP to vote for the Bill is to contact them, and encourage them to **vote in favour of Bill C-323**.

You can:

1. **Send them a letter** at House of Commons, Ottawa, ON K1A 0A6
2. **Phone them**, or
3. **Email them.**

Each and every contact is one more step toward **making Bill C-323 law**, and one more step toward **preserving our cultural built heritage**.

If you don't know who your MP is, just search "Who is my MP?" in Google, or visit "http://tinyurl.com/hjw6bpv". This website, from the Parliament of Canada, lets you search for who your MP is by postal code.

Imperial Theatre—Saint John, NB