



Township of Uxbridge Public Library Board Meeting Agenda

Date: Thursday, November 21, 2019 @ 7:00 pm

Location: Uxbridge Public Library, Lower Meeting Room

1. Call to order:

2. Disclosure of Pecuniary Interest and the General Nature thereof.

3. Approval of Agenda

4. Approval of Consent Agenda

- October minutes, November Newsletter.

5 Committees:

5.1 Finance –

- October accounts
- Budget drafts
 - Operating Budget
 - 10 – 15 year Capital forecast

5.2 Governance and HR Committee

- HR Committee
 - Discussion from sub-committee meeting November 21st

5.3 Community Committee (D. Clements)

- Community sub Committee
 - Meeting at 8 pm tonight (following the LB meeting)
- Ontario Public Library week October 20 – 26
 - recap

5. New Business

- The Poverty Alliance

6. Ongoing Business / Action items

6.2 Facility update (Amanda)

- Heat and Cooling
- Lighting retro fit
- Final Building audit
- Children's garden



Township of Uxbridge Public Library Board Meeting Agenda

Date: Thursday, November 21, 2019 @ 7:00 pm

Location: Uxbridge Public Library, Lower Meeting Room

7. Correspondence

8. Round Table

9. Council Connects

10. Date of Next Board Meeting: December 4th at 5 pm (special time).

11. Adjournment



Township of Uxbridge Public Library Board Meeting Agenda

Date: Thursday, November 21, 2019 @ 7:00 pm

Location: Uxbridge Public Library, Lower Meeting Room

Consent Agenda

- 1. September Minutes**
- 2. October Newsletter**



Township of Uxbridge Public Library Board Meeting Minutes

Date: Wednesday, October 16, 2019 @ 7:00 pm

Location: Uxbridge Public Library, Lower Meeting Room

Present: Dave Phillips, Gord Shreeve, Lynn Klages, Corrinne Morrison, Amanda Ferraro, Gary Ruona, Willie Popp, Dave Barton, Donna Condon, Agnes Croxford

Regrets: Martin Koolhaas, Dwight Clements

Guests:

1. Call to Order @ 7:00 pm

2. Disclosure of Pecuniary interest and the General Nature thereof.

✓ No disclosures

3. Approval of Agenda with Addendum

✓ Moved by Willie, seconded by Lynn; carried

4. Approval of Consent Agenda: September Minutes, Summer Program Stats, October Newsletter

✓ Moved by Gord seconded by Willie; carried

5 Committees:

5.1 Finance –

- 9 month summary report (Donna)

Both operating expenditures and revenues are tracking favourable to budget, so no concerns so far, expenditures to date have spent 62%, verses revenues have earned 78% to date.

✓ Moved by Dave, seconded by Lynn; carried

- August accounts and September accounts

✓ Moved by Willie, seconded by Lynn; carried

- **Report LB06-19** Provincial resources:

- THAT Report LB06-19 be received for information;
- AND THAT the Library Board direct staff to purchase Ancestry Library Edition, Britannica Library, LibraryAware and World Book Advance Reference for 2020 for an estimated cost that will be very close to that spent in 2019. Maximum amount would be \$3406.59 but due to anticipated Ancestry reduction most likely under \$3000.
- AND THAT Kids InfoBits be added for \$265.00

✓ Moved by Lynn, seconded by Gord; carried

- Budget planning subcommittee
 - Operating Budget
 - **Meeting October 24th 2 – 4pm**

5.2 Governance and HR Committee

- HR Committee



Township of Uxbridge Public Library Board Meeting Minutes

Date: Wednesday, October 16, 2019 @ 7:00 pm

Location: Uxbridge Public Library, Lower Meeting Room

- Meeting November 21st 11 – 2 pm

5.3 Community Committee (D. Clements)

- Community Committee
 - Meeting November 21st at 8 – 9 pm
- Ontario Public Library week is October 20 – 26
 - Planned activities throughout the week

5. New Business

- Cancelled MPP visit on Friday October 25

6. Ongoing Business / Action items

6.2 Facility update (Amanda)

- Heat and Cooling – switched to heat. Minimal issues.
- Lighting retro fit 95 % done
- Building audit – draft version now available
- Children's garden

7. Correspondence

- N/A

8. Round Table

- Dave P. commented on the need to answer the outstanding issue of appointing a permanent CEO. Possible solutions including staying on course but hiring a part time Librarian. This item was referred to the Governance and HR Committee to come back with possible solution.

The Library Board moved into In-Camera at 8:06 pm to discuss matter related to personal matters about an identifiable individual, including Municipal and Local Board employee.

The Library Board rose from In-Camera at 8:14 pm with nothing to report.

9. Council Connects

- Lots of new successes: Pump park soft opening built with mostly grants and sponsorships/fundraising, Red tape reduction roundtable with our MPP, Senior's grant, Neighbourhood watch, Business neighbourhood watch and the removal of the Red Barn for \$1,000 vs \$25,000.

10. Future Meetings: Thursdays at 7:00 pm

- Nov. 21, Dec. 19.



Township of Uxbridge Public Library Board Meeting Minutes

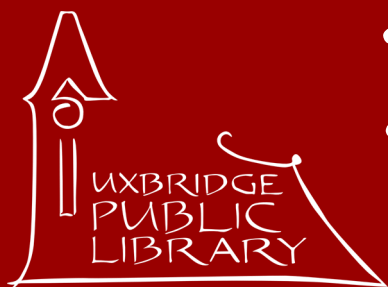
Date: Wednesday, October 16, 2019 @ 7:00 pm

Location: Uxbridge Public Library, Lower Meeting Room

11. Date of Next Board Meeting: November 21

12. Adjournment 8:30 pm

✓ Moved by Willie, seconded by Agnes; carried



Newsletter

9 Toronto Street S.

www.uxlib.com 905-852-9747

Volume 23 Number 11

November 2019

An Old Fashioned Christmas at the Library

Come celebrate an Old Fashioned Christmas at the Library!

This year, it's all about "Giving Back" at the Library. We will be celebrating this season of giving by sponsoring a family in need. If you would like to help a family in our community, please come in and pick out a gift idea from our giving trees in the Adult and Children's Department.

We will also be making cards in both departments that will be distributed to seniors in our community.

Help Merry Mo and Dawna Dasher kick off the holiday season with their Fa-la-la-lal singing along night! Stories, caroling, crafts and more await, so please join us on **December 5th** for an old fashioned Christmas at the Library!

All are welcome!


Refreshments and treats will be served!

Holiday fun will be continued all month long...

-Weekly crafts for children

-Family Holiday Story time Tuesday,
December 17th at 10:30 am





Antique Book Sale Fundraiser

for the
Uxbridge Public Library

November 15-December 15

For a minimum of \$5 you may purchase a piece of local history. It makes the perfect gift for the person in your life who has everything.

Limited quantities offered.

Tax receipts will be issued for donations of \$20 or more.

Holiday Hours (Uxbridge Branch)

December 24	10am-12pm
December 25	Closed
December 26	Closed
December 27	10am-5pm
December 28	10am-5pm
December 29	1-5pm
December 30	10am-5pm
December 31	10am-12pm
January 1	Closed
January 2	10am-9pm



Holiday Hours (Zephyr Branch)

December 24	Closed
December 26	Closed
December 28	10am-3 pm
December 31	Closed
January 2	3-8 pm



Tech Help

New day starting
January 8!



Conquer your iPad! Master your tablet!

Ask your tech questions!

Drop in @ the Uxbridge Public Library's Compton
Family Resource Room on the lower level.

Wednesdays 1:30-3:30 pm



Join us on November 11 for the Remembrance Day ceremonies. The parade will commence in front of the Uxbridge Music Hall at 10:30am and finish at the cenotaph in front of the library. The library will be open.

Connect with us on:



Programs

TOTally Kids

For children ages 18 months to 2 1/2 years
This interactive program includes stories, songs and sensory play!

Tuesdays in February
(4, 8, 11, 25)
10:30am - 11:15am

This program is **FREE!**
Registration will begin online OR in person on Monday, November 25th.



Register online
November 25
Instructions
available at
www.uxlib.com

WIGGLES AND Giggles

This program is **FREE!**
Registration will begin online OR in person on Monday, November 25!

Family Story Time for ages 2½ and up
(with an adult)

This fabulous, fun-filled program will include stories, songs, rhymes, and it always end with a craft!

Stories and crafts are geared for ages 2½ and up!

January 10:30-11:15
Mondays
(13, 20 & 27)

OR
February 10:30-11:15
Mondays
(3, 10 & 24)



Bonding With Baby Bundles

For babies 0-12 months (with a caregiver)

This will be a time for babies and parents to spend time together. Come and meet other parents, learn something new and enjoy some special one-on-one time with your baby.

Tuesdays in January
10:30 am – 11:15 am
7, 14, 21 and 28

This program is **FREE!**
Registration will begin online OR in person on Monday, November 25th.



TICKLES AND TUNES

Join the musical fun with musician Kathy Reid-Naiman

For children 6 - 36+ months (with an adult)

The cost is **\$50/child** for this **8-week program**

Songs, fingerplays, tickles and tunes, to delight and entertain even the smallest child!

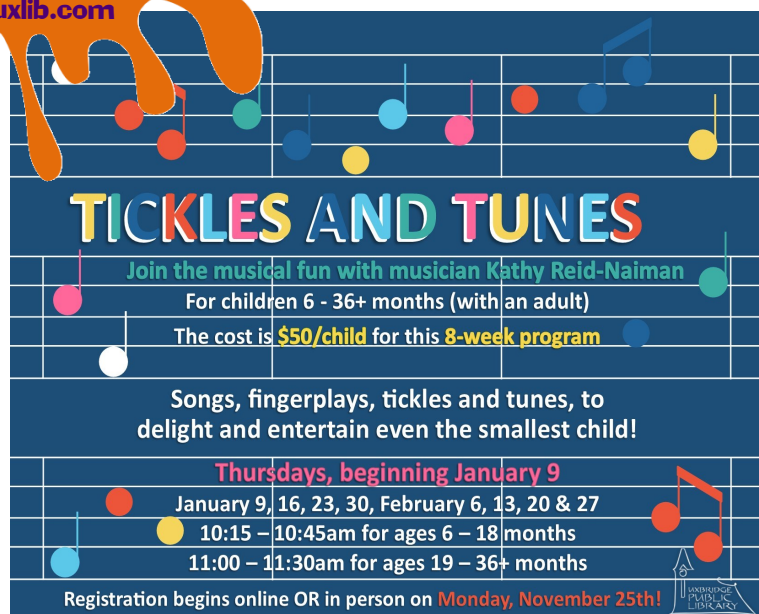
Thursdays, beginning January 9

January 9, 16, 23, 30, February 6, 13, 20 & 27

10:15 – 10:45am for ages 6 – 18 months

11:00 – 11:30am for ages 19 – 36+ months

Registration begins online OR in person on **Monday, November 25th!**



Reading Buddies

A great **reading program** that fosters **literacy** through **one-on-one** reading, literacy based **activities**, and fun!



Wednesdays:

Jan. 8th—Feb. 26th
(3:45-4:45pm)

Thursdays:

Jan. 9th—Feb. 27th
(3:45-4:45pm)

**For more information please pop in or Children's Department or call 905-852-9747.

Registration begins November 25th

Big Buddy
Volunteers
Wanted!

Grades 6-9

Grades 6-9

TWEEN TAKEOVER

at the Uxbridge Public Library

FREE!

Stop by every Thursday night at 7:00pm for our **TWEEN TAKEOVER!!** We meet every week in the YA department

November 7: Movie - Nightmare Before Christmas
November 14th: BOB ROSS paint night
November 21st: Harry Potter Trivia
November 28th: Tie Dye (Bring a white shirt or bag)

December 5th: Holiday Cheer! (Cookies and Carols)
December 12th: Crafts and Christmas Cards!



Programs

PA Days at the Library

PA days at the library are for elementary students with a caregiver. All of the activities being offered are FREE! Make sure to drop-in any time between 11:00 am and 3:00 pm to take part in our fun activities!



November 15th: Makey Makey Music Studio

February 11th: The STEAM Lab



STEAM



Family Fun Day: Fairy Tale Bash!

Saturday, November 16th 11:00am to 3:00pm

Come and enjoy crafts and activities while rediscovering some old and new Fairy Tales!



FAMILY FUN DAY



Winter Wonderland at the Library

Let's celebrate winter by enjoying some indoor fun to beat the cold weather with activities to brighten your winter day. Learn about Picasso and Frida Kahlo (or your favourite artist) by making a snowman in their art style! Don't worry, it won't melt...

Drop-in program between
11:00 am-3:00 pm
Saturday, January 18th



Please join us for this drop-in style book club

Meetings will be held at 7:00 pm in the Meeting Room at the Uxbridge Public Library
9 Toronto Street South, Uxbridge
Questions? Please call (905) 852-9747



AMNESTY INTERNATIONAL
BOOK CLUB

Fall 2019

November 7



Fugitive Pieces
by Anne Michaels

December 5



Scarborough
by Catherine Hernandez



AWARENESS + ACTION = A DIFFERENT KIND OF BOOK CLUB

During Ontario Public Library Week we asked you...

How valuable a resource is the Uxbridge Public Library in our community?

1. How many items did we check out for the month of July 2019?

(Clue: It was 7958 in April)

9784 with the winner being Bob Romar with a guess of 9856

2. What was the most money saved by a patron during the past year by borrowing items rather than buying?

(Clue: The second highest amount was \$16,887.00!)

\$21,689.05 with the winner being Barb Barfoot with a guess of \$21,684.72

3. How many patrons enter the library in an average hour?

45 with the winner hitting the answer perfectly, Mark Kinghan

Congratulations to all of our Facebook and Instagram winners also.

CONGRATULATIONS
TO OUR WINNERS!





Adopt-a-Magazine @ the Library

For individuals or companies wishing to contribute to the library's collection, consider our

"Adopt-a-Magazine" Program.

Adopt-a-magazine in our collection and have your contribution to the library marked with a word of appreciation on the shelf with the magazine.

Come in to choose your magazine for 2020.

A tax receipt will be given for all donations.

Information is available at the library or call [905-852-9747](tel:905-852-9747).



Did you know you can drop off your used household batteries to the library anytime for safe disposal?

Drop off your used household batteries in the container at the lower level entrance of the library.

7:00 pm
November 12th, 2019
Admission free
Uxbridge Library, 9 Toronto St S

UXBRIDGE CLIMATE ACTION
2019/2020 LECTURE SERIES PRESENTS

GLOBAL GREENHOUSE GASES CAUSES, EFFECTS AND SOLUTIONS

DR. LORNE McCONNELL, F.C.A.E.

Renowned Greenhouse gas expert, in addition to representing Canada at the United Nations he has lectured to universities, professional engineers, scientists, and the general public for over 30 years.

COMING SOON

GREEN TIPS FOR A FAMILY FOCUSED CHRISTMAS

December 3rd, 2019, 7:00PM

Steve Leahy

UPCOMING SEMINARS INCLUDE

**SUSTAINABLE BUILDING, LOCAL AGRICULTURE,
SUSTAINABLE FAMILIES AND MORE.**



Birthday Parties at the Library

You can host your next birthday party at the Uxbridge Public Library in our meeting room!

\$30.00 per hour.

Please contact:

corrinne.morrison@uxlib.com

or

peggy.kennedy@uxlib.com

For more information.



**"Like" the
Uxbridge
Public
Library**



**and the Zephyr Public
Library pages on
Facebook and "Follow"
us on Instagram**

Look for posts on upcoming events and information about events and program registrations.

Library Hours



UXBRIDGE BRANCH

9 Toronto St. S.
Uxbridge, Ontario L9P 1P7

905-852-9747

Monday, Wednesday,

Friday, Saturday

10 am - 5 pm

Tuesday, Thursday

10 am - 9 pm

Sunday 1 pm - 5 pm

from November through April

ZEPHYR BRANCH

13000 Durham Road 39
Zephyr, Ontario L0E 1T0

905-473-2375

Tuesday, Thursday

3 pm - 8 pm

Saturday

10 am - 3 pm



Reduce, Reuse, Recycle

GARBAGE BAG TAG

Did you know we sell garbage tags? Residents setting out more than four bags of garbage on collection day are required to buy tags for each bag over the limit.



The Uxbridge Public Library sells sheets of 10 garbage bags for \$25, or \$2.50 per tag. Tags can be purchased at the Adult Circulation Desk.



Want to know what is happening at the Library? Sign up at www.uxlib.com to receive our newsletter, and you'll be the first to receive information about our programs and special events, directly to your inbox. If you require the newsletter in a different format please notify us by phone at 905-852-9747 or email to uxbridgelibrary@uxlib.com

Date	Vendor Name	Invoice Number	Invoice Description	Amount \$
10/3/2019	BRODART CANADA COMPANY	038648	SUPPLIES	\$52.66
10/3/2019	LIBRARY SERVICES CENTRE	575331	BOOKS	\$663.29
10/3/2019	MEEK ELECTRIC	7106-LIB	RE-INSTALL BANNERS	\$360.47
10/3/2019	RONA INC.	33220-11952631	SUPPLIES	\$33.01
10/3/2019	STEVE KING PROPERTY SERVICES	2015144-LIBRARY	GRASS CUTTING-SEPT 16-LIB	\$22.60
10/3/2019	THE COMPUTER MEDIA GROUP	1473059-IN	SUPPLIES	\$101.14
10/3/2019	THE UXBRIDGE HISTORICAL SOCIETY	AUGUST 1/2019	PLANTS	\$452.28
10/3/2019	WORKPLACE SAFETY & INSURANCE	WSIB-JULY TO AUG/19	WSIB-LIBRARY -JULY TO AUG/2019	\$360.89
10/3/2019	HEAT-AIR MECHANICAL LTD.	28422	HYDRONIC HEATING/COOLING UNITS	\$13,482.28
10/3/2019	LAWNSCAPE	36183-LIBRARY	GRASS CUTTING-SEPT 16-LIB	\$28.25
10/3/2019	LIBRARY SERVICES CENTRE	575796	BOOKS	\$637.64
10/3/2019	MINISTER OF FINANCE*****	EHT-SEPT/19-LIBRARY	EHT-SEPT/2019-LIBRARY	\$589.47
10/3/2019	ROCKY RIDGE DRINKING WATER LIMITED	333820	WATER	\$64.00
10/3/2019	RONA INC.	33220-11953331	SUPPLIES	\$15.25
10/3/2019	THE COMPUTER MEDIA GROUP	1472945-IN	TONER	\$82.93
10/3/2019	CORPORATE EXPRESS CANADA INC.	C301287-00611244-LIB	OFFICE SUPPLIES	\$78.24
10/3/2019	ENBRIDGE	113542251003/SEP2019	ESTIMATE-AUG 20 TO SEPT 18	\$162.46
10/3/2019	HEAT-AIR MECHANICAL LTD.	28380	SERVICE	\$562.18
10/9/2019	DE LAGE LANDEN	7298344	COPIER-10/15/19-11/14/19	\$196.50
10/9/2019	LIBRARY SERVICES CENTRE	576723	BOOKS	\$1,006.11
10/9/2019	MARTY S WINDOW CLEANING	22	WINDOW CLEANING-BOTTOM EXT.	\$113.00
10/9/2019	BLUE HERON BOOKS	309588	BOOKS	\$68.81
10/9/2019	GDL SOLUTIONS INC.	16-847	SERVICES-OCTOBER	\$2,203.50
10/9/2019	LIBRARY SERVICES CENTRE	576724	BOOK	\$50.21

10/9/2019 THE COMPUTER MEDIA GROUP	1473454-IN	SUPPLIES	\$96.05
10/9/2019 BLUE HERON BOOKS	309589	BOOKS	\$53.66
10/9/2019 ELEXICON ENERGY	51001548-02/SEPT2019	HYDRO-AUG 8 TO SEPT 8	\$1,529.71
10/10/2019 CWB NATIONAL LEASING	18240323	MONTHLY LEASE-#2680458	\$136.73
10/17/2019 LAWNSCAPE	36467-LIBRARY	GRASS CUTTING-OCT 7-LIB	\$28.25
10/17/2019 LIBRARY SERVICES CENTRE	577100	BOOKS	\$975.68
10/17/2019 BELL CANADA	9058529747/OCT2019	TELEPHONE CHARGE-OCT	\$338.63
10/17/2019 BELL CANADA	9054732375/OCT2019	TELEPHONE CHARGE-OCT	\$112.16
10/17/2019 LIBRARY SERVICES CENTRE	577101	DVD	\$13.87
10/17/2019 STEVE KING PROPERTY SERVICES	2015172-LIB	GRASS CUTTING-OCT 9-LIB	\$22.60
10/17/2019 TODD BOWEN ENTERPRISES INC.	1015191	LIGHTING RETROFIT	\$34,642.31
10/17/2019 XEROX CANADA LTD.	85177605	COPIES-OCT	\$23.85
10/17/2019 FOCUS IT SOLUTIONS	2019-35	CONSULTING-ROBOTICS/SUPPLIES	\$557.75
10/17/2019 GARY BROWN MASONRY LTD.	SEPT 26/2019	RELOCATE BOOK DROP	\$1,345.10
10/22/2019 GDL SOLUTIONS INC.	16-835	SERVICES-SEPTEMBER	\$2,203.50
10/22/2019 YORKHAM PAINTING AND DECORATING	0711	EXTERIOR PAINTING-WINDOWS/DOOR	\$2,373.00
10/22/2019 GDL SOLUTIONS INC.	16-811	SERVICES-JULY	\$2,203.50
10/22/2019 HYDRO ONE NETWORKS INC.	200072033278/OCT2019	HYDRO-SEPT 6 TO OCT 4	\$145.44
10/22/2019 COMPTON COMMUNICATIONS	014302/OCT2019	INTERNET-OCT/NOVEMBER	\$542.26
10/31/2019 DE LAGE LANDEN	7333587	COPIER-11/15/19 TO 12/14/19	\$196.50
10/31/2019 RONA INC.	33220-11989881	SUPPLIES	\$21.40
10/31/2019 ELEXICON ENERGY	51001548-02/OCT2019	HYDRO-SEPT 8 TO OCT 8	\$1,086.14
10/31/2019 IAN WATSON	OCT 2019	TOWER CLOCK MAINTENANCE	\$150.00
10/31/2019 HEAT-AIR MECHANICAL LTD.	28707	SERVICE	\$162.97
10/31/2019 ENBRIDGE	113542251003/OCT2019	ACTUAL-SEPT 19 TO OCT 17	\$217.74

10/31/2019 UTS TREE CARE	783	TREE PLANTING/MAINTENACE	\$960.50
10/31/2019 MAUREEN O'SHEA BROWN	OCTOBER 2019-EXP.	EXPENSES-OCTOBER	\$49.70
10/31/2019 KATHY REID NAIMAN	PROGRAM-TICKLES/TUNE	TICKLES AND TUNES PROGRAM	\$973.30
10/31/2019 JIM NELSON	534720	CARETAKING-OCTOBER	\$2,079.20

Uxbridge Public Library – Building Condition Assessment

9 Toronto Street South, Uxbridge, Ontario



Prepared by:



570 Bryne Drive, Unit L
Barrie, ON
TA-4583-19
November 5, 2019

Executive Summary

Tacoma Engineers was retained by Amanda Ferraro of Township of Uxbridge to carry out a structural condition assessment of the Public Library at 9 Toronto Street South, Uxbridge, ON. The undersigned, and Alex Nowakowski, P.Eng., attended the site on June 27, 2019, accompanied by Chris Langford (EME Engineering) and Bob Mitchell (Davenport Architectural Corp.)

This report is based on a visual inspection only and does not include any destructive testing. The structure is assumed to have been constructed in accordance with best building practices common at the time of construction. No further structural analysis or building code analysis has been carried out as part of this report. Where no concerns were noted the structure is assumed to be performing adequately.

The existing building was found to be in generally good condition, with localized areas in poor condition. There were no major immediate structural issues found in the buildings.

The item of greatest structural concern was the condition of the wood framing and brick walls of the tower structure. Structural repair of this element is recommended in the medium-term.

Mitigation of water infiltration is critical to the long-term health of this building. The majority of problems found in buildings are due to water ingress, and the cost to address these concerns is significantly reduced the earlier they are detected.

The architectural and structural issues that were identified in this report have been classified as either short-term, medium-term, or long-term action items. These items must be addressed to ensure the long-term viability of the buildings.

Mechanical and Electrical concerns and recommendations can be found in Appendix C.

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1. Introduction

Tacoma Engineers was retained by Amanda Ferraro of Township of Uxbridge to carry out a structural condition assessment of the Public Library at 9 Toronto Street South, Uxbridge, ON. The undersigned, and Alex Nowakowski, P.Eng., attended the site on June 27, 2019, accompanied by Chris Langford (EME Engineering) and Bob Mitchell (Davenport Architectural Corp.)

This report includes a summary of the following items for the building reviewed:

- major systems;
- existing conditions and areas of potential concern;
- conceptual repair options for any areas that may require remedial work;
- consideration related to future development.

2. Background

This assessment is being undertaken by The Township of Uxbridge and is intended to determine the condition of the building. This report is not being prepared as a response to an Order, recommendations, or request by any regulatory body. Refer to attached reference drawings in Appendix B for specific layout of the building and notes related to photos.

The primary purpose of this assessment is to identify and prioritize concerns and present options for protection and remediation as part of a 15-year plan for the building.

Architectural, life-safety and accessibility items were reviewed by Tacoma Engineers (Tacoma) in conjunction with Davenport Architectural Corp. (Davenport). Comments related to these items have been incorporated into the base report.

Mechanical and electrical systems were reviewed by Hubbert EME Engineering (EME). Comments related to the assessment completed by EME have been added to this report in Appendix C.

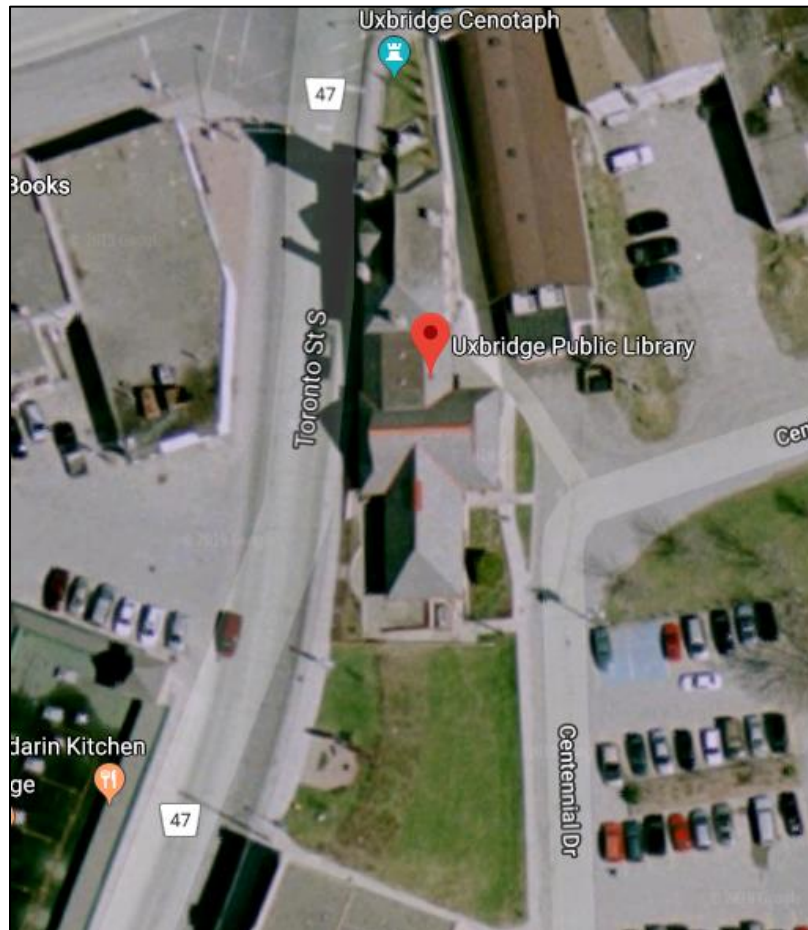
No previous work has been completed by Tacoma Engineers on this building for this or any other owner.

3. Building History

The original Uxbridge Library is a 3-storey structure (including basement) that was built in 1887. A 2-storey addition was constructed to the south of the original building in 1986. The building is constructed out of combination of brick masonry, concrete, and wood framing.

The building was originally designed to be a Mechanics Institute to support the education of the working class. The building has operated as a Free Library since the late 1890s.

Refer to Photograph 1 for an aerial view of the building.



Photograph 1 - Aerial View of Building (Google Earth)

4. Scope and Methods

The following documents were provided to the undersigned prior to the preparation of this report:

- Architectural Renovation Drawings, ARCOP Architecture Inc., June 12, 2014.

This report is based on a visual inspection only and does not include any destructive testing. Where no concerns were noted the structure is assumed to be performing adequately. The structure is assumed to have been constructed in accordance with best building practices common at the time of construction. No further structural analysis or building code analysis has been carried out as part of this report unless specifically noted.

Note that most the spaces in the building have applied finishes that preclude a direct visual assessment of the structural systems. Limited areas are unfinished, and a review of the primary structure was possible in these areas.

A site visit was carried out on June 27, 2019 by the consultant team described previously. A visual review of all accessible spaces was completed on this date, and photographs were taken of all noted deficiencies.

5. Definitions

The following is a summary of definitions of terms used in this report describing the condition of the structure as well as recommended remedial actions. Detailed material condition definitions are included in Appendix A of this report.

1. Condition States¹:

1. Excellent – Element(s) in “new” condition. No visible deterioration type defects present, and remedial action is not required.
2. Good – Element(s) where the first signs of minor defects are visible. These types of defects would not normally trigger remedial action since the overall performance is not affected.
3. Fair – Element(s) where medium defects are visible. These types of defects may trigger a “preventative maintenance” type of remedial action where it is economical to do so.
4. Poor – Element(s) where severe or very severe defects are visible. These types of defects would normally trigger rehabilitation or replacement if the extent and location affect the overall performance of that element.

2. Immediate remedial action¹: these are items that present an immediate structural and/or safety hazards (falling objects, tripping hazards, full or partial collapse, etc.). The remedial recommendations will need to be implemented immediately and may include restricting access, temporary shoring/supports or removing the hazard.

3. Priority remedial action: these are items that do not present an immediate hazard but still require action in an expedited manner. The postponement of these items will likely result in the further degradation of the structural systems and finishes. This may include interim repairs, further investigations, etc. and are broken down into timelines as follows:

1. **Short-term:** it is recommended that items listed as short-term remedial action are acted on within the next 8 months (**before the onset of the next winter season**).
2. **Medium-term:** it is recommended that items listed as medium-term remedial action are acted on within the next 24 months.
3. **Long-term:** it is recommended that items listed as long-term remedial action are acted on within the next 5-10 years. Many of these items include recommendations of further review/investigation.

4. Routine maintenance: these are items that can be performed as part of a regularly scheduled maintenance program.

5. Heritage interest: It should be noted that the building in question is of interest from the perspective of heritage. The Standards and Guidelines for the Conservation of Historic Places in Canada provide direction when a structural system is identified as a character-defining element of an historic place. They also provide direction on maintaining, repairing, and replacing structural components or systems². Refer to the General Guidelines for Preservation, Rehabilitation, and Restoration to further inform the development of more detailed remedial actions.

¹ Adapted from “Structural Condition Assessment”, 2005, American Society of Civil Engineers/Structural Engineering Institute

² “Standards and Guidelines for the Conservation of Historic Places in Canada”, 2nd Edition, 2010, www.historicplaces.ca

6. General Conditions

For clarity this report has been broken into two areas: interior, and exterior. Specific attention called to areas where deficiencies were noted.

6.1. Interior Review

Construction

The construction of building was predominantly wood framing with a combination of wood and steel beams supported on interior piers and the exterior walls.

Conditions

The interior of the building was found to be in generally good condition, with localized areas in poor condition. Our observations were split between building issues and comments related to the use of certain areas.

Water damage to plaster wall and ceiling finishes was observed in several locations. Damage was most prevalent near the exterior walls and above windows (refer to Photograph 2, Photograph 3, and Photograph 4). In some locations water damage coincided with locations where mechanical piping was un-insulated or insulation had become damaged. In one location (Photograph 4) a bucket was found about the t-bar ceiling collecting water from an un-insulated section of pipe.

The exit path from the upper level of the original Library building was partially blocked (refer to Photograph 5 and Photograph 7). The main corridor in the upper level of the original Library was temporarily being used for storage (refer to Photograph 6).

Steel guard for the stair connecting the two levels in the new addition was observed to be climbable (refer to Photograph 8). The door from the lower level to stair in the new addition was found to have an “auto-hold” preventing it from closing on its own (refer to Photograph 9).

Wood-framed knee walls above the Library Stack Room were found to be unbraced on each side of the building (refer to Photograph 10).

Localized damage to the wood framing in the Tower was observed (refer to Photographs 11a and 11b). Cross-bracing and connections were found to be missing in certain locations.

Localized damage to the brick mortar joints was observed in several locations within the Tower (refer to Photograph 12). Medium to wide cracking in the mortar joints was observed.

The clock mechanism at the top of the tower is currently accessed for service by a non-fixed ladder.



Photograph 2 - Water staining - previous repair



Photograph 3 - Water staining – damaged pipe insulation



Photograph 4 - Ceiling water staining – bucket below pipes



Photograph 5 – Blocked fire exit



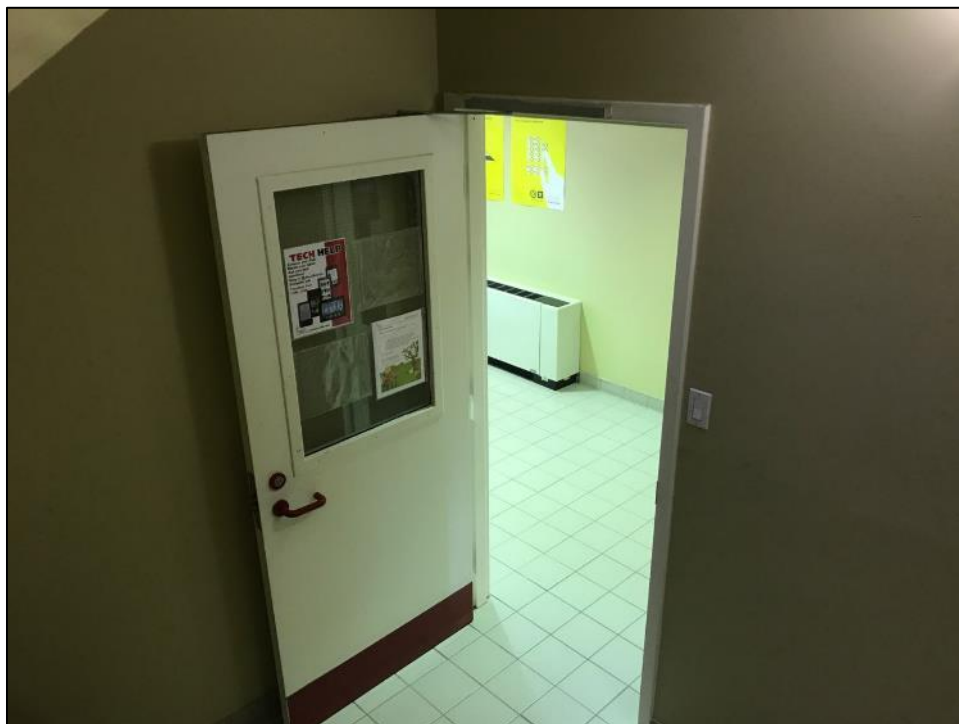
Photograph 6 – Corridor used for storage



Photograph 7 – Book shelving and storage in exit path



Photograph 8 – Climbable Stair Guard



Photograph 9 – Auto-hold on door from stair to lower level



Photograph 10 – Unbraced knee-walls above Library Stack Room



Photograph 11a, b: Wood framing in tower structure of original building



Photograph 12 – Wide masonry cracking in tower

6.2. Exterior Review

Construction

The exterior walls consisted of a combination of brick and stone masonry.

The foundation wall thickness was not determined but has been assumed to exceed 20" in thickness. This type of foundation is often called a "rubble stone wall" and typically consists of an interior and exterior wythe of stone masonry tied together with mortar and loose stone (rubble).

Conditions

The exterior walls were found to be in generally fair condition.

Localized damage to the brick, stone, and mortar joints was observed in several locations. Medium to wide cracking in the mortar joints was observed. Refer to Photograph 14 and 15.

Brick chimney's that were capped were in fair condition; however, chimney's that were not capped were in poor condition (refer to Photograph 16).

Water staining, and mild efflorescence was observed on the exterior of stone masonry walls at the location of the damaged downspout (refer to Photograph 17). These observations are indicative of water infiltration. It is not known whether water is actively entering the building.

Damaged gutters were observed at the eaves of the newer addition to the building (refer to Photograph 18).

Medium to severe spalling was observed in the concrete block in the newer addition (refer to Photograph 19). Observed spalling was likely the result of freeze-thaw action. Water that infiltrates the wall can become trapped without a proper drainage path. This trapped water expands as it freezes. The observed spalling is likely the result of this expansion.

Our client has indicated that the timber porch on the north side of the original building was in poor condition and had observed severe rot locally (refer to Photographs 13a and b).



Photograph 13a, b: Wood framing condition of timber-framed balcony (client provided photos)



Photograph 14 – Wide cracking in brick and stone at rear of building



Photograph 15 – Stone masonry wall requiring repointing



Photograph 16 – Damaged brick chimney (without cap)



Photograph 17 – Damaged downspout



Photograph 18 – Damaged gutters



Photograph 19 – Concrete block foundation wall spalling

7. Summary of Recommendations

The following provides a summary of the recommendations for the existing structure.

Items requiring immediate remedial action:

1. Clear exit path from upper level of original library building to main level by removing items in the upper hallway and lower foyer.

Items requiring short-term remedial action:

1. Review and reinstate insulation on piping near exterior walls. Much of the interior damage related to water appeared to be at pipes that have lost insulation.
2. Remove auto-hold from door to stair on the lower level of the addition. This door is required to be closed while not in use.
3. Consider adding meshing to the existing steel stair guard to prevent it from being climbable.
4. Remove storage boxes from corridor of upper level of the original library. Floor loading should be limited to 2.4 kPa (50 psf) for this type of floor.
5. Ensure existing downspouts and gutters are functional and effectively diverting water away from the building.
6. Client identified vents in the exterior walls adjacent interior radiators. These vents are no longer needed and should be sealed and insulated to prevent further damage from freezing.

Items requiring medium-term remedial action:

1. Repair damaged wood framing in tower structure, including:
 - a. Re-instate wood cross-bracing and stud wall connections.
 - b. It is recommended that steel ring beams are added at two locations (third-points) to provide additional stability to the tower structure.
 - c. It is recommended that fixed steel ladders are added to interior of the tower to facilitate access to the clock mechanism at the top of the tower.
2. Repair cracks in mortar joints in brick masonry tower walls. Localized steel rods may be required at locations where wide cracking was observed. It is critical that the mortar used to repoint the joints is of similar strength and stiffness to the existing (lime-based). Use of a stiff repointing mortar (portland cement based) will result in further damage to the brick and stone masonry walls.
3. Add wood knee-wall bracing to the walls above the Library Stack Room.
4. Repair cracks in mortar joints in exterior brick and stone masonry walls. As previously stated, it is critical that the mortar used to repoint the joints is of similar strength and stiffness to the existing (lime-based). Use of a stiff repointing mortar (portland cement based) will result in further damage to the brick and stone masonry walls.
5. It is recommended that the damaged concrete block masonry is locally repaired and patched to prevent water infiltration at the damaged locations.
6. Locally repair damaged brick masonry and mortar joints at the chimney that has not been capped. Once repair work is complete, add cap with drip edge to prevent further damage.
7. Locally repair damaged wood-framed porch and original wood-framed windows.

Items requiring long-term remedial action:

1. A building of this age should be regularly reviewed by a consultant team to ensure it continues to perform as intended. Unless there is a specific safety concern, it is recommended that a visual review is completed every 5 years.
2. It is our understanding that the client is interested in adding insulation to the exterior of the building. Adding insulation to a building without a vapour retarder can be a waste of money because the air movement is not restricted, and the insulation just ends up acting as a filter. It is recommended that a thermograph is completed during the winter season to identify any cold spots on the building exterior. Choice of insulation and detailing is critical with a building envelope upgrade. It is recommended that a building science specialist is retained to aid with preparation of this scope of work.

Items requiring routine maintenance:

1. The mitigation of water infiltration is critical to the long-term health of this building. The majority of problems found in buildings are due to water ingress, and the cost to address these concerns is significantly reduced the earlier they are detected.
2. Ensure that a review of roofing, roof drainage and flashing, and exterior finishes is incorporated into the building maintenance schedule and budget.
3. Minor structural repairs to the roof framing and attic framing should be anticipated seasonally.
4. Ensure that a review of exterior finishes is incorporated into the building maintenance schedule and budget.

Budget Estimates:

Construction cost estimates can vary significantly depending on the time of year and the quantity of work described. It is recommended that a reputable contractor, familiar with the restoration of heritage buildings is retained to provide a better estimate of the actual construction costs.

While detailed cost estimates will require further development of repair scope, please consider the following initial budget estimates to be used for planning purposes.

Budget costs for items requiring short-term remedial action:	\$7,500 to \$15,000
Budget costs for items requiring medium-term remedial action:	\$70,000 to \$140,000
Budget costs for items requiring long-term remedial action:	\$12,500 to \$25,000

8. Future Expansion

During our building condition assessment, the team reviewed options for future expansion of the existing facility. The location of the existing elevator and stairs would make it challenging to accommodate a vertical extension of the existing building.

It was agreed on that the most appropriate location for a building addition would be the green space on the south side of the existing building. Refer to Photo 1 for an aerial view of the described location. It is the opinion of the consultant team that any new addition or expansion be sensitive to the original design of the building and does not disrupt the heritage value of the remaining building.

9. Conclusions

The existing building was found to be in generally good condition, with localized areas in poor condition. There were no major immediate structural issues found in the buildings.

The item of greatest structural concern was the condition of the wood framing and brick walls of the tower structure. Structural repair of this element is recommended in the medium-term.

Mitigation of water infiltration is critical to the long-term health of this building. The majority of problems found in buildings are due to water ingress, and the cost to address these concerns is significantly reduced the earlier they are detected.

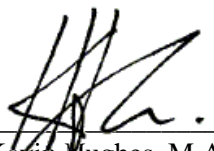
The architectural and structural issues that were identified in this report have been classified as either short-term, medium-term, or long-term action items. These items must be addressed to ensure the long-term viability of the buildings.

Mechanical and electrical issues are described in Appendix C.

It is recommended that a complete set of drawings and specifications is prepared for this structure to address the remedial work described in this report. Please contact Tacoma Engineers if you would like further instruction in this regard.

If there are any questions or comments with respect to any item raised in this report or any other structural issues, please don't hesitate to contact the undersigned.

Per:


Kevin Hughes, M.A.Sc., P.Eng., CAHP
Structural Engineer, Senior Associate
Tacoma Engineers Inc.



Appendix A: Material Condition Definitions

Condition States¹:

1. Excellent – Element(s) in “new” condition. No visible deterioration type defects present and remedial action is not required.
2. Good – Element(s) where the first signs of minor defects are visible. These types of defects would not normally trigger remedial action since the overall performance is not affected.
3. Fair – Element(s) where medium defects are visible. These types of defects may trigger a “preventative maintenance” type of remedial action where it is economical to do so.
4. Poor – Element(s) where severe or very severe defects are visible. These types of defects would normally trigger rehabilitation or replacement if the extent and location affect the overall performance of that element.

Steel Corrosion¹:

1. Light – Loose rust formation and pitting in the paint surface. No noticeable section loss.
2. Medium – Loose rust formation with scales or flakes forming. Up to 10% section loss.
3. Severe – Stratified rust with pitting of metal surface. Between 10% and 20% section loss.
4. Very Severe – Extensive rusting with local perforation or rusting through, in excess of 20% section loss.

Timber Checks, Splits and Shakes¹:

1. Light – Extend less than 5% into the member.
2. Medium – Extend between 5% and 10% into the member.
3. Severe – Extend between 10% and 20% into the member.
4. Very Severe – Extend more than 20% into the member.

Timber Cracking, Splintering and Crushing¹:

1. Light – Damage is superficial with less than 5% section loss.
2. Medium – Considerable damage with 5% to 10% Section loss.
3. Severe – Significant damage with 10% to 20% Section loss.
4. Very Severe – Extensive damage with section loss in excess of 20%.

Timber Rot/Decay¹:

1. Light – Slight change in colour. The wood sounds solid and cannot be penetrated by a sharp object. Damage is superficial with less than 5% section loss.
2. Medium – Surface is discoloured with black and brown streaks. The wood sounds solid and offers moderate resistance to penetration by sharp object. Considerable damage with 5% to 10% Section loss.
3. Severe – Surface is fibrous, checked or crumbly and fungal fruiting bodies are growing on it. The wood sounds hollow when tapped and offers little resistance to penetration by sharp object. Significant damage with 10% to 20% Section loss.
4. Very Severe – The surface can be crumbled and disintegrated with ease. Extensive damage with section loss in excess of 20%.

¹ Adapted from “Ontario Structure Inspection Manual (OSIM), 2000 (Rev. 2008)” by the Ministry of Transportation Ontario (MTO)

Masonry Cracking¹:

1. Hairline Cracks – Less than 0.1 mm wide.
2. Narrow Cracks – Between 0.1 and 0.3 mm wide.
3. Medium Cracks – Between 0.3 and 1.0 mm wide.
4. Wide Cracks – Greater than 1.0 mm wide.

Masonry Splitting, Spalling and Disintegration¹:

1. Light – Hairline cracking and minor loss of stone surface with loss of section up to 50 mm.
2. Medium – Considerable damage with 5% to 10% Section loss.
3. Severe – Significant damage with 10% to 20% Section loss.
4. Very Severe – Extensive damage with section loss in excess of 20%.

Concrete Scaling¹:

1. Light - Loss of surface mortar to a depth of up to 5 mm without exposure of coarse aggregate.
2. Medium - Loss of surface mortar to a depth of 6 to 10 mm with exposure of some coarse aggregates.
3. Severe - Loss of surface mortar to a depth of 11 mm to 20 mm with aggregate particles standing out from the concrete and a few completely lost.
4. Very severe - Loss of surface mortar and aggregate particles to a depth greater than 20 mm.

Concrete Spalling¹:

1. Light - Spalled area measuring less than 150 mm in any direction or less than 25 mm in depth.
2. Medium - Spalled area measuring between 150 mm to 300 mm in any direction or between 25 mm and 50 mm in depth.
3. Severe - Spalled area measuring between 300 mm to 600 mm in any direction or between 50 mm and 100 mm in depth.
4. Very Severe - Spalled area measuring more than 600 mm in any direction or greater than 100 mm in depth.

Concrete Delamination¹:

1. Light - Delaminated area measuring less than 150 mm in any direction.
2. Medium - Delaminated area measuring 150 mm to 300 mm in any direction.
3. Severe - Delaminated area measuring 300 mm to 600 mm in any direction.
4. Very Severe - Delaminated area measuring more than 600 mm in any direction.

Concrete Cracking¹:

1. Hairline Cracks – Less than 0.1 mm wide.
2. Narrow Cracks – Between 0.1 and 0.3 mm wide.
3. Medium Cracks – Between 0.3 and 1.0 mm wide.
4. Wide Cracks – Greater than 1.0 mm wide.

¹ Adapted from “Ontario Structure Inspection Manual (OSIM), 2000 (Rev. 2008)” by the Ministry of Transportation Ontario (MTO)

Immediate remedial action¹: these are items that present an immediate structural and/or safety hazards (falling objects, tripping hazards, full or partial collapse, etc.). The remedial recommendations will need to be implemented immediately and may include restricting access, temporary shoring/supports or removing the hazard.

Priority remedial action¹: these are items that do not present an immediate hazard but still require action in an expedited manner. The postponement of these items will likely result in the further degradation of the structural systems and finishes. This may include interim repairs, further investigations, etc. and are broken down into timelines as follows:

1. **Short-term:** it is recommended that items listed as short-term remedial action are acted on within the next 8 months.
2. **Medium-term:** it is recommended that items listed as medium-term remedial action are acted on within the next 24 months.
3. **Long-term:** it is recommended that items listed as long-term remedial action are acted on within the next 5-15 years. Many of these items include recommendations of further review/investigation.

Routine maintenance¹: these are items that can be performed as part of a regularly scheduled maintenance program.

¹ Adapted from “Structural Condition Assessment”, 2005, American Society of Civil Engineers/Structural Engineering Institute

Appendix B: Reference Drawing

See attached (one page).







Appendix C: Electrical and Mechanical

See attached (three pages).

Appendix D: Expanded Cost Estimate Data

Item #	description	estimated cost		
1	Review and reinstate insulation on piping near exterior walls	\$ 2,500.00	to	\$ 5,000.00
2	Remove auto-hold from door to stair on the lower level of the addition	\$ 500.00	to	\$ 1,000.00
3	Add meshing to the existing steel stair guard to prevent it from being climbable	\$ 1,500.00	to	\$ 3,000.00
4	Remove storage boxes from corridor of upper level of the original library	\$ 500.00	to	\$ 1,000.00
5	Maintenance of existing downspouts and gutters	\$ 1,500.00	to	\$ 3,000.00
6	Seal and insulate exterior vents that are no longer required	\$ 1,000.00	to	\$ 2,000.00
		\$ -	to	\$ -
	Estimated Construction Cost Range (budget): Short-Term Remedial Actions	\$ 7,500.00		\$ 15,000.00
Item #	description	estimated cost		
1	Repair damaged wood framing in tower structure	\$ 2,500.00	to	\$ 5,000.00
2	Repointing of exterior and interior brick mortar joints in tower structure	\$ 5,000.00	to	\$ 10,000.00
3	Provide wood-framed knee bracing above Library Stack Room	\$ 5,000.00	to	\$ 10,000.00
4	Allowance for selective repointing of exterior stone and brick masonry joints	\$ 30,000.00	to	\$ 60,000.00
5	Local replacement of stone and brick units	\$ 5,000.00	to	\$ 10,000.00
6	Localization brick chimney repair	\$ 5,000.00	to	\$ 10,000.00
7	Localized repair of damaged wood-framed porch and windows	\$ 5,000.00	to	\$ 10,000.00
8	Installation of reinforcement ring beams - tower	\$ 10,000.00	to	\$ 20,000.00
9	New fixed ladders in ring beams	\$ 2,500.00	to	\$ 5,000.00
		\$ -	to	\$ -
	Estimated Construction Cost Range (budget): Medium-Term Remedial Actions	\$ 70,000.00		\$140,000.00
Item #	description	estimated cost		
1	Follow-up building condition assessment by consultant team	\$ 10,000.00	to	\$ 20,000.00
2	Thermograph to determine extent of insulation voids	\$ 2,500.00	to	\$ 5,000.00
		\$ -	to	\$ -
	Estimated Construction Cost Range (budget): Long-Term Remedial Actions	\$ 12,500.00		\$ 25,000.00

LEGEND:

- | | |
|---|--|
|  | NEW PARTITIONS |
|  | EXISTING TO REMAIN |
|  | AREA NOT IN SCOPE OF
ARCHITECTURAL WORK |
| ROOM | ROOM NAME |
|  | ROOM NUMBER |
|  | DOOR NUMBER, SEE A-8 |
|  | WALL TYPE, SEE A-901 |

[illegible]

architect

ARCOP

ARCOP Architecture Inc.
ARCHITECTURE INTERIORS PLANNING URBAN DESIGN

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T 416 368 6987 F 416 869 9075

project

Township of Uxbridge
Library Renovations

9 Toronto Street South, Uxbridge, ON

LOWER LEVEL AND MAIN LEVEL FLOOR PLANS

scale : AS SHOWN	project no : 138-12410
date : Nov. 25, 2013	drawing no : A-101
drawn by : sph / RE	
checked by :	
approved by :	file no :

2 MAIN LEVEL FLOOR PLAN
A-101 Scale: 1/8" = 1'-0"

1 LOWER LEVEL FLOOR PLAN
A-101 Scale: 1/8" = 1'-0"

Project: Uxbridge Public Library

THIS BUILDING CONDITION ASSESSMENT IS BASED ON A VISUAL REVIEW CONDUCTED BY HUBBERT EME ENGINEERING STAFF, IF THERE IS A REQUIREMENT FOR FURTHER CLARIFICATION IT SHALL BE ISSUED TO HUBBERT EME ENGINEERING INC IN WRITING. OUR STAFF HAVE NOT COMPLETED A DETAILED INSPECTION OF THE DEVICES AND SYSTEMS.

Issued Date: 02-August-2019

Address: 9 Toronto St S, Uxbridge, ON

Prime Consultant: Tacoma Engineers

Summary

Hubbert EME Engineering (EME) was retained by The Township of Uxbridge through Tacoma Engineers to complete a building condition assessment of the Uxbridge Public Library at the above noted address. The initial site visit was completed on the morning of Thursday June 27, 2019. Typically, a building condition assessment would focus on major findings and anticipated expenditures (costs greater than \$25,000) that should be addressed in the first 10 years of the study period. Due to the size of the building and the types of systems we have expanded on our scope to include the items as noted. Below are our recommendations:

Site Specific Mechanical and Electrical Items:

Item 1: Investigation of sanitary and storm distribution piping (above grade and below)

Notes: In a building of this type and age it is likely that the underground piping is cast iron or clay. At the time of our review the piping condition was unclear and unknown. Site staff mentioned that repairs had been required and completed but the scope of work was not clear. It is recommended that the Town of Uxbridge conduct a video inspection to determine the actual condition of the piping and schedule repairs accordingly. If new piping is required alternate material is recommended based on specification and design of a professionally licensed Engineer.

Estimated Cost: \$12,000

Estimated Replacement Time: 5 years

Item 2: Replace domestic hot water piping and add pipe insulation

Notes: In a building of this age it is recommended that the domestic hot water piping is removed and replaced. Addition of insulation is recommended. At the time of our review the piping condition was unclear and unknown. Site staff mentioned that repairs had been required and completed but the scope of work appeared to be emergency in nature.

Estimated Cost: \$12,500

Estimated Replacement Time: 10 years

Item 3: Replace domestic cold water piping and add pipe insulation

Notes: In a building of this age it is recommended that the domestic cold water piping is removed and replaced. Addition of insulation is recommended. At the time of our review the piping condition was unclear and unknown. Site staff mentioned that repairs had been required and completed but the scope of work appeared to be emergency in nature.

Estimated Cost: \$12,500

Estimated Replacement Time: 10 years

Item 4: Inspect / replace domestic hot water tank

Notes: At the time of our review the tank appeared to be functioning without issue. A full inspection should be completed 15 years from the date of installation. Early replacement will be required if the water at the building water service contains a high content of minerals.

Estimated Cost: \$3000

Estimated Replacement Time: 7 years

Item 5: Replace Fan-coil Units

Notes: The fan coil units within the building provide heating and cooling. At the time of our site visit were not all units were fully functional and some were under repair. It is our recommendation the staff continue with the repairs. Full replacement is typically completed 25-35 years after installation date. These units have been stressed due to some systematic complications following the original installation. Replacement is recommended in 25years however if the repairs completed to date do not rectify the operational issues this date may need to be adjusted. It is recommended that staff continue to monitor the situation.

Estimated Cost: \$100,000

Estimated Replacement Time: 25 years

Item 6: Replace Fan-coil Piping and Valves

Notes: The fan coil units are provided with hot water for heating and chilled water for cooling. Over time the piping that provides the hot and cold water will require full replacement due to degradation. It is recommended that staff continue to monitor the situation and complete repairs of any pin hole leaks as required.

Estimated Cost: \$50,000

Estimated Replacement Time: 40 years

Item 7: Replace Chiller and Fluid Cooler

Notes: The cooling (air conditioning) system for the building is provided by fan coils; fan coils receive chilled water from a chiller and fluid cooler. The chiller and fluid cooler appear to be in decent condition; annual maintenance is recommended. Based on our visual review and discussion with staff it is possible that the chiller system has be undersized. It is recommended that a study be conducted to ensure the chiller and fluid cooler can provide sufficient cooling to control temperature and humidity in the building.

Chiller / Fluid Cooler Adequacy Study: \$10,000

Replacement Estimated Cost: \$180,000

Estimated Replacement Time: 35 years

Item 8: Electrical Panels

Notes: The electrical components date of manufacture is unclear, based on our experience the panels appear to be 30 years old. Electrical equipment lifecycle is typically 35 years. We recommend replacing the Electrical Distribution Panels, clean up circuits and upgrade main service disconnect.

Estimated Cost: \$15,500

Estimated Replacement Time: 5 year

Item 9: Fire Alarm System

Notes: The existing fire alarm control panel is past the useful life expectancy. Replacement of the fire alarm control panel is recommended. We also recommend a fire alarm modernization program including the installation of new fire alarm annunciator panels at both the main street entry and the main parking entry

Estimated Cost: \$4,500

Estimated Replacement Time: 1 year

Item 10: Replace Boilers

Notes: The existing natural gas boilers manufactured date is unknown. At the time of our review the boilers appeared to be relatively new and functioning without issue. At the time of our review maintenance records were not available for our review. It is our recommendation that maintenance is followed semi-annually. Replacement of the boilers will be based on hours, quality of water, maintenance and life cycle.

Estimated Cost: \$50,000

Estimated Replacement Time: 25 years

Item 11: Dehumidification Control

Notes: At the time of our review it was noted that in the library there are multiple dehumidifiers plugged in at various locations. The staff commented that the existing system is not able to regulate humidity in the space. A fan coil system, if correctly set up, is very effective at humidity control. It is our recommendation that as part of the study noted in **Item 7** humidity control is added.

Chiller / Fluid Cooler Humidity Adequacy Study: See Item 7

Item 12: Install a Building Automation System

Notes: At the time of our review it was noted that the heating and cooling system in the library is not an interconnected intelligent system. Boiler, chillers and fan coils are not interconnected. For a system of this complexity to function efficiently and correctly there must be a method of global control. It is highly recommended that the building be outfitted with a building automation system for the mechanical components. Control of outlet temperatures of fan coil units can be coordinate and set from a central location, temperatures can be adjusted based on time of day to account for the amount of sunlight entering a room. Status of the system can be monitored locally and remotely. Maintenance issues can be reported early resulting in minor corrective measures before catastrophic failures and performance of equipment can be historically logged to forecast energy use and predict required maintenance work.

Estimated Cost: \$25,000

Estimated Installation Time: 1 year

Item 13: LED Replacement of Light Fixtures

Notes: It was noted at the time of our review that LED retrofit was well underway and applications had been submitted by an electrical contractor. LED retrofit is a critical component to lowering operating cost while improving lighting levels and ambiance.

If there are any questions regarding this report please contact our office directly.

Issued by;



Chris Langford., P.Eng.
Principal Engineer

