



## **THE CORPORATION OF THE TOWNSHIP OF SOUTHGATE**

### **PROPERTY SALE**

*Plan 480 BLK E Part Lot 5, Main North, alternatively known as 80  
Main St E, Dundalk ON, N0C 1B0, Dundalk Olde Town Hall*

### **REQUEST FOR PROPOSALS**

**This package includes the following documents:**

*Notice of Sale by Public Tender*

*Property Summary*

*Description of Existing Building Condition & Features*

*Various Reports re State of Building*

*Agreement of Purchase and Sale*

**If your package is missing any of the above noted documents or you have any questions regarding this sale of land, please contact the undersigned:**



Lindsey Green, Clerk  
[lgreen@southgate.ca](mailto:lgreen@southgate.ca)  
519-923-2110 ext. 230

## SALE OF LANDS BY PUBLIC TENDER

The Corporation of the Township of Southgate invites offers to purchase for the following property, which is owned by the Township and has been declared surplus to the needs of the Township:

**Plan 480 BLK E Part Lot 5 Main North, alternatively described as 80 Main St East, Dundalk, ON N0C 1B0, Dundalk Olde Town Hall**

### Property Information

The property is located at 80 Main Street East, also known as the Dundalk Olde Town Hall. Please see the below key map for detail (blue outlined):



The property is being sold in an "as is" condition, without any representations or warranties from the seller. The buyer agrees to take the property title "as is" and should therefore do their own due diligence prior to submitting an Offer to Purchase.

A property summary providing additional information, along with a template agreement of purchase and sale, is included with this package and available at the Township of Southgate Administration Office, 185667 Grey County Road 9, Dundalk Ontario N0C 1B0.

The Township of Southgate makes no representations or warranties as to the accuracy or completeness of any information provided to purchasers and such purchasers acknowledge that any information provided by the Township of Southgate or any of its advisors or representatives is subject to the purchaser's verification and such purchaser will not hold the Township of Southgate or its advisors or representatives liable, or make any claims against them, based upon the inaccuracy or incompleteness of any such information. Except for the specific representations and warranties for the Township of Southgate contained in the Agreement of Purchase and Sale:

- a. The Purchaser acknowledges that they are acquiring the Property in an "as is" condition and that the Vendor gives no representation or warranties with respect to the Property whatsoever including, but not limited to, the existing

physical conditions of this Property, environmental conditions, fitness for any purpose, or the availability of municipal services and utilities necessary for the Purchaser's proposed use of the Property.

### **Conditions of Sale**

1. All offers must be submitted on the Township's form, included below, or may be obtained at the Corporation of the Township of Southgate Administration Office, 185667 Grey County Road 9, Dundalk Ontario N0C 1B0 and must be received via email to [tenders@southgate.ca](mailto:tenders@southgate.ca) or [lgreen@southgate.ca](mailto:lgreen@southgate.ca) or mailed or dropped off at the Township Office in a sealed envelope clearly marked "Offer to Purchase, 80 Main St E, Dundalk Olde Town Hall", and must include the following:
  - a. Agreement of purchase and sale
  - b. Minimum deposit of 10% of the purchase price, by certified cheque payable to the Corporation of the Township of Southgate
  - c. Bidders Proposal Response Form
2. The Township of Southgate has received an opinion of market value for the subject property of \$285,000.00. The Township will entertain all offers submitted.
3. The Township may choose to not accept any offer received and reserves the right to negotiate with any Purchaser.
4. The Purchaser shall be responsible to retain a solicitor to complete the transaction at its cost and must provide the Township with the name of the solicitor within ten (10) days of acceptance of the Purchaser's Offer.

***Please note the following property summary should be read in conjunction with the Agreement of Purchase and Sale.***

Dated at the Township of Southgate this 13<sup>th</sup> day of June 2024.

*Lindsey Green, Clerk  
Township of Southgate,  
185667 Grey County Road 9, Dundalk, Ontario N0C 1B0  
Phone: 519-923-2110 ext. 230 Email: [lgreen@southgate.ca](mailto:lgreen@southgate.ca)*



The Corporation of the Township of Southgate

**Property Summary/Request for Proposals information  
80 Main St East, Dundalk ON N0C 1B0**

Legal Description: Plan 480, BLK E Part Lot 5 Main North  
Roll Number: 42-07-110-001-27800-0000

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**Property Information:**

The property is located at 80 Main St E, Dundalk, ON N0C 1B0, also referred to as the "Dundalk Olde Town Hall". The property is being sold in an "as is" condition.

**Zoning:** Community Facility (CF)

**Official Plan Designation:** Downtown Commercial

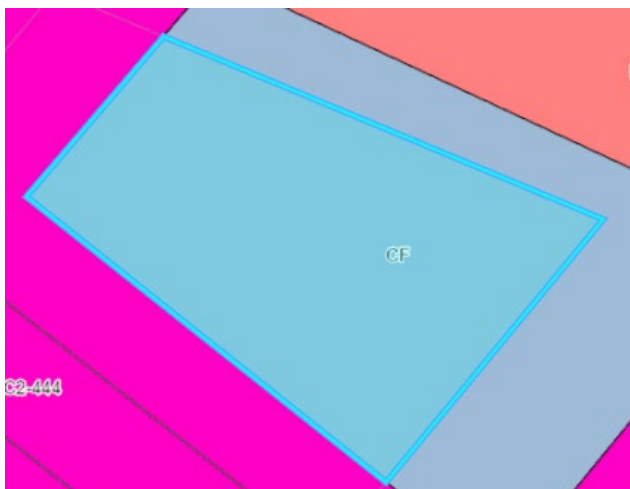
**Municipal Services:** Municipal Water and Wastewater

**Approximate Size:** 0.2 Acres

**Pricing:** The Township of Southgate has received an opinion of market value for the subject property of \$285,000.00. The Township will entertain all offers submitted.

**Request for Proposals:**

In conjunction with an offer to purchase, the Township is seeking proposals for the future use of the building.





The Corporation of the Township of Southgate

**Description of Existing Building Condition & Features  
80 Main St East, Dundalk ON N0C 1B0**

The building located at 80 Main St E, Dundalk On, N0C 1B0 alternatively known as "Dundalk Olde Town Hall" has served several uses historically, including a location for social events, political meetings, concerts and theatre, and a community meeting place since it's opening in 1905. The property also served as a local jail and housed the local fire fighting equipment until 1963. The building is currently owned by the Township of Southgate.

The building exterior is brick, with two front of building entrances located off Main Street, three side entrances off Artemesia Street, 2 emergency exits on the second floor and one secured basement stair entrance. The building has a shingled roof, that was replaced in 2009, and new electrical entre service that was upgraded in 1999 which included a 400-amp service.

The first floor of the building hosts the front entrance and lobby, meeting room, office space, office and storage space, a kitchen and three washrooms.

The second floor of the building is a 220-seat historical theatre with a mezzanine. The theatre is equipped with community donated seating, sound and lights room, and a chair lift operating system to the second-floor theatre space.

Attachments included in the request for proposals package include the following:

- Fire Safety Inspection Report (December 2013)
- RV Anderson Engineering Report (May 2014)
- AVIS Architects – Final Part A Assessment Report (July 2018)
- AVIS Architects – Final Part B Assessment Report (August 2019)

The property is being sold collectively and in an "as is" condition, without any representations or warranties from the seller. The buyer agrees to take the property titles "as is" and should therefore do their own due diligence prior to submitting an Offer to Purchase. It is the responsibility of the proponent to ensure that any and all upgrades made to the building are done so in accordance with applicable legislation.



**AGREEMENT OF PURCHASE AND SALE (the “Agreement” or “APS”)  
this \_\_\_\_\_ of \_\_\_\_\_, 2024.**

BETWEEN:

THE CORPORATION OF THE TOWNSHIP OF SOUTHGATE

(the “Vendor”)

-and-

\_\_\_\_\_  
(the “Purchaser”)

**WHEREAS** the Vendor is the owner, in fee simple, of the lands and premises described in Schedule “A” (the “Subject Property”);

**NOW THEREFORE IN CONSIDERATION** of the mutual covenants and premises in this Agreement, the parties agree as follows:

**SECTION I  
GENERAL**

1. The Purchaser agrees to purchase the Subject Property and the Vendor agrees to sell the Subject Property according to the terms of this Agreement.
2. In consideration of the agreement referred to in the preceding paragraph, the Purchaser shall pay a total Purchase Price of \_\_\_\_\_ to the Vendor. The Purchase Price shall be paid as follows:
  - (a) \_\_\_\_\_ (a minimum of 10% of the Purchase Price) is payable by the Purchaser by certified cheque or bank draft upon execution of this Agreement, to be held on an interest free basis by the Solicitor for the Vendor as a deposit pending completion of this transaction on account of the Purchase Price on completion, or if this Agreement is not completed through no fault of the Purchaser, the deposit shall be returned to the Purchaser; and
  - (b) The balance of the Purchase Price, subject to adjustments, shall be paid to the Vendor on the Completion Date, by certified cheque or bank draft.
3. Irrevocable Date
  - (a) This APS shall be irrevocable by the Vendor until 5:00 p.m., \_\_\_\_\_, after which time, if not accepted, the APS shall become null and void and the deposit shall be returned to the Purchaser in full without interest.

**SECTION II  
PURCHASE OF SUBJECT PROPERTY**

4. Deed
  - (a) The Vendor agrees to deed or transfer the Subject Property to the Purchaser subject to the terms of this Agreement.
5. Completion Date
  - (a) The closing of this transaction shall be 5:00 p.m. \_\_\_\_\_ or such other date as mutually agreed upon (the “Completion Date”) at which time possession of the Subject Property in “as is, where is” condition shall be given to the Purchaser

other than as provided in this APS. The Vendor acknowledges that it has the right and authority to sell the Subject Property.

6. Council Approval

- (a) This transaction is subject to compliance with Section 270 of the *Municipal Act, 2001*, S.O. 2001, c. 25 as amended and the approval of the Council of The Corporation of the Township of Southgate in its sole and absolute discretion by by-law. Council approval shall be obtained on or before the Completion Date, or this agreement will be null and void and the deposit returned without interest or deduction.

7. Documents, Reports and Information

- (a) The Vendor will produce and deliver to the Purchaser within thirty (30) days of the execution of the APS any documents, reports or information in its possession in respect to the Subject Property. The Purchaser agrees to return all of the above documentation to the Vendor if this transaction is not completed.

**SECTION III  
CONDITIONS, REPRESENTATIONS AND WARRANTIES**

8. “As Is” Condition

- (a) The Purchaser acknowledges that it is acquiring the Subject Property in an “as is” condition and that it must satisfy itself prior to the execution of the APS regarding the condition of the Subject Property including, but not limited to, all existing physical conditions of this Subject Property, environmental conditions, fitness for any purpose, suitability for construction, soil bearing capacity for any building proposed, and the availability of municipal services and utilities necessary for the Purchaser’s proposed use of the Subject Property. The Purchaser acknowledges that the Vendor shall not be responsible for any physical deficiencies of this Subject Property or for any past, present or future environmental liabilities and hereby waives any claims against the Vendor in respect of any environmental liabilities on this Subject Property. The Purchaser agrees to sign a release and indemnity in favour of the Vendor on or before closing with respect to matters set out in the preceding sentence. If the Purchaser is for any reason whatsoever dissatisfied with the Subject Property, it shall deliver written notice to that effect to the Vendor by no later than the time specified herein, and this Agreement shall be terminated and the deposit shall be returned to the Purchaser without interest or deduction. If the Vendor is notified that the condition of the Subject Property is not satisfactory, then the Purchaser shall, prior to receiving its deposit monies back and prior to being entitled to a full release from the Vendor with respect to this Agreement, restore the Subject Property to its original condition as it existed prior to such testing or inspection by the Purchaser, at the Purchaser’s sole expense. If the Purchaser fails to deliver written notice to the Vendor within the time specified herein regarding this condition, this condition shall be deemed to have been waived by the Purchaser.
- (b) The Vendor makes no covenant or warranty in regard to the current zoning of the Subject Property; bringing the zoning into conformity with the Township Zoning By-law shall be at the sole cost and responsibility of the Purchaser after closing. This provision shall survive closings.

9. Investigation by the Purchaser

- (a) The Purchaser acknowledges having inspected the Subject Property prior to executing the APS and understands that upon the execution by the parties of this APS, and subject to any conditions herein, there shall be a binding agreement of purchase and sale between the Purchaser and the Vendor. It shall be the Purchaser's responsibility to provide, at its own expense, any soil bearing capacity tests or environmental inspection, as may be required or desired, and the Vendor shall grant the Purchaser access for such testing or inspection at all reasonable times, on reasonable notice, for the purpose of conducting reasonable inspections.

10. Future Use



- (a) The Vendor and the Purchaser agree that there is no condition, express or implied, representation or warranty of any kind that the future intended use of the Subject Property by the Purchaser is or will be lawful except as may be specifically stipulated elsewhere in this Agreement.

11. Development Covenants and Restrictions

- (a) The Subject Property shall be subject to the development covenants and restrictions more particularly described in Schedule "B" attached to this APS, which shall survive the completion of this transaction and run with the Subject Property. The development covenants and restrictions shall be registered on title by the Vendor and the cost of registration shall be at the expense of the Purchaser. In the event that the said covenants and restrictions are not registered on title to the Subject Property on or before closing, the Purchaser covenants and agrees to consent to the registration of the covenants and restrictions after closing.

12. Subject Property Not for Resale

- (a) The Purchaser covenants that it is purchasing the Subject Property for occupancy and redevelopment or repurpose and not for resale purposes.

**SECTION IV  
PRIOR TO COMPLETION DATE**

13. Purchaser May Inspect the Subject Property

- (a) The Purchaser, its agents and contractors shall be permitted to inspect the Subject Property as frequently as is reasonably necessary between the date of acceptance hereof and the Completion Date at reasonable times and upon reasonable notice to the Vendor.

14. Insurance

- (a) Pending closing, the Vendor shall hold all insurance policies and the proceeds thereof in trust for the parties as their interest may appear and in the event of damage to the Subject Property. The Purchaser may elect to either receive the proceeds of the insurance and complete the purchase or to cancel the APS and have all the deposit monies paid to the Vendor returned together with all interest earned thereon without deduction.

**SECTION V  
COMPLETING THE TRANSACTION**

15. Deed

- (a) The Deed or Transfer of the Subject Property will be prepared at the expense of the Purchaser in a form acceptable to the solicitors for the Vendor and Purchaser. The Purchaser will pay all Land Transfer Tax, Harmonized Sales Tax, surveying and other costs in connection with the registration of it.

16. Electronic Registration

- (a) The parties agree that the transaction shall be completed by electronic registration pursuant to Part III of the *Land Registration Reform Act*, R.S.O. 1990, c.L.4 as amended. The parties acknowledge and agree that the delivery and release of documents may, at the discretion of the lawyer: a) not occur contemporaneously with the registration of the transfer/deed and other registerable documentation, and b) be subject to conditions whereby the lawyer receiving documents and/or money will be required to hold them in trust and not release them except in accordance with the terms of a written agreement between the lawyers entered into in the form of the Document Registration Agreement adopted by the Joint LSUC-OBOA Committee on Elective Registration of Title Documents.

17. Survey or Reference Plan

- (a) The parties acknowledge that a Reference Plan may be registered on title and may be used to provide a registrable description of the Subject Property.
18. Letters and Reports from Officials of the Vendor
- (a) On or before the requisition date, the Vendor agrees to provide to the Purchaser, at the Vendor's expense, letters or reports from the Fire Chief of the Township of Southgate and the Building and Zoning Department of the Township of Southgate regarding the status of compliance with all codes, by-laws, rules and regulations with respect to the Subject Property and the buildings located thereon.
19. Examination of Title
- (a) Title to the Subject Property shall be good and marketable and free from all encumbrances except for any service easements or rights-of-way to be reserved in favour of the Vendor and for any easements or rights-of-way registered on title and any minor encroachments shown on the survey or Reference Plan delivered to the Purchaser.
- (b) The Purchaser is allowed forty-five (45) days from the execution of the APS to examine the title to the Subject Property. If on or before this date the Purchaser furnishes the Vendor in writing with any valid objections: to the title; to any undisclosed outstanding work orders; to undisclosed non-compliance with the municipal by-laws or covenants and restrictions which run with the land and cannot be resolved before the Completion Date; as to any objection of which the Vendor shall be unable to remedy or correct by the Completion Date and which the Purchaser will not waive, then this APS shall, notwithstanding any intermediate acts or negotiations, be terminated and the deposit shall be returned to the Purchaser without deduction and the Vendor and the Purchaser shall not be liable for any costs, damages, compensation or expenses.
20. Vendor to Discharge all Encumbrances
- (a) The Vendor agrees to obtain and register at its own expense, on or before the Completion Date, a discharge of all liens, encumbrances, agreements and mortgages now registered against the Subject Property and not assumed by the Purchaser. The Vendor further covenants and agrees to discharge, on or before the Completion Date, any and all liens, chattel mortgages, assignments or any other security interest given by the Vendor against any personal property that forms part of this transaction.
21. Adjustments
- (a) The Vendor agrees that all security deposits, if any, held by the Vendor including interest thereon shall be credited to the Purchaser in the Statement of Adjustments prepared for the Completion Date.
- (b) Any rents, mortgage, interest, taxes, local improvements, water and assessment rates shall be apportioned and allowed to the Completion Date, the day itself to be apportioned to the Purchaser.
22. Deliveries by the Vendor To The Purchaser on Closing
- (a) The Vendor covenants and agrees to deliver to the Purchaser on the Completion Date, all such deliveries to be a condition of the Purchaser's obligation to close this transaction, the following:
- (i) a deed/transfer to the Subject Property;
  - (ii) any survey or reference plan of the Subject Property in the possession of the Vendor;
  - (iii) a Statutory Declaration by an authorized officer of the Vendor stating that accurateness and truthfulness of all of the representations and warranties;
  - (iv) a Statutory Declaration by an authorized officer of the Vendor as to possession of the Subject Property in a form acceptable to the solicitors for the Purchaser;

- (v) a Statutory Declaration by an authorized officer of the Vendor that it is not now, and upon completion will not be, a “non-resident person” within the meaning and for the purpose of Section 116 of the *Income Tax Act*, R.S.C., 1985, c. 1 (5th Supp.) as amended;
- (vi) certified copies of all appropriate Certificates, By-Laws and other documents of Vendor authorizing the transaction herein; and,
- (vii) such further documentation and assurances as the Purchaser may reasonably require to complete the transaction contemplated by the APS.

23. Harmonized Sales Tax

- (a) The parties hereto acknowledge and agree that the transaction contemplated herein is subject to the Harmonized Sales Tax (HST) under the *Excise Tax Act*, R.S.C., 1985, c. E-15 (the “Act”) and that the Purchase Price does not include HST. The Vendor shall provide the Purchaser with its HST Business Number. The Purchaser shall pay to the Vendor any HST imposed under the Act payable in connection with the transfer of the Subject Property to the Purchaser, or as it may direct, unless the Purchaser or its nominee, or its assignee, provides:
  - (i) a certificate on or before the Completion Date containing a representation and warranty to the Vendor that:
    - (1) it is registered for the purpose of the HST on the Completion Date and specifying the HST registration number;
    - (2) it will self-assess the HST on its GST/HST return or file the prescribed form pursuant to subsection 228(4) of the Act in connection with the purchase of the Subject Property;
    - (3) the Subject Property transferred pursuant to this APS is being purchased by the Purchaser, or its nominee or assignee, as principal for its own account and is not being purchased by the Purchaser as agent, trustee or otherwise on behalf of or for another person, and does not constitute a supply of residential complex made to an individual for the purpose of paragraph 221 (2)(b) of the Act;
    - (4) an indemnity, indemnifying and saving harmless the Vendor from any HST payable on this transaction and penalty and interest relating to HST; and,
    - (5) a notarial true copy of its HST registration confirmation.

**SECTION VI  
MISCELLANEOUS**

24. Entire Agreement

- (a) There is no representation, warranty, collateral agreement or condition affecting this Agreement or the Subject Property other than expressed herein.

25. Tender

- (a) Any tender of documents or moneys hereunder may be made upon the solicitor acting for the party upon whom tender is desired, and it shall be sufficient that a negotiable, certified cheque or bank draft may be tendered instead of cash.

26. Time of Essence

- (a) Time shall be of the essence of this Agreement.

27. Planning Act

- (a) This Agreement shall be effective only if the provisions of Section 50 of the *Planning Act*, R.S.O. 1990, c.P.13, as amended are complied with.

## 28. Notices

- (a) All notices in this Agreement shall be in writing and shall be deemed to have been given if delivered by hand or mailed by ordinary mail, postage prepaid, addressed to the solicitor for the person to whom such notice is intended to be given at the following address:

### **Solicitors for the Vendor:**

Kraemer LLP  
 ATTENTION: Patrick J. Kraemer  
 904 – 50 Queen St. N.  
 Kitchener ON N2H 6P4  
 Phone: (519) 954-1965  
 Fax: (519) 954-1966  
 Email: patrick@kraemerllp.com

### **Solicitors for the Purchaser:**

ATTENTION:

Phone:  
 Fax:  
 Email:

If mailed, such notices must also be given by facsimile or email transmission on the date it was so mailed. If so given, such notices shall be deemed to have been received on the first business day following the date it was delivered or marked mailed out.

## 29. Successors and Assigns

- (a) The Purchaser shall be permitted to assign all of its right, title and interest in and to this APS with the Vendor's written approval which shall not be unreasonably withheld. Subject to the restrictions in the preceding sentence, the Vendor agrees to engross the Transfer/Deed of Land as directed by the Purchase on the Completion Date as the Purchaser may elect, and the Vendor agrees to complete the transaction contemplated by this APS on the Completion Date with such assignee or nominee. The Purchaser is released from all liability hereunder, if it assigns its interest in this APS. This Agreement shall be binding upon the parties hereto and their respective successors and assigns.

## 30. Schedules

- (a) The following Schedules shall form an integral part of this Agreement:
- (i) Schedule "A1" Description of the Subject Property; and,
  - (ii) Schedule "B" Restrictive Covenants.

## 31. Acceptance by Fax or Email

- (a) The Purchaser and Vendor acknowledge and agree that the communication of this Agreement of Purchase and Sale may be transmitted by way of facsimile or electronic mail, and that they agree to accept such signatures and documents to be legal and binding upon them.

## 32. Counterparts

- (a) This agreement may be signed in any number of counterparts, each of which is considered to be an original, and all of which are considered to be the same documents.

33. Severability

- (a) If any provision of this Agreement, or the application thereof to any circumstances, shall be held to be invalid or unenforceable, then the remaining provisions of this Agreement, or the application thereof to other circumstances, shall not be affected, and shall be valid and enforceable.

-----remainder of this page left intentionally blank-----

**IN WITNESS WHEREOF** the parties have executed this Agreement.

**The Corporation of the Township of  
Southgate**

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Brian Milne  
Mayor

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Lindsey Green  
Clerk

We have authority to bind The Corporation of  
the Township of Southgate.

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Per:  
Title:

I have the authority to bind the corporation.

**SCHEDULE "A"**  
**LEGAL DESCRIPTION OF**  
**THE SUBJECT PROPERTY**

ALL AND SINGULAR that certain parcel or tract of land and premises situated, lying and being in the Township of Southgate in the County of Grey, being comprised of:

PT LT 5 BLK E PL 480 DUNDALK AS IN R527811; SOUTHGATE

PIN: 37315-0262 (LT)

LRO #16

**SCHEDULE “B”  
DEVELOPMENT COVENANTS**

1. Title Control

- (a) The owner or owners of the property (the “Owner”) upon which these development covenants attach (the “Property”) covenants and agrees that it may not use the Property for its intended use, and the Owner may not retain ownership of the Property unless the Owner has repurposed or redeveloped the existing buildings. The Owner further covenants and agrees to commence construction of renovations to the existing building on the Property which complies with the permitted uses of the Property’s zoning within twenty-four (24) months of the date the Owner took title to the Property being the date of registration of transfer (the “Completion Date”) and to substantially complete the construction of the said buildings in conformity with an approved site plan within forty-eight (48) months from the Completion Date of this transaction.
- (b) In the event that the Owner has not obtained building permits in accordance with the provisions of subclause 1.a) above, the Owner may request from The Corporation of the Township of Southgate (the “Township of Southgate”), in writing, an extension of the time specified in subclause 1.a) above up to a maximum extension period of six (6) months, (such extension, the “Extended Time”) upon payment by the Owner to the Township of Southgate of a performance deposit equal to ten (10%) percent of the purchase price of the Property (the “Performance Deposit”). The Performance Deposit shall be refunded to the Owner, without interest, upon the Owner’s compliance with and completion of the provisions of subclause 1.a) above within the Extended Time. In the event that the Owner fails to complete construction within the Extended Time, then the Township of Southgate shall, in addition to its other rights and remedies as set out herein or otherwise, be entitled to retain the Performance Deposit as liquidated damages and not as a penalty, in partial or full satisfaction of the Township of Southgate’s damages.
- (c) If the Owner does not comply with the provisions of subclause 1.a) above within the periods therein specifically set out or within the Extended Time, the Owner, will, at the option of the Township of Southgate by notice in writing to the Owner, re-convey good title to the Property to the Township of Southgate, free and clear of all encumbrances, in consideration for payment by the Township of Southgate to the Owner of 90% of the purchase price paid by the Owner to the Township of Southgate for the conveyance of the Property in the first instance (the “Discounted Consideration”). The re-conveyance shall be completed within sixty (60) days of the notice set out in this subclause. The Township of Southgate shall be allowed to deduct from the Discounted Consideration all of its reasonable costs, realty commission and legal fees incurred with respect to the original conveyance of the Property by the Township of Southgate to the Owner, as well as the costs of the Township of Southgate in re-acquiring the Property, including without limitation, realty commission, registration costs, land transfer tax, legal fees and such other costs as reasonably incurred by the Township of Southgate. The Township of Southgate shall not be required to pay for any improvements that may have been made, constructed, installed or performed by the Owner on the Property.
- (d) Subject to subclause 1.c) above, the Owner covenants that it will not sell the Property or any part thereof to any person, firm or corporation without first offering, in writing, to sell the Property to the Township of Southgate for consideration equal to or less than the consideration paid by the Owner to the Township of Southgate in the original conveyance of the Property less the costs of the Township of Southgate incurred in re-acquiring the Property, including without limitation, real estate commission, land transfer tax, registration costs, legal fees and such other costs as reasonably incurred by the Township of Southgate, provided however that the Owner may sell or transfer the Property to a subsidiary or affiliate corporation as defined in the *Business Corporations Act*, R.S.O. 1990, c.B.16 as amended, provided such subsidiary assumes and confirms its acceptance of the within covenants and restrictions and expressly undertakes in writing to comply with them in such form as the Township of Southgate may require. The Township of Southgate shall have ninety (90) days from the receipt of an offer made by the Owner under this subclause, to accept such offer which acceptance shall be in writing. If the Township of Southgate does not accept an offer to sell made by the



Owner under the provisions of this subclause, the Township of Southgate's right to repurchase the Property so offered shall terminate. However, the remaining provisions of this clause 1 as well as other provisions herein shall continue in full force and effect. The limitation contained in this subclause, will expire upon the Owner fulfilling all of the building requirements as set out in subclauses 1.a) and 1.b) above.

2. Occupation of Buildings

- (a) If the Owner, lessee, tenant or subsequent purchaser thereof fails to occupy the building within six (6) months after satisfying the provisions of subclauses 1.a) and 1.b) above with respect to the completion of the buildings, and for so long as the buildings remain unoccupied, beginning on the first day following the six (6) month period after satisfying the provisions of subclauses 1.a) and 1.b) above, the Owner shall pay to the Township of Southgate as liquidated damages, quarterly amounts equal to the difference in Property tax between what is being paid by the Owner as Property tax for the Property when deemed vacant land and what would be paid as Property tax by the Owner for the Property if the building was occupied. If any such payment is not duly remitted by the Owner, interest shall be calculated on the balance owing in the same manner and shall be paid at the same rate to the Township of Southgate as interest is calculated and paid to the Township of Southgate on unpaid taxes. Any amount owing may be added to the tax roll of the Property and collected in the same manner as municipal taxes pursuant to section 398(2) of the *Municipal Act, 2001*, S.O. 2001, c.25 as amended.
- (b) In the event that the Owner, lessee, tenant or subsequent purchaser has not occupied the building in accordance with the provisions of subclause 2.a) above, the Owner may request, in writing, that the Township of Southgate extend the time for occupation of the building for a maximum period of 6 months, which request the Township of Southgate shall review and may approve in its sole and absolute discretion. Additional Extensions can be granted at the option of the Township of Southgate, upon written request from the Owner prior to the expiry of any prior extensions granted by the Township of Southgate.

3. Assignment of Covenants

- (a) The Owner acknowledges and agrees that the covenants and restrictions herein shall run with the title to the Property. The Owner, for itself, its successors, heirs, and assigns in title from time to time of all or any part or parts of the Property will observe and comply with the stipulations, restrictions, and provisions herein set forth (the "Restrictions"), and covenants that nothing shall be erected, fixed, placed or done upon the Property or any part thereof in breach or in violation or contrary to the Restrictions or the provisions of the agreement of purchase and sale between the Owner and the Township of Southgate and that the Owner will require every subsequent purchaser or every successor in title to assume and acknowledge the binding effect of this document, as well as, covenant to observe and comply with the Restrictions and other covenants herein, and the surviving provisions of this Agreement of Purchase and Sale.

4. Force Majeure

- (a) If the Owner shall be unable to fulfill, or shall be delayed or restricted in fulfilling any of the obligations set out herein due to any act or neglect of the Township of Southgate or any of its employees, or due to strikes, walkouts, lockouts, fire, unusual delay by common carriers, or by any other cause beyond the Owner's reasonable control, then the time for fulfilling any such obligations shall be extended for such reasonable time as may be required by the Owner to fulfill such obligation.

5. Right to Waive

- (a) Notwithstanding anything herein contained, the Township of Southgate and its successors shall have the power by instrument or instruments in writing from time to time to waive, alter or modify the herein covenants and restrictions with respect to their application to any part of the Property without notice to or approval from the Owner or notice to or approval from the owners of any other adjacent or nearby lands.

**Township of Southgate  
Administration Office**  
185667 Grey County Road 9  
Dundalk, ON N0C 1B0



**Phone:** 519-923-2110  
**Toll-Free:** 1-888-560-6607  
**Fax:** 519-923-9262  
**Web:** [www.southgate.ca](http://www.southgate.ca)  
**Email:** [info@southgate.ca](mailto:info@southgate.ca)

## **The Corporation of the Township of Southgate**

### **OFFER FORM - CONFIDENTIAL**

**Subject Lands:** Plan 480 BLK E Part Lot 5 Main North, alternatively described as 80 Main St East, Dundalk, ON N0C 1B0, Dundalk Olde Town Hall

**Name(s):** \_\_\_\_\_

**Address:** \_\_\_\_\_

\_\_\_\_\_

**Phone Number:** \_\_\_\_\_

**Offer price of Lands: \$** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

By submitting an offer to purchase the lands described above, does not automatically mean your offer will be accepted by Council. If your offer is accepted by Council, you will be required to enter into a Purchase and Sale Agreement with the Corporation of the Township of Southgate.

An offer of purchase must be received by the Township of Southgate by email to [tenders@southgate.ca](mailto:tenders@southgate.ca) or [lgreen@southgate.ca](mailto:lgreen@southgate.ca), by mail or dropped off to 185667 Grey County Road 9, Dundalk, Ontario, N0C 1B0, in a sealed envelope clearly marked "RFP – Offer to Purchase, 80 Main St E, Dundalk Olde Town Hall", and must include the following:

- a. Agreement of purchase and sale
- b. Minimum deposit of 10% of the purchase price, by certified cheque payable to the Corporation of the Township of Southgate
- c. Bidders Proposal Response Form

*The personal information provided on this form is collected under the authority of the Municipal Freedom of Information and Protection of Privacy Act (MFIPPA). The information you provide will be used to for contact purposes but is otherwise considered confidential. Questions about the collection of personal information and its use can be directed to the Clerk's Department 519-923-2110 ext. 230.*

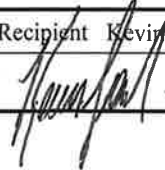
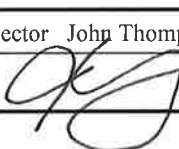
# FIRE SAFETY INSPECTION REPORT

Date of Inspection December 3, 2013	Date of Issue December 10, 2013	Address of Property 80 Main Street East	File OTH-04-13
Inspector John Thompson	Telephone # 519-923-2402	Dundalk ON N0C 1B0	
Fire Department Dundalk Fire Department	Occupant Various		
Address of Department 85 Dundalk St. Dundalk, ON N0C 1B0	Owner Township of Southgate	Telephone # 519-923-2110	
Person Contacted Kevin Green	Address 185667 Grey Rd 9 RR1 Dundalk ON N0C 1B0		

During an inspection of the noted property, contraventions of the Ontario Fire Code were noted.  
Descriptions of the noted violations are listed below.

Item	Reference #	Description of violations	Page 1 of 1
1	9.2.2.1.(1)	Fire separations will be provided between assembly and major occupancies in compliance with Article 3.1.3.2. of the 1986 Building Code	
2	9.2.2.2.(1)	Closures that are in compliance with Sentences 3.1.6.4.(2) and 3.1.6.7.(1) of the 1986 Building Code shall be provided in fire separations.	
3	9.2.2.3(3)(b)	A 30 min fire separation is deemed to be compliance where a detection system is provided and connected to the building alarm system	
4	9.2.2.3.(4)	Fire separations shall be provided between theatrical stages and assembly occupancies in compliance with Sentences 3.3.2.14.(3) to (5) of the 1986 Building Code	
5	9.2.3.1.	The occupant load for calculation of number and width of exits referred to in Articles 9.2.3.6. and 9.2.3.7. shall be in accordance with Article 2.7.1.4.	
6	9.2.3.10.	A fire escape may be erected to an existing building to provide one or more exits described in Article 3.4.1.2. of the 1986 Building Code.	
7	9.2.3.11.	Each fire escape shall be constructed to comply with Article 3.4.7.13 of the 1986 Building Code.	
8	9.2.3.15.(1)	Where an exit stairway serves as a required exit, it shall be separated from the remainder of the building in accordance with Sentence 3.4.4.1.(7)(c) to (f) of the 1986 Building Code.	
9	9.2.3.15.(2)	Doors in fire separations required in Sentence (1) shall be equipped with self closing devices.	
10	9.2.3.18.(1)	Openings adjacent to fire escapes shall comply with Sentence 3.4.7.13.(5) of the 1986 Building Code.	
11	9.2.4.1.(1)	Fire alarm and detection systems shall be installed in compliance with Subsection 3.2.4., excluding Article 3.2.4.7., of the 1986 Building Code.	
12	2.8.1.1.(1)(a)	Emergency planning apply to buildings containing assembly occupancies.	
13	2.8.1.2.(1)	Supervisory staff shall be instructed in the fire emergency procedures as described in the fire safety plan before they are given any responsibility for fire safety.	
14	2.8.2.1.(2)	The fire safety plan shall be prepared, approved and implemented in buildings regulated by Article 2.8.1.1.	
15	2.8.2.1.(3)	The fire safety plan shall be kept in the building in an approved location.	
16	2.8.2.1.(4)	The fire safety plan shall be reviewed as often as necessary, but at intervals not greater than 12 months, to ensure That it takes account of changes in the use and other characteristics of the building.	

Fire officials do not have the authority to grant you an extension of time to correct the violations noted. The violations must be corrected forthwith. Failure to correct the violations by March 31, 2014 or as noted for each violation, may result in prosecution.

Name of Recipient Kevin Green	Name of Inspector John Thompson Chief Fire Official Township of Southgate
Signature 	Signature 



May 16, 2014

RVA 142964

Township of Southgate  
185667 Grey Road 9  
Dundalk, ON N0C 1B0

**Attention: Mr. Kevin Green  
Facilities Manager**

Dear Kevin:

Re: Dundalk Olde Town Hall Inspection

Further to your request, a visual inspection of the Dundalk Olde Town Hall was carried out on April 11, 2014 by Mr. Syed Raza, P.Eng. (electrical engineer), Ms. Grazyna Krezel, OAA (architect) and Tom Richardson, P.Eng. (structural engineer), all of R.V. Anderson Associates Limited. The purpose of the inspection was to provide a status report on the condition of the building in relation to its present usage. This report is a compilation of our observations, opinions and understandings. No intrusive investigations, testing or detailed engineering analysis was done. There are potentially additional issues that were either hidden from view or not observed.

In summary, there are numerous life safety and building code issues with the building that make it unsuitable for continued public assembly use without extensive renovations. These renovations would require the building to be brought up to the performance levels given in the NFPA 919 Code for Protection of Historic Structures and the current Ontario Building Code (OBC), Part 11. The reports prepared by Mr. Kevin Green and the Fire Chief identified numerous issues, deficiencies and associated rectification costs. The costs noted will be insufficient to upgrade the building to the current code requirements.

#### Background Information

The original structure was built in 1905 and in February 1997, the Corporation of the Village of Dundalk requested that the building be designated of historical and architectural interest. The building presently has a heritage designation. Recently, the Township has set up an advisory council to deal with the future of the building.

The basic building consists of load bearing masonry brick walls, rubble stone masonry foundation walls, wooden floor structures, wood and steel truss roof structure and a bell tower. We were not able to access the bell tower. There is a wood framed ancillary extension at the rear of the building. At some point in the building's history, a significant modification took place and the theatre space on the second floor was either added or upgraded. Steel beams were installed to support the theatre floor, concrete piers were added in the basement along the perimeter walls and steel fire escape stairs were added to allow direct escape from the theatre floor level. From the exterior, it is obvious that the exit doors at the second floor level were added in what were once window openings.

The building is presently used as an office facility by County of Grey Social Services, Waterloo Wellington Community Care Access Centre and the Dundalk Little Theatre group. The theatre puts on several performances per year and the local fire chief has previously allowed performances only if a "fire watch" was in place but recently the Township's insurance company has disallowed this practice.

Under the OBC, the building has two occupancies, one being a Group A1 assembly occupancy for the theatre and the other a Group D occupancy for the office premises. These two occupancies require a rated fire separation between them that does not presently exist. The existing floor layouts do not lend themselves to an easy modification that would provide the required fire separations. The building is of combustible construction.

Both the Township's fire chief and the Township's facilities manager prepared reports along with cost estimates of the work that they anticipated would be necessary in order to allow the operation of the building to continue. The deficiencies noted in those reports are valid concerns, but the rectifications required to bring the building up to code will be more extensive than they anticipated. We have not made detailed estimates of the work required to renovate the building but, in our opinion, the costs outlined in those reports are too low.

#### Deficiencies

The deficiencies observed mainly revolve around structural, fire code deficiencies and life safety issues. The exits from the facility are inadequate, there are insufficient fire separations between occupancies and floors, there are electrical safety issues, there is no air conditioning, the washrooms are insufficient for the occupant load and don't meet barrier free design requirements. The roof structure does not meet present structural strength requirements, the basement walls leak in numerous locations, structural timber members have been cut and the brick masonry is deteriorating. There is no sprinkler or emergency lighting systems.

#### Structure

The original wood roof structure has been reinforced at some point with steel trusses but they are inadequate in design. The sizes of the wood framing members are insufficient in size to meet present strength requirements. The steel trusses appear to have been added as reinforcement but the configuration makes their ability to carry any significant load suspect. We did not analyze these trusses. We are presently reinforcing an old church with a roof of similar size in Toronto and the cost of that roof renovation alone is approximately \$300,000.

The main floor framing consists of wood beams supporting wood joists. This floor is likely to be inadequate to carry a floor loading of 4.8 KPa (100 psf) and thus would need to be reinforced or replaced. At least one of the major floor beams has been cut for a plumbing pipe and needs reinforcement. Most of the electrical wiring is stapled to the floor framing and this prevents practical reinforcement without removing the wiring. The floors need to be strong enough to support the required loadings and function as rated fire separations.

The stairs to the basement need to be upgraded to exits as defined by the building code and form part of the rated fire separation between floors or sealed off. Similarly the stairs at the rear of the building, between the main floor and the stage area, are not code compliant.

Large structural steel beams have been added to support the theatre floor at some point after the building was constructed. These beams appear oversized for the intended floor loading but the support of these beams appears inadequate. At the exterior walls, the direct support system is hidden but there are concrete piers in the basement under the ends of the beams that were not part of the original construction. At the interior end of the beams, the support system is hidden but the path for transfer of their loads to the original freestanding masonry piers in the basement goes through the wood floor. Generally, it is not acceptable to support steel structure on wood.

The balcony in the theatre is not likely to have sufficient strength.

The brick is delaminating and cracked in a number of locations. The masonry joints need pointing in a number of locations.

### Exits

The present exterior steel fire escape stairs are structurally and functionally inadequate. There is a tripping hazard at the threshold of the exit doors. The stairs are not capable of carrying the required loadings and the railings are of insufficient height and strength. The stairs are not enclosed and they would not be usable if covered with snow. The pathway at the bottom of the stairs was obstructed with snow during the visit. There is no lighting on these stairs. The stairs cross unprotected openings in wall of the first floor occupancy and the stairs may be unusable if there was a fire in that area.

The means of egress from the balcony seating area is inadequate. The stairs are too steep, they have narrow winders at the top and the handrail is not continuous. The stairs are not protected by a fire separation and therefore do not qualify as an exit as defined by the building code. A new enclosed and protected exit would be required.

The stairs from the front entrance to the theatre do not qualify as an exit as they are not separated from the first floor occupancy by a rated fire separation. There is insufficient space to reconfigure the front entrance area as a compliant exit.

The handicapped ramp does not have sufficient railings. Although there is handicapped access to the theatre, the egress route is along the same path which is not a compliant exit.

### Fire Separations

The building has two main occupancies, the Group A1 assembly area and the Group D office area. There is a requirement for a rated fire separation between these two occupancies. Presently there is no rated fire separation between the office area and theatre and there is no separation between the basement level and the first floor. The stairs between floors also do not function as fire separations. One of the greatest challenges with the renovation of this building, if trying to maintain the existing layout, would be the installation of proper fire separations.

### Basement

The rubble stone basement walls were leaking in a number of locations and, in the old jail area, there is an electrical panel on an actively leaking wall. The leaks are either due cracks or deteriorating masonry. There was water on the basement floor in numerous locations. The basement walls need to be waterproofed and this would require excavation around the perimeter of the building, cleaning of the irregular stone surface, parging to an even surface and the application of a waterproof membrane. There should also be a weeping tile system installed along the base of the foundation wall. When exposed, the rubble stone masonry basement could be found to be in poor condition and in need of total replacement with a new concrete foundation.

### Mechanical and Ventilation

The building has fairly new gas furnace but no air conditioning. The lack of air conditioning makes the theatre unusable on hot days. The OBC requires air conditioning and adequate ventilation for assembly areas.

The insulation of the building will not provide the required energy efficiency and will require upgrading. The windows for the most part are single pane and will also not meet the energy efficiency requirements and will require upgrading.

The washrooms do not meet code requirements. There are insufficient fixtures, the size and the layout does not meet barrier free standards and the washrooms are located in the Group D occupancy rather than the assembly area.

### Electrical

The electrical system has been modified on numerous occasions. There are electrical panels in at least four locations in the building indicating that the electrical system is a compilation of multiple additions.

There is surface mounted wiring throughout the building and extensive exposed wire runs in the basement. There are remnants of obsolete knob and tube style wiring visible in the basement, as well as old wiring in a number of areas that has been abandoned and should be removed.

The main service disconnect switch and power distribution equipment are in the basement. They are installed on a plywood backboard, mounted on a leaking basement wall, creating a hazard that needs immediate correction. The distribution panel is in poor condition with visible rusting and exposed live parts.

The manual load transfer panel installed in the basement beside the main disconnect switch is set up to feed critical loads to various parts of the building. It appears that previously there was provision to connect this panel to a portable generator outside the building for emergency usage. At present, however, the portable generator connector cable is coiled in the basement area without any proper arrangement for termination to an outdoor portable generator connection box.

### Conclusions

There are numerous deficiencies with the building that make it unsuitable for continued assembly usage in its present condition. The building has the potential to be renovated so that its present usage could continue but this renovation would be extensive and costly. The building needs to be renovated to comply with the requirements of NFPA 919 and the OBC.

There are many approaches that could be taken to the renovation of this building while trying to maintain its outward appearance. The layout of the existing stairways conflict with fire safety requirements and the struggle to make the final design comply with code requirements will be difficult. The cost of the work would depend greatly upon the approach chosen, but the interior requires a complete redesign and the final layout will require careful consideration that is beyond the scope of this review.

In our opinion, the most efficient way to renovate the building would be to strip the interior back to its core elements and reconstruct in accordance with the present codes. The engineering and architectural design costs alone could easily exceed \$500,000.

While we have not done an accurate estimate of the costs of such a major renovation, we anticipate that the overall renovation costs would range between \$3 million to \$6 million.

The final solution to non-compliance issues would be subject to detailed design by a qualified professional engineer or architect and nothing in this letter should be construed as a design or direction to proceed with any rectifications.

I trust the above is suitable for your purposes at this time, however, should you have any questions please do not hesitate to call. Should council wish, we would be available to discuss our findings.

Yours very truly,

**R.V. ANDERSON ASSOCIATES LIMITED**



R. T. Richardson, P.Eng.  
Structural Engineer

RTR:zr



July 24, 2018

AAA Project No. 1748.02

Township of Southgate  
185667 Grey County Road 9, RR#1  
Dundalk, Ontario  
N0C 1B0

**Attn: Dave Milliner, CAO**

**Re: Part A - Brief Report  
Building Assessment and Feasibility Study  
Dundalk Olde Town Hall, 80 Main Street East, Dundalk**

Dear Mr. Milliner

Attached is Part A - Brief Report for the Building Assessment and Feasibility Study of Dundalk Olde Town Hall.

The building assessment was conducted by Architect only and did not involve engineers or other specialized consultants that would normally participate in a comprehensive Building Condition Assessment Report.

Commencement of Part B Comprehensive Report is awaiting your direction.

Please contact us with any questions or comments.

Yours truly



*Allan Avis* architects inc.

Allan Avis  
B Arch, OAA, MRAIC, CAHP

Attachments:           1986 OBC definition of "stage"  
                              BCC Ruling #97-16-558, dated 28-May-1997  
                              BCC Ruling #00-38-770, dated 10-Aug-2000  
                              BCC Ruling #10-03-1239, dated 21-Jan-2010

S:\00 - ACTIVE JOBS\1748 Dundalk Olde Town Hall Study\Report\20180724 Dundalk Olde Town Hall Final PART A Report.wpd

## **Executive Summary**

The Olde Town Hall building is generally in reasonable condition for a building of its age. The building will require a range of building envelop maintenance and repair work, including: site drainage, foundations, above-grade masonry, flat roofing replacement, building structure, windows, doors and painting. Building interiors could benefit from finish upgrades. A significant increase in toilets is required to serve the building's population, especially if use of the assembly hall be reactivated.

It is uncommon for an existing building, especially one that is 113 years old, to be updated to fully comply with current Codes. Codes recognize this dilemma and have generally adopted "reasonable accommodation", "compliance alternatives" and "acceptance by authority" as a means of finding a reasonable balance of public safety, owner risk, limitations presented by existing conditions, practicality of implementation and retention of heritage building fabric.

Although the 2<sup>nd</sup> floor performance hall has historically been referred to as a "theatre", it is not a "theatre" as defined in the Ontario Building Code. This matter is discussed on Page 14 of this report.

For the Olde Town Hall building, life-safety systems must be installed and/or upgraded for Code compliance and to satisfy the standing 2013 Fire Safety Inspection Report, which resulted in closing the second story performance hall. Work will involve: hazardous building materials audit, adjustment in space use, installation of fire separations, early warning and evacuation systems. Existing fire escapes, from second floor, require upgrading or replacement. A building-wide fire sprinkler is recommended as a compliance alternative to basic prescriptive Code measures, which will also provide enhanced occupant and property protection.

The existing building cannot be considered as barrier-free and accessible. Accessibility is a legislated requirement and a necessity for a civic facility. It is recommended that the existing exterior ramp be replaced and new, properly sized and equipped access door provided. Doors throughout the building require enlarging and installation of appropriate hardware. At least one universal washroom is required. A passenger elevator is required to provide proper, dignified access to the second storey performance hall.

Incorporating changes to address interior circulation, accessibility and washrooms, will occupy much more of the first floor, thereby reducing space available for tenants. This will bring the discussion regarding nature of building uses and occupancies to the forefront.

The cost to preserve, maintain and upgrade the building is significant. The list of Anticipated and Recommended Building Improvements, starting on Page 16, indicates that the general magnitude of construction cost will be approximately \$3.6M. Prorated over the existing 6,340 sq.ft. of useable floor area, the budget cost is approximately \$578/sq. ft. As high as this cost is, it is not outrageous in today's renovation construction market and it is possible to rationalize this level of investment in an existing quality property that is highly utilized and holds special value to the community.

Work Outlined, in the table later in this report, includes a wide range of required, optional and generally recommended repairs and upgrades. Not all of the identified work items have to be completed to allow for safe and comfortable public use of the building. If authorization is granted to proceed with PART B report, the Implementation Plan can be presented to distinguish work items that are required for Code or other reasons, and items that are recommended, as voluntary upgrades, for particular reasons.

### **Purpose of this Report**

In this Study, the building will be considered “infrastructure” and the existing occupancies will be considered “tenants”.

The purpose of this Study is to provide a preliminary assessment of the existing building’s infrastructure to assess its general condition and to report our observations, analysis and recommendations, for various building systems, for continued use of existing occupancies at first floor and reinitiating operation of second floor performance hall.

For the purposes of this Study, the wall facing Main Street East is considered to face south.

### **Mandate for Report - PART A**

The contracted mandate for this report states:

*Architect, only, will conduct a preliminary visual review of the existing building infrastructure to assess its general condition. The visual review will be executed from grade level and from interior floor levels. No elevated platform access is anticipated.*

*A Brief Report will be prepared following the site visit, consisting of observations, analysis and recommendations, regarding the following building systems:*

- ▶ *Building enclosure (walls, windows, doors and roofing)*
- ▶ *Interior finishes*
- ▶ *Life safety systems*
- ▶ *Accessibility*
- ▶ *General impression of building structural, mechanical and electrical systems*
- ▶ *Building Code compliance of building for existing uses*
- ▶ *Fire Code work orders*
- ▶ *Budget construction costs for recommendations*

Commencement of PART B - Comprehensive Report, is pending to additional authorization.

### **General**

Observations are based on a single site visit, conducted 14-Jun-2018, with visual review from grade level and from interior floor levels. No elevated platform access or invasive testing was involved.

Architect only was involved in the preliminary visual assessment; no engineers or specialized consultants participated.

Codes frequently referenced in this report include:

OBC	2012 Ontario Building Code (current issue)
1986 OBC	1986 Ontario Building Code, that is directly referenced in the OFC
OFC	2007 Ontario Fire Code

### **Brief Building History**

Dundalk Olde Town Hall, located at 80 Main Street East in Dundalk, was constructed in 1905. The one-storey addition at the north end of the building was constructed during the mid-1900s and has been used by the fire department and later by police services until 1963. The belfry was removed in 1964 and was subsequently replicated and reinstalled in 1982.

The following, previously prepared documents were reviewed as part of the report process:

- ▶ History of Dundalk Town Hall 1905-2005 booklet, published by the Olde Town Hall Board of Management,
- ▶ Building Condition Assessment (Initial Report) for the Olde Town Hall, prepared by Facilities Manager Kevin Green, dated 2013,
- ▶ Fire Safety Inspection Report, prepared by John Thompson of the Dundalk Fire Department, dated 10-Dec-2013,
- ▶ Dundalk Olde Town Hall Inspection report, by RV Anderson Associates Limited, dated 16-May-2014,
- ▶ Dundalk Olde Town Hall Renovation Task Force Report, prepared by Facilities Manager Kevin Green, dated 2014,
- ▶ Facilities Comprehensive Inspection Report, prepared by Facilities Manager Kevin Green, dated 10-Dec-2015,
- ▶ Dundalk Olde Town Hall Renovation Report 2017, prepared by Facilities Manager Kevin Green, dated 2017.

### **Heritage Designation**

The Village of Dundalk designated the Dundalk Olde Town Hall as being of architectural and historical interest in By-Law 1040, dated 21-May-1987.

In the By-Law, Dundalk Town Hall is recommended for designation

*“for architectural reasons, as it is an early example of rural public design; skillfully using local craftsmanship. Historically, the building has served as a focal point for activities, and as a civic symbol for more than eighty years, being built in 1905.”*

Any work at the site should be respectful of the designation and will require review by the local Heritage Committee.

**Current Building Size and Uses**

Floor Level	Approximate Gross Floor Area sq.ft. (m <sup>2</sup> )	Existing Occupant Load (Persons)	Use
Balcony	550 (51.1)	68	OBC Group A2 Assembly Occupancy. Balcony with 68 fixed seats.
Second Floor	2,705 (251.3)	147	OBC Group A2 Assembly Occupancy. Performance hall with 147 fixed seats, elevated performance platform, at north end, and control booth/storage at south end. 2 <sup>nd</sup> Floor "theatre" is original to the building but has had some renovations and upgraded seating in past years.
First (Main) Floor	3,300 (306.6)	25 8 6	Two leased tenancies, roughly subdivide the east and west halves of the original building floor area: OBC Group A2 Assembly Occupancy, in the east half floor, is a childcare provider at 30 sq.ft. (2.8 m <sup>2</sup> ) per child (or license limit) of unobstructed floor area; and OBC Group D Personal Services Occupancy, in the west half, is an office occupancy (Community Care Access Centre), at 100 sq.ft. (9.3 m <sup>2</sup> ) per person. The one-storey northern addition is currently unoccupied but was last used for a Personal Services Occupancy at 100 sq.ft. (9.3 m <sup>2</sup> ) per person. This floor area is approximately 16" lower than the main floor elevation. Two, single occupant public washrooms are accessible to all three 1 <sup>st</sup> floor tenant suites and also have secured direct access to the side street.
Basement	2,485 (230.9)	0	Unfinished basement provides unoccupied space for utilities and storage.
Total	9,040 (839.8)	254	

Building dimensions and area calculations are approximate and are based on preliminary, on-site recording of dimensions. Detailed measurements are required to verify accurate floor area calculations and structural support systems.

## Building Enclosure and Structure

The original brick Town Hall building follows the form, character, material use and structural system, typical of Southern Ontario civic buildings from the turn of the last century.

Visually, from the exterior, wall and roof lines appear to be true, straight and plumb, suggesting the structural “bones” of the building have stood the test of time. As with most buildings of this age, portions of interior structures (bearing walls, beams and columns) have been subject to modification throughout the years.

Three riveted steel trusses support the wood roof structure above the performance hall. The steel trusses appear to be sectional components that were retrofitted in place and may have replaced original wood hammer-beam mainframes (a more typical type of structure to that time); further research is required to confirm this. It is unusual that the bearing plates and truss ends are visible at exterior brick wall face. The steel trusses are placed at but ends of timber roof purlins, which would be consistent with the location of earlier timber frames. It is unusual that some truss bearing points, at exterior walls, are located directly over window openings. Normally main frames or trusses bear over substantial sections of walls, often reinforced with buttress piers.

Buildings of this type of construction technology typically require roof reinforcing to counter natural aging, provide robust resistance to wind storms and the capacity to tolerate increases in design snow loading. This work usually involves sistering new members alongside existing rafters and purlins, installing screw-fastened clips, to connect rafters to purlins, bolted connectors between purlins and trusses, and upgrading anchorage between roof framing members and masonry walls. In some cases, tie-rods are required to span the width of the roof to increase resistance to roof thrust.

The second floor structure, for performance hall and elevated performance platform, has been reinforced with steel beams and columns, bearing on concrete buttress piers at basement. The steel beams, visible above first floor ceiling, appear to be “lifting beams” commonly used by building moving contractors. Joints are welded connections. It appears that structural steel tube (HSS) columns are embedded behind the gypsum board and T&G wood pilasters at first floor level. There was no detectible bounce in the floor of the performance hall.

The wood floor structure, in the front entry foyer, moves under foot traffic, indicating potential deterioration/rot of floor framing. Tracking in of snow, water and salts is the main contributing factor to this area of deterioration.

As pointed out in earlier reports, sections of some wood framing components and timber beams have been compromised when mechanical and electrical systems were installed. A detailed review of the structure should be completed by a Structural Engineer, experienced in assessing and renovating older buildings.

Red coloured bricks, in south (front) wall of Town Hall, are not original but were installed at a later date to replace the original orange coloured brick. The red bricks are larger units that do not match the original brick coursing nor do they have rowlock courses.

Face wythe of orange brick is laid in common bond pattern, with rowlock header courses at every sixth course. Brick walls are three wythes thick and all exterior walls are considered to be load-bearing. Exterior brick masonry and mortar appear to be in fair to good condition; with the following exceptions:

- ▶ Localized pointing of mortar joints and replacement of spalling brick units is required throughout exterior masonry, for approximately 25% of wall surface area. Lime-rich mortar and reclaimed brick units are recommended for repairs.
- ▶ Masonry arches in south wall have partially failed or settled, resulting in stepped cracks through mortar joints. This condition is essentially a structural failure and will eventually require repair.
- ▶ Exterior brick at bottom of walls, at south entry lobby, is severely deteriorated with visible efflorescence, void mortar joints, loose brick units and delaminating/deteriorating brick units. The concentration of brick damage at bottom of walls, abutting exterior concrete stair and landing, indicates that water, salt and freeze-thaw cycling are likely the major contributing factors. This area will require removal of damaged masonry, localized disassembly, to determine extend of damage, and reconstruction. Ideally, a stone or

manufactured concrete product should be installed, providing greater durability from these conditions. A damp-course membrane should be provided between new stone/concrete material and surrounding brick masonry, to prevent moisture migration. Chloride-free deicing products are recommended for stairs and landing.

- ▶ Brick at south concrete stair and landing has visible efflorescence. In combination with masonry repairs and replacement at south entry lobby walls, it is recommended that stone or precast concrete units be installed to replace the brick masonry at south wall of landing. Dampproof coursing should be incorporated to restrict migration of chlorides through the replacement masonry.
- ▶ Brick chimney has been previously rebuilt. The brick masonry requires repair once again. It appears that the chimney may be redundant and could be removed to avoid ongoing maintenance. If retained, the three chimney pots could be removed and the chimney capped with membrane underlayment and lead-coat copper cap flashing.

It is recommended that invasive testing of wall core masonry be executed at two or three locations. This testing will verify competency of the masonry wall, through its thickness. A skilled masonry restoration contractor would be engaged to carefully remove and reinstall brick units at selected locations.

Stone foundation consists of coursed stone units and appears to generally be in fair condition. The following foundation work is anticipated:

- ▶ Pointing of 100% of above grade mortar joints in foundation walls.
- ▶ Dig test pits adjacent to foundation, at two locations, to verify condition of below grade stone wall. Pointing of some or all of the foundation wall may be required.
- ▶ Open and foam-filled mortar joints, around basement windows, should be cleaned out and filled with mortar.
- ▶ Remove inappropriately hard and impermeable cement-rich parging, smeared over portions of above-grade stone foundation walls.
- ▶ Partial reconstruction, may be required, of foundation at north-west corner (near gas meter), which has experienced severe erosion due to uncontrolled discharge of downpipes.

Basement windows serve little practical use at this time. The windows could be infilled with masonry and window wells removed for reduced maintenance, improved site drainage and increased building security.

Asphalt shingle roofing, at upper roof, was last replaced in 2009. Shingles are lying flat without noticeable granular loss. There were no missing shingles observed. Membrane underlayment is visible through gaps in roof sheathing boards in attic. The roof has approximately six mushroom style vents, near the ridge. Eave venting was not confirmed. Venting of roof space is required to maximize roofing service life. Based on performance, to date, it should be reasonable to expect that the existing asphalt shingle roofing can provide another 10 years of service life.

Painted finish on wood components of belfry has deteriorated, leaving raw wood exposed to elements; repainting is required.

Flat roofing, at south entry lobby, has recently been covered with a single-ply roofing membrane, secured with mechanically fastened perimeter retainer bars. It is reported that this membrane was installed as a stopgap measure to arrest roof leaks through the pre-existing roofing system (which remains below the newer membrane). The roof should be accessed to allow a thorough review. It is anticipated that the existing roofing systems should be removed, new sheathing installed, covered with a 2-ply modified bitumen membrane roofing system.

Rain gutters at eaves are standard, residential grade, 5" K-style aluminum gutters, secured with nails and ferrules. Purpose-made internal brackets, with screw fasteners, are recommended to reinforce gutter anchorage. Soffits are prefinished aluminum. Gutters require periodic cleaning.



Rainwater downpipes should be replaced and reconfigured to prevent splashing onto walls. Downpipes should be checked for splits and leaks. Ideally, the downpipes should discharge to storm sewer via in-ground pipe system (if allowed by municipality), or have suitable surface drainage systems to flow water to the street. If the site has good draining soils, an on-site French drain system could be considered.

Vented wood louvres, at south gable, contains wood blades that have a unique scroll-cut lip. Retaining the existing louvres will involve some replacement components, wood repair/replacement/consolidation and repainting. New insect and rodent screens will also be required on attic side. A soldered metal baffle is recommended on attic side, to prevent weather entry. Interestingly, only the upper four feet of the louvres are present in the attic, the remaining height is concealed in the south balcony wall. This condition should be reviewed, up close, to determine how the wall behind the louvre is weather-proofed.

East and west exterior steel fire escapes, from second floor level, are generously sized and appear to be in reasonable condition. Only minor localized rusting was observed at painted steel components. Jumping action did not generate noticeable bounce or vibration at upper landings or at stair runs. Wall anchorage, steel support legs and foundations should be reviewed by a Structural Engineer. Guard and handrail do not appear to fully comply with Code and upgrades will be required. It may be more economical to replace the existing fire escapes with a new galvanized steel system, incorporating smaller landings (especially if exit double doors are replaced with single doors), support brackets and/or posts and foundations, and fixed stairs with handrails at two sides. Hard-surfaced sidewalks should be provided from fire escapes to the street, to facilitate winter maintenance of egress.

Existing steel ladder, on south exterior wall, should be removed. This would have been a form of emergency egress from an earlier time, when the entry lobby had a perimeter balcony above street level.

A semi-mature deciduous tree, located at southwest corner of property, is rooted within 8' of foundations. At a minimum, the tree should be significantly pruned to a smaller canopy and maintained in that fashion. Alternatively, the tree should be removed to avoid root damage to foundation and to allow for better drying of masonry walls, currently shaded by the tree. Removal of the tree would also provide a stronger presence of the building at the street.

South exterior steps, to east suite, consist of timbers, infilled with unit pavers. A welded steel railing system is provided at both sides of steps and landing. Bottom riser has reduced height, posing a potential trip hazard. This could be rectified by regrading the unit paver sidewalk to delete the short bottom riser. If the recommended foundation renovations are implemented, replace the existing timber and unit paver steps with new precast concrete stair/landing, complete with low maintenance prefinished aluminum railing system.

Most windows in the original building appear to be original, wood windows with uninsulated, single glazing. Performance hall fixed windows have clear or cathedral coloured glazing set in lead caming. All of the wood windows require repainting; many will require repair and restoration prior to painting. Existing windows in north addition are newer prefinished, insulated glass units. A detailed window assessment is required to verify condition of existing wood units. It is most often feasible, economically viable and historically appropriate to retain existing wood windows. Replacement windows can be considered as an alternative.

Windows in the south wall of the balcony elevation are leaded windows, square cut cathedral glass, without any interior or exterior glazing provided. Open air gaps noted at lead caming allows uninhibited air flow between the interior and outdoors.

Second storey windows have generally been retrofitted with exterior, residential grade, aluminum storm windows. First storey windows typically have removable wood sash storm windows. Leaded windows should be more closely examined. It is generally recommended that the cavity between exterior, protective clear glass and leaded-glass panel be ventilated to the exterior or the interior, to prevent the interstitial space from superheating, causing weakening of lead caming. Upgrading storm windows (at interior or exterior) is a sensible means of increasing comfort and energy efficiency.



Exterior doors are a combination of aluminum and hollow metal. Interior doors are a combination of hollow metal and wood. Doors in required fire-rated assemblies, require fire-rating, latching hardware and automatic closers. Exterior aluminum door, at south entry lobby, operates as a push-pull door and is locked with a single cylinder thumb-turn dead lock. The door measures 36" wide, with clear of 33 3/8" and is equipped with a continuous hinge. This door is an exit door and should be equipped with rim-latch panic hardware to provide full-time egress. Many existing doors will have to be replaced as they are in barrier-free paths of travel and are currently too narrow.

The building is assumed to have minimal, if any, thermal insulation. Blown-in insulation is present at the flat section of performance hall and elevated performance platform ceiling. It is unclear if the cathedral portion of ceilings are insulated and ventilated. It appears that first floor walls, with more recent gypsum board finish, are strapped with 2x4 wood studs and cavities filled with fibreglass insulation.

Incorporation of insulation in historic, mass masonry building is not a Code requirement and introduction of insulation has to be carefully considered. Type and quantity of insulation is a fine balance. Too much of the incorrect insulation will negatively impact ability of the masonry wall to maintain a healthy temperature and to dry quickly after wetting.

### **Interior Finishes**

Interior side of exterior brick walls are generally painted plaster over wood lath and strapping. The strapping, lath and plaster assembly is approximately 2 1/2" in thickness. Plaster finish has been replaced throughout most of first floor with gypsum board.

Flooring materials include tongue and groove wood, vinyl composite tile, sheet vinyl and carpet. Carpets, at south entry lobby and stairs, and in west first floor tenant suite, is rippled, packed torn and worn, and should be replaced. Other existing floorings are in reasonable condition.

Wall finishes are primarily painted plaster and gypsum board, with some areas having pressed metal and wood tongue and groove wainscoting.

Ceiling materials include pressed metal, painted plaster, painted gypsum board and suspended lay-in tile.

Wall and ceiling finishes are generally in fair condition. Flaking paint, at performance hall ceiling, requires testing, as mentioned elsewhere in this report.

Portions of south entry lobby flooring move under foot traffic. Deterioration and rot of wood floor structure is suspected, due to tracking in of snow, water and deicing salts from exterior porch. No access is available to the crawlspace below to review existing conditions. It is apparent that the floor structure will require replacement.

A residential style, chair-glide system was previously installed from the entry lobby to performance hall, in an attempt to address accessibility. This equipment was maintained by Davidson-Hill Elevators, prior to closing of the second floor to use. A chair-glide is not considered appropriate for a public assembly building. It does not provide accessibility for the majority of potential users and it involves significant risk when transferring persons to and from the chair. There is also the matter of manually transporting mobility devices up to the second floor for continued travel. The permanent rail for the glide reduces the effective stairway width and could pose a trip hazard, especially in an emergency egress situation.

The elevated performance platform has newer, tongue and groove wood flooring, painted gypsum board ceiling and walls, and electric baseboard heating. The original elevated performance platform is still visible, but has been built over with a new projection made of 2 x4 framing and paneling. The space below the elevated performance platform projection is used for storage.

The tongue and groove, natural wood floor throughout the performance hall is raked up, approximately 16" from elevated performance platform to south performance hall wall. Fixed chairs with folding seats are relatively new and are generally in good condition. The ceiling height at elevated performance platform is 16-3 ½"; at performance hall floor, immediately forward of elevated performance platform, the ceiling height is approximately 19-7".

There is a single stairway up to the balcony. Stairs are relatively steep with turning winders at top of stair run. Treads are approximately 9" in total depth (including the nosing) and rise is 8".

The guard around the balcony stair opening is a wood post system, with turned spindles and oak top rail. Spacing between spindles exceeds the currently allowed 4" open space and the guard is not 42" high from floor. This guard does not appear to provide OBC complaint resistance to lateral forces and will require overall upgrades. It is recommended that continuous handrails be installed, at both side of this stair, to help counter the steepness of the stairs. The handrail may sweep wide around the top of the stair to ensure persons take a foothold through the deeper sections of turning winders.

The balcony has six riser platforms for aisles and seating; there are three riser platforms from railing to riser #4 cross-aisle, and another two risers up to the south wall. Significant amounts of paint flakes were observed on the balcony floor. The paint flakes have delaminated and fallen from the painted, pressed metal ceiling. It is not uncommon to find that paint coatings on historic metal ceiling are lead containing paints. Samples of the paint should be laboratory tested to determine if lead is present. In the meantime, areas with paint flakes should not be disturbed, to limit health concerns.

The bottom chord of steel truss, at balcony, is placed low, relative to balcony floor, and creates a risk of persons hitting their heads on the chord when being seated at front the row near the wall. It is advisable to remove the seats that allow this condition.

The guard at the front of the balcony consists of tongue and groove pine boards with an oak top rail. Lateral resistance to movement, by hand force, seems to be fair, however, an engineer will have to confirm adequacy. The guard measures 25" in height. OBC 3.3.2.8. requires that the guard be 30" high in front of fixed seats and 36" high at the foot of steps at front row seats. Any deficiency in lateral resistance can be addressed when the guard is modified to provide required heights.

Basement has a poured concrete floor, brick columns (measuring approximately 16" x 16") supporting two beam lines that run north-south. There are three brick piers for each beam length. Basement ceiling joists and timber beams are exposed. At the northeast corner there is a poured concrete cistern that is reported to date back to the time when there was an adjacent fire hall (the cistern was the water reservoir for refilling the firefighting pumper).

Main electrical service equipment is located in a room at the southeast corner of building. The primary service panel is 400A with disconnect, feeding a splitter box. One adjacent sub-panel is located in this room and two distribution panels are located elsewhere in the building. A manual transfer switch is provided with a twist-lock cable to connect a portable backup power generator. An access port is provided through the foundation wall to feed the cable to the side yard.

Relatively high levels of humidity were present in the basement during our site visit. The two residential style dehumidifiers, located near the furnace, simply do not have sufficient capacity to make a real difference in controlling basement humidity levels. Addressing these conditions may require a number of interventions, which may include, installing industrial dehumidifiers, excavating foundation walls at exterior, replenishing mortar between stones or installing a concrete dead-wall, installation of waterproofing and drainage system, installation of clay dams subgrade, surface grading and materials to control runoff and discharge from rainwater leaders.

In addition to signs of water seepage and potential rising-damp at foundation walls, there is evidence of significant accumulation of mortar fines at toe of walls. Mortar fines on the floor is generally directly related to breakdown of solid mortar to constituent components, most frequently due to moisture associated deterioration.

First floor brick vault walls, at the southwest corner of building, are supported on rubble stone foundation walls. At first floor level, the brick walls and vaulted ceiling are finished with a cement or lime parging.

The exterior basement entrance, concealed by the wood cellar door in the east yard, consists of a wide sloped concrete ramp, leading to an oversized wood door in the foundation wall. It is reported that, in early years, the local police constable brought his horse down a ramp into the basement, where there was a stable. The horizontal wood plank doors in the yard are unlikely to have sufficient structural strength and they are problematic related to weather and water entry. As an alternative to replacing the existing doors, if this access is not used, or only used infrequently, a secondary weathertight, structural access door could be installed below the plank doors.

The water service, accessing the west wall of the basement, appears to be ½" copper. The water meter and various valves/back-flow preventer are provided at the entry point. The adjacent sump pit is without a pump and appears to simply be a recess in the soil below the floor slab, covered with a floor grate. The floor appears to have a natural slope to the pit, reinforced with a rough, shallow drainage trench cut into the concrete. There was a noticeable amount of water and water staining on the floor, emanating from furnace area. The primary source of water appears to be a severely deteriorated copper fitting that connects the PVC condensate pipe and the cast-iron soil stack.

The furnace is a relatively new, gas-fired Lennox unit, direct-vented, PVC pipe issue, installed on a housekeeping pan. Water heating is electric, Cascade 40.

The two, west-facing basement windows have ½" thick, Lexan panels, mechanically fastened to the inside of wood frames. The Lexan is cracked and broken at some screws.

The quantity of toilet fixtures and distribution of washrooms will require detailed review. Based on currently provided seating capacity at the performance hall, approximately 3 male and 5 female toilet fixtures are required. It may be possible to design the main floor to allow other tenants use of these same washrooms. Otherwise, more ensuite toilet fixtures will be required to service tenant spaces. Specially designed child washrooms are normally required for child care facilities. Public washrooms, directly accessed from the street, involve an increased level of security concerns.

Door hardware and clear widths of doorways require detailed review for compliance.

Recommendations regarding public washroom and general/barrier-free accessibility will require significant changes at the first floor. The resulting reallocation of space use may reduce the first floor from three suite to two suites.

### **Life Safety Systems**

The performance hall and balcony provide for occupancy of more than 150 persons, above the first storey. Therefore, per, 1986 OBC 3.2.4.1.(1c), an automatic fire alarm system is required. There currently is no fire alarm system in the building.

Lighted exit signs and battery powered emergency lighting devices are provided throughout the building. Subject to a detailed review by Electrical Engineer, the following modifications are anticipated:

- ▶ The exit sign, with emergency lighting heads at balcony, should be relocated to the stairway. A double-headed emergency light should be installed at the current sign location.
- ▶ The exit sign with emergency lighting heads, at sound control booth (rear of performance hall), should be relocated to be at the stair landing beside control booth. This equipment should be tested regularly and results logged.

Replacement of exterior steel fire escape is recommended elsewhere in this report.

### **Accessibility**

The existing building does not comply with accessibility standards. For example, the property lacks compliant, designated street parking adjacent to the site, barrier-free access into the building, paths of travel throughout the building, elevating device to second floor and washroom facilities.

When operating, the second floor performance space is open to the public and the building is therefore required to comply with the Accessibility for Ontarians with Disability Act (AODA). Having said that, Codes, Standards and most people, recognize the principal of "reasonable accommodations" when applying such standards to existing buildings.

Doors in barrier-free path of travel are likely to require replacement with wider doors and/or installation of swing-clear hinges. In a public building of this type, it is recommended that all door hardware be changed to lever style. The building area is greater than 300 m<sup>2</sup> and, therefore, a power door operator is required for the barrier-free entry door.

The exterior concrete ramp, in east yard, is sloped approximately 7.3% (3 ½" over 4'). The maximum allowable ramp gradient is 8%, therefore, the existing slope is compliant. The width of the ramp also appears to be compliant, at 35" between curbs, however, landing sizes and the absence of a full railing system are noncompliant.

The entry door, at top of ramp, accesses the east suite directly. This door is not equipped with lever door hardware. The public washrooms are then accessed through an interior door and by exterior steps.

Existing washrooms are not sized or equipped to comply with accessibility standards. At least one universal washroom will be required in the building.

As discussed earlier in this report, the exiting chair glide in south stairway does not provide the level of accessibility that is expected in a civic facility. The chair glide system should be removed and replaced with a passenger elevator; a more appropriate and dignified form of vertical transport. Construction of the hoistway should be located to exterior of the existing building to avoid reduction of existing floor area. The hoistway would ideally be located in the alley at west side of Olde Town Hall, avoiding the higher visibility south and east facades (it will have to be verified if the alley is a legal, shared right-of-way and if so, could that be changed to allow for an elevator addition). The elevator should be designed to access at least the first and second floor levels. A location and design for an elevator addition, including street level vestibule would require a design study that is beyond the scope of this report.

The existing building, in general, is deficient at main floor level in terms of accessibility and is essentially inaccessible with regard to the performance hall floor levels when reopened to the public.

### **General Comments on Mechanical and Electrical Systems**

The existing centralized, gas-fired furnace was installed in 2011. Air distribution ductwork, throughout the building, is interconnected, crossing between common spaces and tenancies and crossing required fire separations. This type of furnace system cannot satisfy the ventilation requirements for the second floor performance hall. The centralized furnace system will also have challenges satisfying individual tenant needs. For reasons of ventilation requirements, comfort and energy efficiency, it is anticipated that individual air delivery systems should be provided for each of the main floor tenants and for the second floor theatre.

Assembly performance hall requires a significant amount of fresh air ventilation to comply with Code. These fresh air requirements are most effectively achieved using commercial grade, packaged HVAC equipment. The air conditioning, normally included in such equipment, allows for comfortable use of the performance hall during warm weather and increases potential for year-round use. Installing air conditioning in uninsulated, vintage buildings has to be carefully designed to avoid causing damage by reverse vapour drive through mass masonry walls.

Electrical service, main and sub-panels, was upgraded in 1999 to 400A service with all new breaker panels. This size of service should be adequate for most anticipated needs of building occupants.

Significant modifications should be expected for washroom facilities throughout the building and will include new sanitary sewer from building to street (unless there are records of sewer upgrades having been completed in recent years).

The basement experiences elevated levels of humidity. Water seepage through the foundation wall is a significant contributing factor. A severely deteriorated copper elbow, connecting the furnace condenser pipe to the sanitary stack, is the cause for water leakage at the floor adjacent to furnace. Prior notice was provided to Facilities Department to immediately repair this pipe connection.

### **Hazardous Building Materials**

Provincial law (Bill 208) requires that a building owner survey and know the presence of all designated substances, including asbestos, on a property and in a building.

A building of this age is likely to have some of the scheduled "designated substances". A room-by-room survey should be conducted by a certified Industrial Hygienist to comply with Provincial regulations and laws.

### **Building and Fire Code Compliance with Existing Uses**

The Ontario Fire Code (OFC) has the power to require retrofits for unsafe conditions in existing buildings.

Requirements of the Ontario Building Code (OBC) are typically triggered by building construction or change of use. Otherwise, the OBC has few retrofit powers and an existing building is generally "grandfathered" forward as-is.

Important Code criteria:

- ▶ OBC Part 11 Renovation and OFC Part 9 Retrofit apply because this is an existing building.
- ▶ The building faces 2 streets and contains multiple occupancies.
- ▶ OBC Hazard Index for a mid-sized building, containing a more restrictive A2 Assembly Occupancy, is HI4.
- ▶ OBC Construction Index is C11 because existing first and second floor assemblies generally provide no fire-rating.
- ▶ If existing occupancies remain, it could be argued that there is no change of occupancy and, thus, the OBC typically allows for "match existing" conditions for most building systems. A limited number of critical building systems are excluded from the "match existing" relief.
- ▶ However, as the second floor spaces approach five years of non-use, the OBC normally considers the second storey space as vacant with no occupancy. Consequently, any space use will invoke Additional Upgrades in compliance with OBC Tables 11.4.3.4.A. and 11.4.3.3. Required upgrades are 45 minute fire-resistance rating at undersides of first and second floor structures and at supporting structural elements, and a zero fire-resistance rating at the roof structure. Alternatively, the above assemblies may be protected with a fire sprinkler system.
- ▶ Fire-rated separations and closures are also required at:
  - 1 hr fire-resistance rating at horizontal and vertical suite separations (OBC 3.1.3.2.(1)).
  - 1 hr fire-resistance rating at mechanical service rooms (OFC 9.2.2.3.(2)).
  - The above 1 hr fire-resistance ratings can be reduced to 30 minutes if the building has a fire sprinkler system that is connected to a monitored fire alarm system (OFC 9.2.2.2.(2)(b)).
- ▶ The Fire Department can be asked to accept a fire sprinkler system as a compliance alternative for the above two requirements for fire separations. A sprinkler system would avoid extensive renovations required to install contiguous gypsum board ceilings and wall protections. Plus, a sprinkler system provides for early detection, suppression and containment in the event of fire. These are significant benefits in terms of life-safety and property protection.
- ▶ The existing balcony has 68 seats and requires two means of egress from the balcony. If eight seats were removed and a sign posted to limit the occupant load to not exceed 60 persons, then a single egress complies with OBC. Furthermore, because the stairway from balcony to second floor is an existing condition, the Code does not require it to be replaced to remove its winders or to modify its steep slope.



- ▶ Second floor performance hall and balcony have three egress doors. The east and west egress doors, to fire escapes, are double doors that extend well beyond the original single window opening that the doors are hosted in. The unusually large upper landing of the exterior steel fire escape is likely due to door swing clearances onto the landing. Double doors and enlarged landings are unnecessary to comply with Code. There are three, existing designated egress doors from the performance hall. It appears to be feasible to modify the existing fire escape doors to single doors, reverting back to the original window opening width and reducing the fire escape landing area. Reconstituting the removed portion of masonry wall would be beneficial from a structural standpoint as well as being aesthetically and historically appropriate.
- ▶ Fire escape landings and stairs are exposed to unprotected window and door openings in walls below. According to OFC 9.2.3.10. & 1986 OBC 3.4.7.13(1), protection of these openings is not required because the fire escape does not serve storeys above the second storey.
- ▶ The performance hall and balcony provides for occupancy of more than 150 persons above the first storey. Therefore, per OFC 9.2.4.1.(1) and 1986 OBC 3.2.4.1.(1c), a fire alarm system is required.

The following discussion focuses on Item #4 contained in the 10-Dec-2013 Fire Safety Inspection Report. This item references OFC 9.2.2.3.(4) stating *"Fire separations shall be provided between theatrical stages and assembly occupancies in compliance with Sentences 3.3.2.14.(3) to (5) of the 1986 Building Code."*

The OFC and 1986 OBC defines the term "Stage" as:

*Stage means a space designed primarily for theatrical performances with provision for quick change of scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects and which is traditionally, but not necessarily, separated from the audience by a proscenium wall and curtain opening.*

The Dundalk Olde Town Hall performance area has the same characteristics as an elevated performance platform in a school performance hall or gymnasium. Such performance areas accommodate a variety of activities, including lectures, presentations, concerts and theatrical events. Performance areas are typically small in size, have good visibility from audience seating and do not have partition wall structures concealing adjacent support/ancillary spaces.

The Dundalk Olde Town Hall performance area does not have a fly tower or other facilities for quick change of scenery. The small area of storage, below the elevated platform projection, can be closed to use. There are no side-wings, storage rooms, workshops, dressing rooms or service rooms. The absence of such support/ancillary spaces represents a reduced fire load, compared to a stage equipped with such spaces.

The Building Code Commission (BCC) has recognized a distinction between an "elevated performance area" and a "stage". Previous BCC rulings pertaining to this matter include:

- BCC Ruling #97-16-558, dated 28-May-1997;
- BCC Ruling #00-38-770, dated 10-Aug-2000; and
- BCC Ruling #10-03-1239, dated 21-Jan-2010.

The published details of all three of these Rulings are attached to this report for your convenience. The areas involved in these Rulings have similar characteristics to Dundalk Olde Town Hall performance hall. These three Rulings, spanning nearly 20 years, have been consistent in their decisions.

In each of the above deliberations, the Municipal Building Officials argued that the performance areas were "stages" and therefore required a deluge water curtain or a fire-rated curtain to separate the "stage" from the audience. The Applicants argued that their performance areas did not meet the OBC definition of "stage" and, therefore, fire curtain and deluge water curtain provisions do not apply.

For each of the above cases, the BCC ruled in favour of the Applicant. The rationale for these rulings include:

- ▶ The construction is considered to be a raised platform in a multipurpose facility.
- ▶ The subject platform area does not provide for quick change and storage of scenery, etc.
- ▶ There is no provision for quick change scenery or fly towers, which limits the combustible load on the stage.
- ▶ The theatre, stage and back of house areas are of limited size.

- ▶ The performance space does not have the fire load that is associated with the activities and occupancies described in the Building Code's definition of "stage".

BCC Ruling #10-03-1239 is particularly interesting in that the BCC concluded that the subject performance area was indeed a "stage" as defined by the OBC, however, the BCC determined that fire sprinkler protection was not required in this case because the performance area did not have the fire load associated with a "stage" (i.e., the performance area did not have ancillary spaces such as workshops, dressing rooms and storage areas).

It is our opinion that the platform at Dundalk Olde Town Hall performance hall can be classified as an "elevated performance area", consistent with the BCC Rulings. This elevated performance area is not a "stage" as defined by Division A of the OBC and, therefore, the fire-rated curtain and deluge water curtain requirements at the proscenium opening are not applicable.

A consultation is required with Building and Fire Authorities to fully establish the nature and extent of Code requirements and acceptable solutions.

### Anticipated and Recommended Building Improvements

The range of anticipated and recommended work items, listed in the following table, include essential, core building maintenance work, required to preserve the building for ongoing use, renewal and replacement of equipment and finishes that are soon approaching the end of their service life, and mandatory and voluntary upgrades to building components and systems.

	Description	Budget Estimate
1.	Commission a Designated Substances Survey.  Abatement of hazardous building materials resulting from Survey cannot be determined at this time and the cost for same is not included.	\$5,000  Not Included
2.	Additional investigations and testing: - Remove brick in exterior walls to verify condition of inner core of walls. - Dig test pits to review below-grade condition of stone foundation walls. - Structural review of floor and roof structures, fire escapes. - Detailed window assessment. - Probe in-ground storm drainage system connected to rainwater leaders to verify proper operation and determine outlet for drainage.	\$21,000
3.	Site Work: - Prune or remove tree at southwest corner of building. - Replace existing timber and unit paver steps at south exterior door, to east suite, and replace with precast concrete stairs and landing with aluminum railing system.	\$8,500
4.	Exterior Masonry: - Excavate perimeter of building to expose foundation walls, repair/replace deteriorating foundation stone units (including repair at northwest corner where severely eroded), remove face parging, point 100% of foundation mortar joints (alternatively, install poured concrete dead-wall at exterior side of stone wall), provide footing drain and waterproofing systems. Backfill and grade surface to drain away from foundations. - Point 100% of foundation mortar joints at interior side of foundation wall. - Infill basement windows with masonry, or replace windows. - Localized pointing of approximately 25% of mortar joints in exterior brick masonry walls. - Stabilize failing masonry arches at south wall and install local reinforcement. - Remove and replace damaged brick at bottom of south entry lobby walls. Install stone or concrete masonry units for approximately 12" above exterior concrete landing and steps, isolating new base material with dampcourse membrane. Install new brick above. - Remove brick at south wall of exterior concrete landing and install same stone or concrete masonry units with isolation dampcourse. - Repair chimney top and install new lead-coat copper cap flashing. Alternatively, remove chimney and extend roof through. - Remove redundant wall-mounted steel ladder from south wall.	\$300,000
5.	Roof Structure: - Reinforce roof framing for wind uplift and snow load capacity (subject to Structural Engineer recommendations): sistering new members alongside existing rafters and purlins, installing screw-fastened clips to connect rafters to purlins, bolted connectors between purlins and trusses, and upgrading anchorage between roof framing members and masonry walls. - Install short spreader beams at truss bearing points, located over or close to window openings in walls.	\$125,000
6.	Roofing: - Replace flat roofing at south entry lobby. - Replace downpipe system and connect to storm sewer or provide positive runoff at grade.	\$21,000



7.	<p>Painting:</p> <ul style="list-style-type: none"> <li>- Paint belfry.</li> <li>- Replenish exterior caulk sealants throughout.</li> <li>- Restore and paint south wall louvres, or replace with prefinished metal louvres.</li> </ul>	\$47,000
8.	<p>Windows and Doors:</p> <ul style="list-style-type: none"> <li>- Replace exterior aluminum storm windows with new fixed windows, with insulated glass.</li> <li>- Modify existing leaded windows at interior to provide top and bottom venting on interstitial space.</li> <li>- Restore leaded glass windows, where required.</li> <li>- Strip, repair and paint exterior wood windows, including wood storm windows.</li> <li>- Replace doors and hardware on barrier-free path of travel to provided required clear door width and lever operation.</li> <li>- Install panic hardware at south lobby aluminum door.</li> <li>- Upgrade, repair or replace cellar doors located in east yard.</li> </ul>	\$150,000
9.	<p>Floor Structures:</p> <ul style="list-style-type: none"> <li>- Repair floor structure at south entry lobby.</li> <li>- Repairs to floor framing, beams and columns where compromised by M&amp;E installations and where generally deteriorated.</li> <li>- Repairs and upgrades resulting from detailed structural assessment.</li> </ul>	\$120,000
10.	<p>Interiors:</p> <ul style="list-style-type: none"> <li>- Replace carpeting and vinyl flooring at first floor level and main stairway.</li> <li>- Provide contrasting coloured nosings at interior egress stairs.</li> <li>- Localized painting of metal ceiling panels where existing paint finish is delaminating. Global removal and painting may be required if testing confirms that the existing paint system has generally failed. Assumes existing paint system contains lead and removal will require lead paint abatement procedures. An alternative, lower cost solution, could consider removal of exiting metal panels and installation of new metal panels with similar pressed details.</li> <li>- General upgrades to interior finishes, lighting and power distribution.</li> </ul>	\$600,000
11.	<p>Life Safety:</p> <ul style="list-style-type: none"> <li>- Upgrade floor assemblies at first and second floor levels to provide 1-hour fire resistance rating and at suite separations. This will require a double layer of fire-rated gypsum board over basement and first floor level ceilings, including supporting structural elements and at partition walls separating suites. Doors and stairways in these separations require the same fire rating.</li> <li>- Alternatively, in lieu of installing the noted above fire-rated separations, install a building wide fire sprinkler system. A combination wet and dry system will be required to include for unheated attic spaces.</li> <li>- Construct wall enclosure around fuel-fired HVAC equipment, located in the building. Enclosure to provide 1-hour fire resistance rating, including doors and duct penetrations.</li> <li>- Remove 8 seats from balcony and post notice of occupant limit of 60 persons. Remove seats at locations of head clearance conflicts, with steel trusses, and at less desirable seating locations.</li> <li>- Install continuous handrails at both sides of balcony stairs. Have handrail sweep wide around stairs, through turning winders, to force persons to walk at deeper tread depths.</li> <li>- Upgrade balcony guard to provide Code required heights and reinforce balcony guard (if required).</li> <li>- Modify locations of exit signs and emergency light fixtures, as noted.</li> </ul>	\$550,000
	<p>Fire escapes:</p> <ul style="list-style-type: none"> <li>- Renovate existing steel structures, modify as determined by Engineer and add handrailings at both sides of stairs.</li> <li>- Provide sidewalks from fire escape stairs to street.</li> <li>- Optional upgrades include: removing existing double doors at second storey exits, installing single doors and reconstructing missing wall areas. Remove existing steel fire escapes and replace with new, galvanized steel units, having smaller landings.</li> </ul>	\$90,000

12.	<p>Accessibility:</p> <ul style="list-style-type: none"> <li>- Replace exterior ramp access with new ramp and Code compliant railing system.</li> <li>- Provide power door operator at entry door.</li> <li>- Renovate first floor to provide universal washroom with power door operator at door.</li> <li>- Replace doors and/or hardware at barrier-free path of travel throughout first floor to provide required clear width and lever hardware.</li> <li>- Remove existing chair glide system.</li> </ul>	\$135,000
	<ul style="list-style-type: none"> <li>- Install a hoistway and hydraulic passenger elevator to provide dignified access to performance hall at second floor level. Elevator to have at least three stops; street, first and second floor levels. If constructed as a building addition, a vestibule or lobby will be required at street level. The elevator machine room would be located in the basement.</li> </ul>	\$400,000
13.	<p>General, Mechanical and Electrical Systems:</p> <ul style="list-style-type: none"> <li>- Repair deteriorated leaking copper fitting connected to furnace condensate line (if not already repaired).</li> <li>- Install industrial dehumidifiers in basement to control humidity levels.</li> <li>- Provide commercial grade packaged HVAC system to serve performance hall.</li> <li>- Provide one new HVAC unit to serve each of the three first floor suites and basement, allowing for local suite control.</li> <li>- Upgrade public washroom to increase toilet fixture counts.</li> <li>- Provide vandal resistant finishes and fixtures, if washrooms are to be accessible to the public directly from street.</li> </ul>	\$400,000
14.	Subtotal	\$2,972,500
15.	Construction Contingency (20%)	\$595,000
16.	Cost Escalation Contingency (5% per year for deferred work)	Not Included
17.	Total (HST not included)	\$3,567,500

**Notes Regarding Cost Estimates**

Cost estimates are very conceptual and preliminary. The above list is not intended to be comprehensive or complete. No designs or accurate quantification of anticipated work has been prepared. Budget estimates are intended to provide a generalized magnitude of costs associated with the described work items.

Items of work have, in some instances, been grouped together to make efficient use of materials, equipment and labour. Scheduling the work into multiple, smaller projects will result in higher costs. It is recognized that the longer work is delayed the more expensive it becomes, not only in terms of inflationary cost escalation but also due to ongoing progressive deterioration of building systems.

Cost estimates and budgets have been prepared by Allan Avis Architects Inc. and represent the Architect's judgement as a design professional. It is recognized, however, that neither the Architect nor the Client has control over the cost of labour, materials, equipment, over the Contractor's methods of determining bid prices, over competitive bidding, market or negotiation conditions. Accordingly, the Architect cannot, and does not, warrant or represent that bids or negotiated prices will not vary from the estimate of construction cost or evaluations prepared or agreed to by the Architect.

The cost of work is estimated on a contracted-out basis, is based on our experience with projects of similar nature and information provided by contractors and suppliers. The estimates are in mid-2018 dollars. We cannot guarantee the accuracy of the estimate because market conditions are beyond our control. The estimates should be modified periodically to reflect actual or anticipated rates of inflation (at approximately 5.0% compounded annually).

A 20% construction contingency is carried in the budget to reflect the preliminary nature of the estimate and lack of detail at this early stage. This contingency is to cover unknown details in design and construction, layout variations and material selections, but excludes any scope increases.

Professional fees and HST are in addition to construction cost estimates.

## 1986 Ontario Building Code

### 1.3.2

*Smoke detector* means a *fire detector* designed to operate when the concentration of airborne combustion products exceeds a pre-determined level.

*Soil* means that portion of the earth's crust which is fragmentary, or such that some individual particles of a dried sample may be readily separated by agitation in water; it includes boulders, cobbles, gravel, sand, silt, clay and organic matter.

*Space heater* means a *space-heating appliance* for heating the room or space within which it is located, without the use of ducts.

*Space-heating appliance* means an *appliance* intended for the supplying of heat to a room or space directly, such as a *space heater*, fireplace or *unit heater*, or to rooms or spaces of a *building* through a heating system such as a central *furnace* or *boiler*.

*Sprinklered* means equipped with a system of automatic sprinklers.

*Stage* means a space designed primarily for theatrical performances with provision for quick change scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects and which is traditionally, but not necessarily, separated from the audience by a proscenium wall and curtain opening.

*Starting platform* means a rigid platform located entirely on the *pool deck* consisting of a top which, if projected horizontally over the water surface, would be less than 1 m in vertical height above the surface and that is designed to be used by a swimmer to dive from at the start of a swimming race.

*Storage garage* means a *building* or part thereof intended for the storage or parking of motor vehicles and which contains no provision for the repair or servicing of such vehicles.

*Storage-type service water heater* means a *service water heater* with an integral hot water storage tank.

*Storey* means that portion of a *building* which is situated between the top of any floor and the top of the floor next above it, and if there is no floor above it, that portion between the top of such floor and the ceiling above it.

*Stove* means an *appliance* intended for cooking and space heating.

*Street* means any highway, road, boulevard, square or other improved thoroughfare 9 m or more in width, which has been dedicated or deeded for public use, and is accessible to fire department vehicles and equipment.

*Subsurface investigation* means the appraisal of the general subsurface conditions at a *building* site by analysis of information gained by such methods as geological surveys, in situ testing, sampling, visual inspection, laboratory testing of samples of the subsurface materials and *groundwater* observations and measurements.

*Suite* means a single room or series of rooms of complementary use, operated under a single tenancy, and includes *dwelling units*, individual guest rooms in motels, hotels, boarding houses, rooming houses and dormitories as well as individual stores and individual or complementary rooms for *business and personal services occupancies*. (See Appendix A.)

*Supply duct* means a duct for conveying air from a heating, ventilating or air-conditioning *appliance* to a space to be heated, ventilated or air-conditioned.

*Theatre* means a place of public assembly intended for the production and viewing of the performing arts or the screening and viewing of motion pictures, and consisting of an auditorium with permanently fixed seats intended solely for a viewing audience.



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## BCC Ruling No. 97-16-558

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### **BUILDING CODE COMMISSION DECISION ON B.C.C. #97-16-558**

**IN THE MATTER OF** Subsection 24 (1) of the Building Code Act, 1992.

**AND IN THE MATTER OF** Article 3.3.2.13. of "the Building Code" (Ontario Regulation 419/89 as amended by Ont. Reg. 183/88, 581/88, 11/89 and 115/89).

**AND IN THE MATTER OF** an application by Mr. Stephen Roth, General Manager, Waterloo Stage Theatre, 24 King Street North, Waterloo, Ontario, for the resolution of a dispute with Mr. Anthony Krimmer, Chief Building Official, City of Waterloo, concerning whether the performance area is a stage and thus subject to the requirements of Article 3.3.2.13 of the Ontario Building Code, at the Waterloo Stage Theatre, Waterloo, Ontario.

#### **APPLICANT**

Mr. Stephen Roth, General Manager  
Waterloo Stage Theatre  
24 King Street North  
Waterloo, Ontario

#### **RESPONDENT**

Mr. Anthony Krimmer  
Chief Building Official  
City of Waterloo

#### **PANEL**

Mr. Michael Lio, Chair  
Ms. Susan Friedrich  
Mr. Ross Thomson

#### **PLACE**

Toronto, Ontario

#### **DATE OF RULING**

Wednesday, May 28th, 1997

**APPEARANCES**

Mr. Stephen Roth  
General Manager  
Waterloo Stage Theatre

**The Applicant**

Mr. Peter Ciuciura  
L. Alan Grinham Architects &  
Mr. Johnathan Rubes  
Leber Rubes Inc.

**Agents for the Applicant**

Mr. Anthony Krimmer  
Chief Building Official  
City of Waterloo

**The Respondent****RULING****1. The Applicant**

Mr. Stephen Roth, General Manager, Waterloo Stage Theatre, is a person who has applied for a permit under the *Building Code Act, 1992* to renovate an existing 500 seat cinema for live theatre productions. The building is 1 storey with a partial mezzanine at one end that had previously been used as a projection booth and a small basement for mechanical equipment. The building contains a fire alarm system and has sprinklers servicing the stage area.

**2. Description of Construction**

The proposed renovation would erect a new stage. Across the rear portion of the stage would be a small open mezzanine space. The seating capacity would be reduced to 252. Some modifications are to be made to the existing projection booth to allow for light and sound control.

**3. Dispute**

The issue under dispute between the Applicant and the Respondent is whether the proposed performance area is a stage as defined by the 1990 Ontario Building Code (OBC) and whether the subject area is required to be designed in accordance with OBC Article 3.3.2.13.

**4. Provisions of the Building Code****3.3.2.13. Stages for Theatrical Performances**

1. Stages for theatrical performances and ancillary spaces, such as workshops, dressing rooms and storage areas shall be *sprinklered*.

2. A *fire separation* with a *fire-resistance rating* of not less than 1 h shall be provided between every stage for theatrical performances and ancillary spaces, such as workshops, dressing rooms and storage areas.

3. Every *stage* for theatrical performances and ancillary spaces, such as workshops, dressing rooms, and storage areas, shall be separated from the seating space by a *fire separation* having a *fire-resistance rating* of not less than 1 h, except for a proscenium opening which shall be protected with

- (a) a sprinkler deluge system conforming to the requirements of paragraph 4-4.20 of NFPA 13 "Standard for the Installation of Sprinkler Systems",
- (b) an unframed fire curtain when the opening is not more than 20 m (65 ft 7 in) wide, or
- (c) a semi-rigid fire curtain when the opening is more than 20 m (65 ft 7 in)

4. Every fire curtain as required by Sentence (3) shall be designed to close

- (a) automatically by heat-actuated devices,
- (b) automatically upon the actuation of the sprinkler system,
- (c) automatically upon the actuation of the fire alarm system, and
- (d) manually by remote control devices located at the curtain control panel and at each side of the stage.

5. Not less than 2 vents for the purpose of venting fire and smoke to the outside of a *building* shall be provided above every stage designed for theatrical performances and shall

- (a) have an aggregate area of not less than one eighth of the area of the stage behind the proscenium opening, and
- (b) be arranged to open automatically by means of
  - (i) heat-actuated devices, or
  - (ii) actuation of the sprinkler system.

#### **1.1.3.2. Definitions of Words and Phrases**

*Stage* means a space designed primarily for theatrical performances with provision for quick change scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects and which is traditionally, but not necessarily, separated from the audience by a proscenium wall and curtain opening.

#### **5. Applicant's Position**

The Applicant submitted that the performance area of the Waterloo Stage Theatre does not meet the OBC definition of a stage. Accordingly, they believe the provisions of Article 3.3.2.13. should not apply. This view is based on the fact that while the subject stage does include lighting equipment, it does not contain facilities to provide quick change scenery, especially side stages, a fly tower and accompanying equipment. The lack of these facilities means that ancillary space is limited and any fire would be quite noticeable by the audience. Further, the exit capacity is approximately double the occupant load, the

farthest travel distance is 20 m, and the stage is currently sprinklered.

## 6. Chief Building Official's Position

The Respondent submitted that the proposed performance area should be considered a stage under the OBC and therefore should be designed to meet the full requirements of Article 3.3.2.13. As a result the stage should include 1 h rated proscenium opening, either a "fire curtain" or deluge sprinkler system, and a fire and smoke venting system.

## 7. Commission Ruling

It is the decision of the Building Code Commission that the stage provides sufficiency of compliance to the requirements of the Building Code provided:

1. quick response sprinklers are installed over the stage and ancillary areas,
2. smoke detection, connected to an alarm system, is installed over all stage areas including the ancillary room at the rear of the stage and below the mezzanine area, and
3. the area under the stage is sealed such that it cannot be used for storage.

## 8. Reasons:

1. The theatre, stage and back of the house areas are of limited size.
2. The theatre has limited seating capacity.
3. A sprinkler system will be provided.
4. Adequate exits will be provided.
5. The maximum travel distance does not exceed 20 m.
6. There are no provisions for quick change scenery or fly towers, which limits the combustible load on the stage.

Dated at Toronto this 28th day in the month of May in the year **1997** for application number **1997-19**.

Michael Lio, Chair  
Susan Friedrich  
Ross Thomson

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## BCC Ruling No. 00-38-770

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### **BUILDING CODE COMMISSION DECISION ON B.C.C. # 00-38-770**

**IN THE MATTER OF** Subsection 24 (1) of the Building Code Act, 1992.

**AND IN THE MATTER OF** Articles 1.1.3.2. and 3.3.2.12 of Regulation 403, as amended by O. Reg. 22/98, 102/98, 122/98, 152/99, 278/99, 593/99, 597/99 and 205/00 (the "Ontario Building Code").

**AND IN THE MATTER OF** an application by Mr. Franco Lora, Project Coordinator, City of Toronto, Economic Development, Culture & Tourism, Toronto, Ontario, for the resolution of a dispute with Mr. Yaman Uzumeri, Chief Building Official, City of Toronto, Ontario, to determine whether the proposed elevated platform should be considered a stage and must therefore comply with Article 3.3.2.12. of the Ontario Building Code at the Lakeshore Grounds Assembly Hall, 3121 Lakeshore Blvd. West, Toronto, Ontario.

### **APPLICANT**

Mr. Franco Lora, Project Coordinator  
Economic Development, Culture & Tourism, City of Toronto  
Toronto, Ontario

### **RESPONDENT**

Mr. Yaman Uzumeri  
Chief Building Official  
City of Toronto

### **PANEL**

Dr. Kenneth Peaker, Chair  
Mr. Michael Steele  
Mr. Donald Pratt

### **PLACE**

Toronto, Ontario

### **DATE OF HEARING**

August 10th, 2000



**DATE OF RULING**

August 10th, 2000

**APPEARANCES**

Mr. David Hine, Principal  
Hine Reichard Tomlin Inc.  
Toronto, Ontario

**Agent for the Applicant**

Mr. Sait Toprak  
Manager, Plan Examination  
City of Toronto

**Designate for the Respondent****RULING****1. The Applicant**

Mr. Franco Lora, Project Coordinator, City of Toronto, Economic Development, Culture & Tourism, Toronto, Ontario, has received a building permit under the Building Code Act, 1992 and is currently constructing an addition onto, and renovating the interior of, a facility known as the Lakeshore Grounds Assembly Hall, 3121 Lakeshore Blvd. West, Toronto, Ontario.

**2. Description of Construction**

The building at issue is an existing community centre that is described as two storeys in building height, 740 m<sup>2</sup> in building area, facing one street and is of combustible construction. (The new construction will be of noncombustible material.) The existing structure contained meeting rooms for a variety of purposes and a multipurpose room and was classified as having a Group A - Division 2 major occupancy. As part of the renovations currently underway, the multipurpose room is being converted into a multiuse assembly hall that can accommodate dances, lectures and theatrical events. This portion of the building is classified as having a Group A - Division 1 occupancy.

The completed facility will be equipped with a sprinkler system and a single stage fire alarm system.

The construction in dispute involves the renovation of the multipurpose assembly hall, specifically the proposed addition of a raised platform to be constructed at the south end of the hall. This platform will serve as the area upon which theatrical performances, lectures and speeches will occur. To enhance the viewing of these activities on the platform, telescopic seating is proposed to be installed in approximately the northern half of the hall facing the platform. The platform area is 78.5 m<sup>2</sup>, the curtain area (at 6.6 m in width and 4.5 m in height) is approximately 30 m<sup>2</sup> and the ceiling height is 6 m, as measured from the platform. It does not include a fly tower above nor a backstage area. As well, the platform area, as is the case for the rest of the building, will be sprinklered, but the Applicant does not intend to equip the proscenium opening with a fire curtain nor a sprinkler deluge system.

**3. Dispute**

The issue at dispute between the Applicant and Respondent is whether the proposed elevated platform should be considered a stage and must therefore comply with Article 3.3.2.12. of the Ontario Building Code.

This provision sets out certain fire safety requirements for stages used for theatrical performances that address the greater hazard associated with the production of theatrical performances such as increased fire load and overhead lighting. It includes requirements to sprinkle the stage (Sentence (1)), to provide a 1 hour fire separation between the stage and its ancillary spaces (Sentence (2)), to provide a 1 hour separation between the stage (including ancillary spaces) and the seating area and, to maintain this separation at the proscenium opening, to install a fire curtain or a sprinkler deluge system (Sentence (3)), and to provide at least two vents (Sentence (5)). These provisions, however, obviously only apply when a stage is involved. In order to ascertain if the requirements of Article 3.3.2.12. apply, it must be determined whether the raised platform is a stage.

#### **4. Provisions of the Ontario Building Code**

##### **Article 1.1.3.2. Defined Terms - Stage**

Stage means a space designed primarily for theatrical performances with provision for quick change scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects and which is traditionally, but not necessarily, separated from the audience by a proscenium wall and curtain opening.

##### **Article 3.3.2.12. Stages for Theatrical Performances**

1. A stage for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas, shall be sprinklered.
2. A fire separation with a fire-resistance rating not less than 1 h shall be provided between a stage for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas.
3. Except as permitted by Sentence (6), a stage for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas, shall be separated from the seating area by a fire separation having a fire-resistance rating not less than 1 h, except for a proscenium opening protected with
  - a. a sprinkler deluge system conforming to the requirements of NFPA 13 ?Standard for the Installation of Sprinkler Systems?,
  - b. an unframed fire curtain if the opening is not more than 20 m (65 ft 7 in) wide, or
  - c. a semi-rigid fire curtain if the opening is more than 20 m (65 ft 7 in) wide.
4. A fire curtain required by Sentence (3) shall be of a type designed to close
  - a. automatically upon the actuation of the sprinkler system,
  - b. automatically upon actuation of the fire alarm system,
  - c. manually by remote control devices located at the curtain control panel and at each side of the stage, and
  - d. automatically by heat-actuated devices.
5. At least 2 vents for the purpose of venting fire and smoke to the outside of a building shall be provided above a stage designed for theatrical performances and shall
  - a. have an aggregate area not less than one eighth of the area of the stage behind the proscenium opening, and
  - b. be arranged to open automatically upon actuation of the sprinkler system.
  - c. The fire separation referred to in Sentence (3) is not required between a stage and a seating area in a

floor area that is sprinklered, provided a sprinkler deluge system is installed at the boundary between the stage and the seating area.

## 5. Applicant's Position

The Agent for the Applicant submitted that the proposed raised platform does not meet the definition of stage as set out in the OBC. He argued that the platform is simply an elevated area that is to be used as the focal point of the room and is raised to enhance the viewing of activities that will occur in the hall. He noted that the platform does not have a fly tower nor a backstage area. Moreover, since at least approximately 85 percent of the platform is visible from the seating area there is also very little in the way of wing space at the sides of the platform. Because of these limitations, the facility is not capable of accommodating productions that include large moveable scenery that may have a high combustible load.

The Agent then stated that Article 3.3.2.12. and its stage requirements, in his view, is intended to apply to large theatres such as the Princess of Wales Theatre in Toronto and others of its size. As he argued, OBC 3.3.2.12. deals with large stages that have the capacity for quick change scenery for which a fly tower is necessary. Such theatres also have large combustible loads, are equipped with sophisticated lighting systems and they are able to produce many complicated visual effects. This is not the case with the subject building, the Agent noted.

The Agent continued by stating that the hall is a multipurpose space and is not specifically designed for theatre productions. He noted that the seating can be folded up and the space can be used for athletic activities like fitness classes or for weddings, etc. The hall, the Agent added, is "reminiscent of a high school (auditorium) stage or a gymnasium with a stage", or even a raised sanctuary in a church. Larger theatres, on the other hand, are not multipurpose as such and are designed specifically for musicals and full-sized stage shows which have greater potential for higher fire risk. Accordingly, facilities that specialize in large theatrical productions must be built to higher building standards to reflect the level of associated hazard. The OBC, in particular Article 3.3.2.12., addresses this.

The key, however, is knowing how to differentiate between a stage and a raised platform and when to apply Article 3.3.2.12., the Agent stated. And to differentiate requires a certain level of judgement of Code requirements based on the circumstances at hand. It is because of the requirement to make a judgement, the Agent argued, that there are many facilities across the City and the Province that have a "stage"-like platform but have not been required to meet OBC 3.3.2.12. To require this in the building at hand would be onerous.

The Agent then discussed NFPA 101, the "Life Safety Code" standard, as a means by which some light might be shed on this situation. This standard, he indicated, separates stages into two main categories; legitimate stages where the height from the stage surface to the ceiling above it is more than 15.2 m (50 ft), and regular stages where the height is less than 15.2 m (50 ft). This standard provides higher requirements for legitimate stages than for regular stages. The requirements for legitimate stages are more in line with those in Article 3.3.2.12., he noted. Thus, since the "stage" to ceiling height is 6 m, he asserted that the hall should not be considered a legitimate stage subject to higher construction standards.

The building, especially the hall, is receiving some physical improvements as a result of the renovation work they are doing, the Agent indicated. For example, the "stage" area is being equipped with a mechanical exhaust system that is capable of six air changes per hour to vent smoke. As well, two, and in some areas three, additional layers of drywall are being added to the ceiling of the platform space. Also, the building is being fully sprinklered throughout.

In response to the question that the hall provide a guarantee that it only be used as a theatre on a limited

basis, the Agent stated that it should not have to offer such a restriction because the facility is not capable of accommodating bigger and potentially more dangerous productions.

In summation, the Agent reiterated his view that the platform should not be considered as a stage. It does not meet the Code's definition as a stage, especially because it lacks the capacity for quick change scenery. Consequently, he concluded that the requirements for a stage found in Article 3.3.2.12. do not apply.

## **6. Respondent's Position**

The Designate for the Respondent submitted that the elevated platform should be considered a stage and it should be built in conformance with Article 3.3.2.12. He then proceeded to offer some background to the present dispute.

The Designate noted that the application for permit originally came in, in part, as a change of use from an A2 general use assembly building to an A1 occupancy to be used for performing arts. It was as an A1 occupancy that the building was reviewed. This change required that the building be sprinklered because the existing building is of combustible construction, and if it were built new would be required to be of noncombustible material. As a result, however, the sprinkler system cannot be seen as a compensating measure for the items mandated in Article 3.3.2.12.

The Designate then argued that it is clear that the hall will be used primarily for staging theatrical performances. And while full scale productions cannot be housed in the space, there will certainly be productions that will involve props, thus resulting in an increased fire load. Indeed, it doesn't matter how small the production is, the scenery can contribute to a high combustible load, he asserted. Moreover, since it is anticipated that the building will be rented out to any interested party, professional or non-professional, to use for their productions, there will be very little control over the space and its use. This could mean, the Designate argued, that the hall could be used by individuals who have little or no experience in terms of theatre fire safety. Also, there will be no control over how many times the building is used for theatrical events. As it stands, it could be used every night for such purposes and the more times it is, the greater the risk of a fire occurring.

The Designate explained that the proponents are spending a considerable amount of money to make the building conducive for performing arts, but, in his view, they are not willing to pay what is required to meet OBC 3.3.2.12.

In conclusion, the Designate expressed concern regarding the safety of the stage if the requirements of Article 3.3.2.12. are waived. He stated that as an A1 building to be used for performing arts, the stage must be separated by a one hour fire separation, except for the proscenium opening which must be protected with a deluge sprinkler or a fire curtain.

## **7. Commission Ruling**

It is the decision of the Building Code Commission that the proposed elevated platform is not considered a stage and therefore does not need to comply with Article 3.3.2.12. of the Ontario Building Code at the Lakeshore Grounds Assembly Hall, 3121 Lakeshore Blvd. West, Toronto, Ontario.

## **8. Reasons**

1. The construction is considered to be a raised platform in a multipurpose facility.
2. The subject platform area does not provide for quick change and storage of scenery, etc.

Dated at Toronto this **10th**, day in the month of **August** in the year **2000** for application number **2000-45**.

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Dr. Kenneth Peaker, Chair

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Mr. Michael Steele

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Mr. Donald Pratt

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**- LAST MODIFIED:FRIDAY, OCTOBER 1, 2010**



Ontario

Ruling No. 10-03-1239  
Application No. B-2009-39

## BUILDING CODE COMMISSION

**IN THE MATTER OF** Subsection 24(1) of the *Building Code Act*, S.O. 1992, c. 23, as amended.

**AND IN THE MATTER OF** with Article 3.3.2.12 of the Regulation 350/06, as amended,  
(the Building Code).

**AND IN THE MATTER OF** an application by Rocky Varcoe, 1570789 Ontario Ltd., Park Playhouse and Performing Arts Centre, for the resolution of a dispute with Frank Lukes, Chief Building Official, to determine whether the proposal to not sprinkler the performance area of the subject performing arts centre provides sufficiency of compliance with Article 3.3.2.12. of Division B of the Building Code, when considering the definition of a "stage" as defined in Division A of the Building Code at the Performing Arts Centre, 60 King Street East, Town of Cobourg, Ontario.

<b>APPLICANT</b>	Rocky Varcoe 1570789 Ontario Ltd Town of Cobourg, ON
<b>RESPONDENT</b>	Frank Lukes Chief Building Official Town of Cobourg, ON
<b>PANEL</b>	Tony Chow, Chair Marina Huissoon Gerry Egberts
<b>PLACE</b>	Toronto, Ontario
<b>DATE OF HEARING</b>	January 21, 2010
<b>DATE OF RULING</b>	January 21, 2010
<b>APPEARANCES</b>	Rocky Varcoe 1570789 Ontario Ltd Cobourg, ON <b>The Applicant</b>
	Frank Lukes Chief Building Official Town of Cobourg <b>The Respondent</b>

## RULING

### 1. Particulars of Dispute

The Applicant has received a permit under the *Building Code Act, 1992*, to renovate an existing building at Park Playhouse and Performing Arts Centre, 60 King Street East, Town of Cobourg, Ontario

The subject building is a one storey, Group A, Division 1 building, comprised mostly of non-combustible construction, however a small portion of the building is combustible. The structure has a building area of 769 m<sup>2</sup> and is equipped with a fire alarm system but has no sprinkler or standpipe and hose system. The existing building was built circa 1940 and used as a movie theatre for over 40 years. In the mid 1990's the theatre was converted to a bar having an elevated dance floor in the area previously occupied by the movie screen. The former elevated dance floor is now proposed to be used as a stage for the purpose of holding live performances. The stage has a floor area of approximately 135 m<sup>2</sup>. It is the "stage" that is the subject of the dispute before the Commission.

The dispute revolves around the application of the definition of "stage" as provided by Article 1.4.1.2. of Division A of the Building Code and associated with it, the provisions of Division B, outlined in Article 3.3.2.12., "Stages for Theatrical Performance". More specifically, at dispute is whether the sprinklering requirements outlined in Article 3.3.2.12. are applicable to the subject "stage" in question and whether the proposal not to sprinkler the performance area or "stage" sufficiently complies with the Building Code.

### 2. Provisions of the Building Code in Dispute

#### Division A, 1.4.1.2. Defined Terms

**Stage** means a space that is designed primarily for theatrical performances with provision for quick change scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects, and that is traditionally, but not necessarily, separated from the audience by a proscenium wall and curtain opening.

#### Division B, 3.3.2.12. Stages for Theatrical Performances

(1) A *stage* for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas, shall be *sprinklered*.

(2) A *fire separation* with a *fire-resistance rating* not less than 1 h shall be provided between a *stage* for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas.

(3) Except as permitted by Sentence (6), a *stage* for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas, shall be separated from the seating area by a *fire separation* having a *fire-resistance rating* not less than 1 h, except for a proscenium opening protected with,

- (a) a sprinkler deluge system conforming to the requirements of NFPA 13 "Installation of Sprinkler Systems",
- (b) an unframed fire curtain if the opening is not more than 20 m wide, or
- (c) a semi-rigid fire curtain if the opening is more than 20 m wide.

- (4) A fire curtain required by Sentence (3) shall be of a type designed to close,
- (a) automatically upon the actuation of the sprinkler system,
  - (b) automatically upon actuation of the fire alarm system,
  - (c) manually by remote control devices located at the curtain control panel and at each side of the *stage*, and
  - (d) automatically by heat-actuated devices.
- (5) At least 2 vents for the purpose of venting fire and smoke to the outside of a *building* shall be provided above a *stage* designed for theatrical performances and shall,
- (a) have an aggregate area not less than one eighth of the area of the *stage* behind the proscenium opening, and
  - (b) be arranged to open automatically upon actuation of the sprinkler system.
- (6) The *fire separation* referred to in Sentence (3) is not required between a *stage* and a seating area in a *floor area* that is *sprinklered*, provided a sprinkler deluge system is installed at the boundary between the *stage* and the seating area.

### 3. Applicant's Position

The Applicant submitted that the subject building was converted to a bar in the 1990's and that the subject performance area or "stage" was used to host live musical performances and as a dance floor. The Applicant explained that the building had subsequently been abandoned and therefore, was now in need of decorative updating and renovations to use the building as a performing arts center.

The Applicant submitted that the platform in question does not meet the definition of "stage" provided by the Building Code, as the subject stage does not have "the provision for quick change scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects", which are essential criteria for the performance area to be considered a "stage" as defined by the Code.

The Applicant described the stage as being 86% open and visible to the audience, containing no grand wing space, for quick change scenery. He explained that at each side of the stage was a relatively small space of about 1.2 x 3.6 m and provided a very limited space for quick change scenery. Elaborating on the description of the performance area, the Applicant added that the stage was not equipped with a curtain or screen and contained a low fire load when scenery was fixed on stage and that the combustible materials on stage was limited to the paint used on the flats, props, tables and other furniture. In response to questions, the Applicant explained that there were no rooms or area behind the stage for performers to use or change in and that in fact, performers changed in the neighbouring building when required. The Applicant noted that due to the limited space available in order to accommodate quick change scenery, a building permit would be required to have the building and stage extended.

The Applicant stated that the types of performances that would most commonly take place on the subject stage were musical bands, comics, and amateur theatre productions. In response to questions, the Applicant advised that previously the subject building had an occupant load of 560 people but currently has an occupant load of approximately 400 people.

In summary, the Applicant maintained that in his opinion the subject performance area is not considered a "stage" as defined by Division A of the Building Code and therefore, the requirement to sprinkler the subject performance area is not applicable in this case.



#### **4. Respondent's Position**

The Respondent submitted that the existing raised area described as the performance area is to be used primarily for live theatrical performances and in his opinion, falls within the scope of the definition of "stage" provided in Division A of the Building Code. The Respondent submitted that the subject stage, being used for live performances was also equipped with overhead lighting, and having considered the definition of "stage" in the Building Code, must conform to the requirements of Division B, Article 3.3.2.12.

The Respondent explained that the stage area does not have a sprinkler system and therefore, does not achieve compliance with the requirements for Article 3.3.2.12. The Respondent submitted that Article 3.3.2.12. stipulates a variety of fire safety measures for "stages", including sprinklers to mitigate the increased fire hazards associated with scenery and lighting arrangements, thereby, affording protection to the viewing audience and other building occupants.

In summary, the Respondent submitted that the performance area was indeed considered a "stage" as defined by the Code and further, the proposal not to sprinkle the stage would not be in conformance with Article 3.3.2.12. of Division B of the Code, which was an applicable Code requirement in this case.

#### **5. Commission Ruling**

It is the Decision of the Building Code Commission the proposal to not sprinkle the performance area of the subject performing arts centre provides sufficiency of compliance with Article 3.3.2.12 of Division B of the Building Code, when considering the definition of a "stage" as defined in Division A of the Building Code at the Performing Arts Centre, 60 King Street East, Cobourg, Ontario.

#### **6. Reasons**

- i) Article 1.4.1.2. of Division A of the Building Code defines stage as "a space that is designed primarily for theatrical performances with provision for quick change scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects, and that is traditionally, but not necessarily, separated from the audience by a proscenium wall and curtain opening". It is the Commission's opinion, based on the testimony and submissions made by the parties, that the performance area is a "stage" as defined by the Code.

Article 3.3.2.12. of the Building Code requires that a "stage" for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas, be sprinklered. The subject performance area does not have the fire load that is associated with the activities and occupancies described in the Building Code's definition of "stage". As a result, the requirements of Article 3.3.2.12. of Division B of the Building Code are not applicable in this case.

Dated at Toronto this 21<sup>st</sup> day in the month of **January** in the year **2010** for application number **B-2009-39**.

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Tony Chow, Chair

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Marina Huissoon

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Gerry Egberts

August 13, 2019

AAA Project No. 1748.02

Township of Southgate  
185667 Grey County Road 9, RR#1  
Dundalk, Ontario  
N0C 1B0

**Attn: Dave Milliner, CAO**

**Re: Part B - Comprehensive Report  
Building Assessment and Feasibility Study  
Dundalk Olde Town Hall, 80 Main Street East, Dundalk**

Dear Mr. Milliner

The Part "A" - Brief Report for the Building Assessment and Feasibility Study of Dundalk Olde Town Hall was submitted 24-Jul-2018.

Attached is the follow up, Part "B" - Comprehensive Report as authorized 25-Apr-2019. This concludes the Report Phase of the Project.

We would like to express our interest in providing future services for the Township of Southgate. We are now equipped with detailed information related to the Dundalk Olde Town Hall, putting us in a excellent position to assist with designs, documents, bidding and construction phase services, as portions of the Implementation Plan are carried out.

Please contact us with any questions or comments you may have about the report and to let us know if we may be of further assistance.

Yours truly



*Allan Avis* architects inc.

Allan Avis  
B Arch, OAA, MRAIC, CAHP

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## Table of Contents

Executive Summary .....	3
Purpose of this Report .....	4
Report Mandate .....	4
Report General Notes .....	5
Brief Building History .....	6
Heritage Designation .....	6
Current Building Size and Uses .....	7
Structure .....	8
Masonry .....	11
Roofing .....	13
Door, Windows & Louvres .....	14
Thermal .....	15
Building Site .....	15
Building Interiors .....	16
Accessibility .....	18
Life Safety Systems .....	19
Hazardous Building Materials .....	19
Electrical .....	20
Mechanical .....	21
Building and Fire Code Compliance with Existing Uses .....	22
Implementation Plan .....	24
Summary of Cost for Implementation Plan by Priority .....	25
Priority No. 1 Recommendations	
Current and Critical - Immediate .....	26
Priority No. 2 Recommendations	
Potentially Critical - Year 1 .....	28
Additional Priority No. 2 Work to Allow for Occupancy of 2 <sup>nd</sup> Floor .....	28
Priority No. 3 Recommendations	
Necessary, But Not Yet Critical - Years 2 to 5 .....	30
Priority No. 4 Recommendations	
Years 6 to 10 .....	31
Priority No. 5 Recommendations	
Discretionary .....	32
Appendix A .....	33
Appendix B .....	34

## Executive Summary

The Olde Town Hall building is generally in reasonable condition for a building of its age. The building will require a range of building enclosure maintenance and repair work, including site drainage, foundations, above-grade masonry, flat roofing replacement, building structure reinforcing and painting of windows and doors. Building interiors could benefit from finish upgrades. A significant increase in toilets is required to serve the building's population, especially if use of the assembly hall is to be reactivated. At the outset, a hazardous building materials survey is required to comply with Provincial Regulations.

It is uncommon for an existing building, especially one that is 113 years old, to be updated to fully comply with current Codes. Codes recognize this dilemma and have generally adopted "reasonable accommodation", "compliance alternatives" and "acceptance by authority" as a means of finding a reasonable balance of public safety, owner risk, limitations presented by existing conditions, practicality of implementation and retention of heritage building fabric.

Although the 2<sup>nd</sup> Floor performance hall has historically been referred to as a "theatre", it is not a "theatre" as defined in the Ontario Building Code. This matter is discussed in detail, later in this report.

For the Olde Town Hall building, life-safety systems must be installed and/or upgraded for Code compliance and to satisfy the standing 2013 Fire Safety Inspection Report, which resulted in closing the 2<sup>nd</sup> Floor performance hall. The work will involve adjustments in space use, installation of fire separations, early warning and evacuation systems and introduction of a new ventilation system and/or air conditioning system. Existing fire escapes, from 2<sup>nd</sup> Floor, require replacement. A building-wide fire sprinkler is recommended as a compliance alternative to basic prescriptive Code measures. A sprinkler system provides for fire suppression, containment and a significantly enhanced level of occupant and property protection.

The existing building cannot be considered as barrier-free and accessible. Accessibility is a legislated requirement and a necessity for a civic facility. It is recommended that the existing exterior ramp be replaced and new, properly sized and equipped access doors be provided into and throughout occupied spaces. Doors throughout the building require enlarging and installation of appropriate hardware. At least one universal washroom is required. A passenger elevator will be required to provide proper, dignified access to the 2<sup>nd</sup> Floor performance hall. The size and configuration of interior spaces seriously limits the feasibility of installing an elevator inside the existing building. An elevator is most likely to involve constructing a hoistway addition.

Furthermore, incorporating changes to address interior circulation, accessibility and washrooms, will occupy a significant portion of the 1<sup>st</sup> Floor, thereby reducing space available for tenants. This will bring the discussion regarding nature of building uses and occupancies to the forefront.

The cost to preserve, maintain and upgrade the building is significant. Recommended and anticipated work, identified in the Implementation Plan, concludes that the general magnitude of construction cost will be approximately \$3.3M, not including Priority No. 5 - Discretionary work items. Approximately half of the estimated costs is directly related to reopening the 2<sup>nd</sup> Floor performance hall.

Prorated over the existing 6,340 sq.ft. of useable floor area, the budget cost is approximately \$521/sq. ft. As high as this cost is, it is not outrageous in today's renovation construction market and it is possible to rationalize this level of investment in an existing, quality property that is highly utilized and holds special value to the community.

### **Purpose of this Report**

In this Study, the building will be considered “infrastructure” and the existing occupancies will be considered “tenants”.

The purpose of this Study is to review existing building infrastructure to assess its general condition and to report our observations, analysis and recommendations, for various building systems, for continued use of existing occupancies at 1<sup>st</sup> Floor and reinitiating operation of 2<sup>nd</sup> Floor performance hall.

For the purposes of this Study, the wall facing Main Street East is considered to face south.

### **Report Mandate**

The contracted mandate for previously submitted PART “A” Report states:

*Architect, only, will conduct a preliminary visual review of the existing building infrastructure to assess its general condition. The visual review will be executed from grade level and from interior floor levels. No elevated platform access is anticipated.*

*A Brief Report will be prepared following the site visit, consisting of observations, analysis and recommendations, regarding the following building systems:*

- ▶ *Building enclosure (walls, windows, doors and roofing)*
- ▶ *Interior finishes*
- ▶ *Life safety systems*
- ▶ *Accessibility*
- ▶ *General impression of building structural, mechanical and electrical systems*
- ▶ *Building Code compliance of building for existing uses*
- ▶ *Fire Code work orders*
- ▶ *Budget construction costs for recommendations*

PART “A” Report was submitted on 24-Jul-2018 and was presented at a public meeting on 25-Sep-2018.

PART “B” - Comprehensive Report was authorized 25-Apr-2019. The contracted mandate for PART “B” Report states:

*Subject to additional authorization, if the Part “A” report determines that detailed engineering reviews are warranted, then Structural, Mechanical and Electrical Engineers will conduct a site visit to review respective building systems. Individual Engineering reports will be provided and combined within Brief Report revisions to produce a more detailed, Comprehensive Report.*

*Approach and Methodology includes:*

- ▶ *Site visit #2 for Architect and Engineers, to review existing building and site conditions;*
- ▶ *Prepare first draft of Comprehensive Report with expanded observations and discussion, incorporating same provided by Engineering consultants and updated estimate of construction costs;*
- ▶ *Email draft of Comprehensive Report to Committee for review and comments;*
- ▶ *Incorporate revisions and issue final draft of Comprehensive Report; and*
- ▶ *Present Comprehensive Report to Municipal Council.*

This document, is the Part “B” Comprehensive Report.

### Report General Notes

In addition to PART "A" site visit on 14-Jun-2018, a second, PART "B" site visit was conducted 08-May-2019, involving Structural, Mechanical and Electrical Engineering reviews and localized invasive testing of sample areas of exterior brick masonry walls. Visual reviews and invasive testing were executed from grade level and from interior floor levels. No elevated platform access was involved.

Codes frequently referenced in this report include:

OBC            2012 Ontario Building Code (current issue)  
1986 OBC      1986 Ontario Building Code, that is directly referenced in the OFC  
OFC            2007 Ontario Fire Code



Town Hall in its early years. Note the 2<sup>nd</sup> floor addition above entry porch is not present.



2018 photograph of Town Hall.

### **Brief Building History**

Dundalk Olde Town Hall, located at 80 Main Street East in Dundalk, was constructed in 1905. The one-storey addition at the north end of the building was constructed during the mid-1900s and has been used by the fire department and later by police services until 1963. The belfry was removed in 1964 and was subsequently replicated and reinstalled in 1982.

The following, previously prepared documents were reviewed as part of the report process:

- ▶ History of Dundalk Town Hall 1905-2005 booklet, published by the Olde Town Hall Board of Management,
- ▶ Building Condition Assessment (Initial Report) for the Olde Town Hall, prepared by Facilities Manager Kevin Green, dated 2013,
- ▶ Fire Safety Inspection Report, prepared by John Thompson of the Dundalk Fire Department, dated 10-Dec-2013,
- ▶ Dundalk Olde Town Hall Inspection report, by RV Anderson Associates Limited, dated 16-May-2014,
- ▶ Dundalk Olde Town Hall Renovation Task Force Report, prepared by Facilities Manager Kevin Green, dated 2014,
- ▶ Facilities Comprehensive Inspection Report, prepared by Facilities Manager Kevin Green, dated 10-Dec-2015,
- ▶ Dundalk Olde Town Hall Renovation Report 2017, prepared by Facilities Manager Kevin Green, dated 2017.

### **Heritage Designation**

The Village of Dundalk designated the Dundalk Olde Town Hall as being of architectural and historical interest in By-Law 1040, dated 21-May-1987.

In the By-Law, Dundalk Town Hall is recommended for designation

*“for architectural reasons, as it is an early example of rural public design; skillfully constructed using local craftsmanship. Historically, the building has served as a focal point for activities, and as a civic symbol for more than eighty years, being built in 1905.”*

Any work at the site should be respectful of the designation and will require review by the local Heritage Committee.



**Current Building Size and Uses**

Floor Level	Approximate Gross Floor Area sq.ft. (m <sup>2</sup> )	Existing Occupant Load (Persons)	Use
Balcony	550 (51.1)	68	OBC Group A2 Assembly Occupancy. Balcony with 68 fixed seats.
2 <sup>nd</sup> Floor	2,705 (251.3)	147	OBC Group A2 Assembly Occupancy. Performance hall with 147 fixed seats, elevated performance platform, at north end, and control booth/storage at south end. Second Floor "theatre" is original to the building but has had some renovations and upgraded seating in past years.
1 <sup>st</sup> (Main) Floor	3,300 (306.6)	25 8 6	Two leased tenancies, roughly subdivide the east and west halves of the original building floor area: OBC Group A2 Assembly Occupancy, in the east half floor, is a childcare provider at 30 sq.ft. (2.8 m <sup>2</sup> ) per child (or license limit) of unobstructed floor area; and OBC Group D Personal Services Occupancy, in the west half, is an office occupancy (Community Care Access Centre), at 100 sq.ft. (9.3 m <sup>2</sup> ) per person. The one-storey northern addition is currently unoccupied. It was last used for a Personal Services Occupancy at 100 sq.ft. (9.3 m <sup>2</sup> ) per person. This floor area is approximately 16" lower than the main floor elevation. Two, single occupant public washrooms are accessible to all three 1 <sup>st</sup> Floor tenant suites and also have secured direct access to the side street.
Basement	2,485 (230.9)	0	Unfinished basement provides unoccupied space for utilities and storage.
Total	9,040 (839.8)	254	

Building dimensions and area calculations are approximate and are based on preliminary, on-site recording of dimensions. Detailed measurements are required to verify accurate floor area calculations and structural support systems. Change in use may result in a change in occupant load.

### Structure

A structural assessment was conducted by Pow Peterman Consulting Engineers on 08-May-2019. Their detailed report is provided in Appendix A. Below is a blend of Pow and AAA observations and recommendations regarding the building's structure.

The original brick Town Hall building follows the form, character, material use and structural system, typical of Southern Ontario civic buildings from the turn of the last century.

Visually, from the exterior, wall and roof lines appear to be true, straight and plumb, suggesting the structural "bones" of the building have stood the test of time. As with most buildings of this age, portions of interior structures (bearing walls, beams and columns) have been subject to modification throughout the years.

Three riveted steel trusses support the wood roof structure above the performance hall. The steel trusses are original to the building. Placement of truss bearing plates, at exterior brick walls, is unusual in that steel components are visible at building exterior and some truss bearing points are located directly over window openings. Normally, main frames or trusses bear over substantial sections of walls, often reinforced with buttress piers. There is no indication that spreader-beams or oversized bearing plates are provided at bearing points above wall openings. Installation of such structural elements is recommended to properly distribute point loads into the masonry wall structure.

Steel truss - red circles highlight bearing points over windows.



Attic above auditorium, looking north.



Ends of steel trusses are visible at building exterior. Note that this truss bears directly over wall opening for window.



Performance Hall auditorium with exposed portion of steel trusses at ceiling.

Timber purlins, spanning between trusses and supporting the rafters, are sagged. Purlin ends are butt-jointed and there are checks/cracks at bolted connections between purlins and steel trusses. No collar ties are provided to connect opposing rafters. The ridge is without a ridge board. The roof structure has evidence of historic leaks but no evidence of recent leaks and was dry at the time of our site visits.

It is recommended that the roof structure be reinforced to counter natural aging, provide robust resistance to wind storms and increase capacity for dynamic snow loads. This work will involve sistering new members alongside existing purlins (at approximately at 10 purlins), installation of collar ties and installing screw-fastened clips, to connect rafters to purlins, bolted connectors between purlins and trusses, and upgrading anchorage between roof framing members and masonry walls.

Uni-Strut additional framing members have previously been installed at ceiling structure, above elevated performance platform, to support theatrical lighting fixtures. This support system appears to be effective for the few light fixtures that would commonly be employed for smaller events. More intense use of lighting, rigging, screens and drapes may require structural upgrades.

Should mechanical equipment be introduced to provide ventilation and air conditioning of 2<sup>nd</sup> Floor, additional reinforcing of ceiling and/or roof structures will be required, unless equipment is supported at grade.

The performance hall floor is raked (sloped). The 2<sup>nd</sup> Floor structure, for performance hall and elevated performance platform, has been reinforced with steel beams and columns, bearing on concrete buttress piers at basement. The steel beams are visible above 1<sup>st</sup> Floor ceiling. Joints are welded connections. It appears that structural steel tube (HSS) columns are embedded behind the gypsum board and T&G wood pilasters at 1<sup>st</sup> Floor level. There was no detectable bounce in the floor of the performance hall.



24" deep (white coloured) steel beam spans width of building, supporting 2<sup>nd</sup> floor structure. Yellow beam was added to support failed wood beam directly above.

At one location, approximately centre of the building, a steel beam was installed to straddle between two main-span steel beams, to support an original wood beam that has a significant split/crack. This split was apparently identified during a much earlier structural review.

The wood floor structure, in the front entry foyer, moves under foot traffic, indicating potential deterioration/rot of floor framing. Tracking in of snow, water and salts is the main contributing factor to this area of deterioration. The crawlspace below appears to be shallow and difficult to access. It is anticipated that the floor will have to be removed from above for a detailed review to determine the extent and nature of repairs.

Basement has a poured concrete floor. It has been determined that the 1<sup>st</sup> Floor joists provide the required 100 psf load capacity, however, wood beams supporting joists are deficient in strength, given their spans. At least two of the beams have severe cracks due to shear failure and these beams have rotated. Wood beams are supported at north and south foundation walls and at three intermediate brick piers (measuring approximately 16" x 16"). Beams run north-south direction. It is recommended that these failed beams be replaced as soon as possible and all other beams be reinforced, doing so will address concerns about beams that have been previously compromised by poorly considered penetrations, for mechanical and electrical installations.

Accumulated mortar fines are present at toe of rubble stone foundation wall, throughout the basement. Deterioration of original lime mortar is part of the natural aging process, however, significant accumulation is an indication of excessive moisture migrating through the masonry foundation wall. Counter measures are



presented later in this report to address surface and soil moisture surrounding the building.

Poured concrete buttress piers, at interior of foundation walls, support steel columns that carry the 2<sup>nd</sup> Floor structure. No visible deterioration was noted at concrete piers.

A large cistern occupies the northeast corner of the basement. It is reported that the cistern was the water supply for the fire fighting pumper that was stored on the floor above in the early years of the building. The cistern is constructed with 12" thick poured concrete walls and the cistern floor is approximately 36" lower than the basement floor. The cistern was dry at the time of our site visits.

Concrete buttresses at inside of foundation walls support steel columns at 1<sup>st</sup> Floor.



Basement, looking south.



Northwest basement corner is very damp due to disconnected exterior rainwater leader draining eave gutter. Note the accumulation of mortar fines primarily at toe of foundation wall.

## Masonry

Red coloured bricks, in south (front) wall of Town Hall, may not original. These bricks are larger units of a different colour and texture and that do not match the original coursing nor do they have rowlock brick units.

Face wythe of orange brick is laid in common bond pattern, with rowlock header courses at every sixth course. Brick walls are three wythes thick and all exterior walls are considered to be load-bearing.

Exterior brick at bottom of walls, at south entry lobby, is severely deteriorated with visible efflorescence, void mortar joints, loose brick units and delaminating/deteriorating brick units. The concentration of brick damage at bottom of walls, abutting exterior concrete stair and landing, indicates that water, salt and freeze-thaw cycles are the major contributing factors.



Invasive testing was conducted at south wall of entry lobby, involving removal of a small quantity of brick units. This testing verified that brick is heavy with water content and mortar fragments are damp enough to form a ball. Damp brick and mortar were evident at second wythe of wall, in addition to outer wythe. It is recommended that the outer wythe of brick in this area be removed and replaced with cut stone units or manufactured concrete products that can better tolerate these conditions. A damp-course membrane should be provided between new stone/concrete material and remaining brick masonry, to prevent moisture migration. Chloride-free deicing products are recommended for stairs and landing.

Invasive testing was also conducted at east wall of main building. Generally, invasive testing determined that the masonry wall assembly appears to be structurally competent; brick units were sound and mortar remains resilient.



Observation port at west side of stairs.



Mortar removed from joint is moist enough to clump and hold under hand pressure.



Brick units were heavy with moisture but in reasonable condition.



Exterior brick masonry and mortar generally appear to be in fair to good condition, with the following exceptions:

- ▶ Localized pointing of mortar joints and replacement of spalling brick units is required throughout exterior masonry, for approximately 25% of wall surface area. Lime-rich mortar and reclaimed brick units are recommended for repairs.
- ▶ Masonry arches in south wall have partially failed or settled, resulting in stepped cracks through mortar joints. These conditions represent a structural failure and require repair.
- ▶ Exterior brick at bottom of walls, at south entry lobby, requires removal and replacement with stone or concrete units, as stated above.
- ▶ Brick at south concrete stair and landing also has visible efflorescence. In combination with masonry repairs and replacement at south entry lobby walls, it is recommended that stone or precast concrete units be installed to replace the brick masonry at south wall of landing. Dampproof coursing should be incorporated to restrict migration of chlorides through the replacement masonry.
- ▶ The brick chimney has been previously rebuilt; brick masonry requires repair, once again. It appears that the chimney may be redundant and could be removed to avoid ongoing maintenance. If retained, the three chimney pots could be removed and the chimney capped with membrane underlayment and lead-coated copper cap flashing.

Stone foundation consists of coursed stone units and appears, generally, to be in fair condition. The following foundation work is anticipated and recommended:

- ▶ Pointing of 100% of above-grade mortar joints in foundation walls.
- ▶ Dig test pits adjacent to foundation, at two locations, to verify condition of below-grade stone wall. Pointing of some or all of the foundation wall may be required.
- ▶ Open and foam-filled mortar joints, around basement windows, should be cleaned out and filled with mortar.
- ▶ Remove inappropriately hard and impermeable cement-rich parging, smeared over portions of above-grade stone foundation walls.
- ▶ Partial reconstruction of foundation at north-west corner (near gas meter), may be required, as it has experienced sever erosion due to uncontrolled discharge of downpipes.
- ▶ Stone masonry foundation walls, at basement access areaway in east yard, are in poor condition and will require significant repairs, reconstruction or complete replacement.



Stone foundation wall requires mortar pointing.  
Diagonal steel members, supporting fire escapes, are under structured.



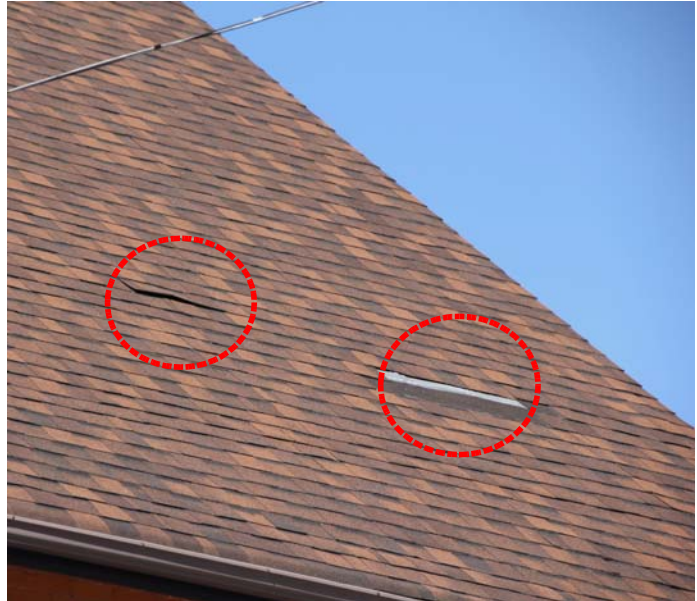
Rainwater leaders are not connected to drain pipe resulting in saturation of wall masonry and deterioration of foundation wall. This area of wall has been subject to previous repairs.

## Roofing

Asphalt shingle roofing, at upper roof, was last replaced in 2009. Shingles are generally lying flat without noticeable granular loss. A few shingles have been pulled from the roof during wind storms, over previous months. Membrane underlayment is visible through gaps in roof sheathing boards in attic. The roof has approximately six mushroom-style vents, near the ridge. Eave venting was not confirmed. Venting of roof space is required to maximize roofing service life. In the absence of wind storms, it is reasonable to expect that the existing shingles could provide between 5 to 10 more years of service life.

Damage resulting from recent wind storms indicates that the asphalt shingle roofing was not installed to high wind installation standards. Future severe wind storms are likely to cause more damage to shingles, increasing the possibility of water penetration to building interiors. Replacement of shingle roofing could be as soon as the next strong wind storm.

Performance of asphalt shingle roofing suggests a typical service life of 12 to 17 years, regardless of manufacture claims and warranties. If the next replacement roofing is also asphalt shingle, it should be installed to high wind application instructions. The underlayment should be carefully inspected after shingle removal to determine if it is competent and can continue in service or if it requires repairs or replacement. Alternative aluminum shingles or metal roofing could be considered, in the future, to provide longer service life, however, the roofing material selection will have to consider that the building is designated.



Some shingles had been blown from the roof and others were lifted, by late winter storms. White colour, visible at absent shingle location, is the membrane underlayment now exposed to the sun.

Painted finish on wood components of belfry has deteriorated, leaving raw wood exposed to elements; repainting is required.

Flat roofing, at south entry lobby, has recently been covered with a rudimentary, single-ply roofing membrane, secured with mechanically fastened perimeter retainer bars. It is reported that this membrane was installed as a stopgap measure to arrest roof leaks through the pre-existing roofing system, which remains below the newer membrane. It is recommended that the existing roofing systems should be removed, new sheathing installed, covered with a commercial grade, 2-ply modified bitumen membrane roofing system.

Rain gutters at eaves are standard, residential grade, 5" K-style aluminum gutters, secured with nails and ferrules. Purpose-made internal brackets, with screw fasteners, are recommended to reinforce gutter anchorage. Soffits are prefinished aluminum. Gutters require periodic cleaning and regular maintenance.

Rainwater downpipes should be replaced and reconfigured to prevent splashing onto walls. Downpipes should be checked for splits and leaks. Ideally, the downpipes should discharge to a storm sewer, via in-ground pipe system, if allowed by the Municipality, or have suitable surface drainage systems to flow water to the street. This may be a challenge in the west driveway, between buildings. If the site has good draining soils and sufficient size, an on-site French drain system could be considered.

### **Door, Windows & Louvres**

Exterior doors are a combination of aluminum and hollow metal doors. Interior doors are a combination of hollow metal and wood. Doors located in required fire-rated assemblies require upgrading to provide fire-rating, latching hardware and automatic closers. Exterior aluminum door, at south entry lobby, operates as a push-pull door and is locked with a single cylinder thumb-turn dead lock. The door measures 36" wide, with clearance of 33-3/8", and is equipped with a continuous hinge. This door is an exit door and should be equipped with rim-latch panic hardware to provide full-time egress for at least one door leaf. Existing interior and exterior doors, in barrier-free paths of travel and that are currently too narrow, will have to be replaced.

Most windows in the original building appear to be original, wood windows with uninsulated, single glazing. Performance hall fixed windows have clear or cathedral coloured glazing set in lead caming. All of the wood windows require repainting; many will require repair, consolidation and restoration prior to painting. Existing windows in the north addition are newer, prefinished, insulated glass units. A detailed window assessment is required to verify condition of existing wood units. It is most often feasible, economically viable and historically appropriate to retain existing wood windows. Replacement windows may be considered as an alternative.

Windows in the south wall of the balcony elevation are leaded windows, square cut cathedral glass, without any interior or exterior glazing provided. Open air gaps, noted at lead caming, allow uninhibited air flow between the interior and outdoors. These windows will require more extensive restoration work, including releading.

Second storey windows have generally been retrofitted with exterior, residential grade, aluminum storm windows. First storey windows typically have removable wood sash storm windows. Leaded windows should be more closely examined. It is generally recommended that the cavity between exterior, protective clear glass and leaded-glass panel be ventilated to the exterior or the interior, to prevent the interstitial space from superheating, causing weakening of lead caming.

Basement windows serve little practical use at this time. The windows could be infilled with masonry and window wells removed for reduced maintenance, improved site drainage and increased building security.

Vented wood louvres, at south gable, contain wood blades that have a unique scroll-cut lip. Retaining the existing louvres will involve some replacement components, wood repair/replacement/consolidation and repainting. New insect and rodent screens will also be required on attic side. A soldered metal baffle is recommended on attic side, to prevent weather entry. Interestingly, only the upper four feet of the louvres are present in the attic, the remaining height is concealed in the south balcony wall. This condition should be reviewed, up close, to determine how the wall behind the louvre is weather-proofed.



### Thermal

Multi-wythe, mass masonry walls inherently offer very modest thermal benefits. The building is otherwise assumed to have minimal, if any, purposely installed thermal insulation. Blown-in insulation is present at the flat section of performance hall and elevated performance platform ceiling. It is unclear if the cathedral portion of the ceiling is insulated and ventilated. It appears that 1<sup>st</sup> Floor walls, with more recent gypsum board finish, are strapped with 2x4 wood studs and cavities filled with R12 fibreglass insulation.

Incorporation of insulation in historic, mass masonry buildings is not a Code requirement and introduction of insulation has to be carefully considered. Type and quantity of insulation is a fine balance. Too much of the incorrect insulation will negatively impact the ability of the masonry wall to maintain a healthy temperature and to dry quickly after wetting. Insulating a mass masonry wall can result in reverse vapour drive, during humid summer conditions, where the building is air conditioned.

### Building Site

A semi-mature deciduous tree, located at southwest corner of property, is rooted within 8' of foundations. The root system is likely to be severely damage when upgrading the domestic water line to the building. Removal of the tree would avoid any further root damage to foundation wall, allow for better drying of above-grade masonry walls and provide a stronger presence of the building at the street. Pruning the tree is required if it is to remain.

South exterior steps, to east suite, consist of timbers, infilled with unit pavers. A welded steel railing system is provided at both sides of steps and landing. Bottom riser has reduced height, posing a potential trip hazard. This could be rectified by regrading the unit paver sidewalk to delete the short bottom riser. Alternatively, if the recommended foundation renovations are implemented, the existing timber and unit paver steps could be replaced with new precast concrete stair/landing, complete with low maintenance prefinished aluminum railing system.

The exterior basement entrance, concealed by the wood cellar door in the east yard, consists of a wide, sloped concrete ramp, leading to an oversized wood door in the foundation wall. It is reported that, in early years, the local police constable brought his horse down a ramp into the basement, where there was a stable. The heavy horizontal wood plank cellar doors are rotted and the counterweight system is no longer functional. As discussed earlier in this Report, foundation walls at the areaway are in poor condition and require significant repairs or replacement, as do the doors. If this access is no longer needed, the areaway could be removed, door opening in foundation wall infilled and the area backfilled.



Non-compliant exterior stairs.



Non-compliant exterior concrete ramp.

## Building Interiors

Interior side of exterior brick walls are generally painted plaster over wood lath and strapping. The strapping, lath and plaster assembly is approximately 2 ½" in thickness. Plaster finish has been replaced with gypsum board, on retrofitted wood stud walls with insulated cavities, throughout most of 1<sup>st</sup> Floor.

Flooring materials include tongue and groove wood, vinyl composite tile, sheet vinyl and carpet. Wall finishes are primarily painted plaster and gypsum board, with some areas having pressed metal and wood tongue and groove wainscoting. Ceiling materials include pressed metal, painted plaster, painted gypsum board and suspended lay-in tile. Wall and ceiling finishes are generally in fair condition. Flaking paint, at performance hall ceiling, requires testing, as mentioned elsewhere in this Report. Carpet, at south entry lobby and stairs and in west first floor tenant suite, is rippled, packed torn and worn, and should be replaced. Other existing floorings are in reasonable condition.

Portions of south entry lobby flooring move under foot traffic. Deterioration and rot of wood floor structure is suspected, due to tracking in of snow, water and deicing salts from exterior porch. No access is available to the crawlspace, to allow review of existing conditions. It is apparent that the floor structure will require replacement.

The elevated performance platform has newer, tongue and groove wood flooring, painted gypsum board ceiling and walls, and electric baseboard heating. The original elevated performance platform is still visible, but has been built over with a new projection made of 2x6 joists and 2x4 wall framing with paneling. The space below the elevated performance platform projection is used for storage.

The tongue and groove, natural wood floor, throughout the performance hall, is raked up, approximately 16" from elevated performance platform to south performance hall wall. Fixed chairs with folding seats are relatively new and are generally in good condition. The ceiling height at elevated performance platform is 16-3 ½"; at performance hall floor. Immediately forward of elevated performance platform, the ceiling height is approximately 19-7" from the auditorium floor.

There is a single stairway up to the balcony. Stairs are relatively steep with turning winders at top of stair run. Treads are approximately 9" in total depth, including the nosing, and rise is 8". It is recommended that continuous handrails be installed, at both side of this stair, to help counter the steepness of the stairs. The handrail may sweep wide around the top of the stair to ensure persons take a foothold through the deeper sections of turning winders.

The guard around the balcony stair opening is a wood post system, with turned spindles and oak top rail. Spacing between spindles exceeds the 4" open space Code allowance and the guard is not 42" high from floor. Furthermore, this guard does not appear to provide OBC complaint resistance to lateral forces and will require overall upgrades.

The balcony has six riser platforms for aisles and seating, three riser platforms from railing to a cross-aisle at riser #4, and another two risers up to the south wall. Significant amounts of paint flakes were observed on the balcony floor. The paint flakes have delaminated and fallen from the painted, pressed metal ceiling. It is common to find paint coatings on historic metal ceiling that are lead containing paints. Samples of the paint should be laboratory tested to determine if lead is present. In the meantime, areas with paint flakes should not be disturbed, to limit health concerns. Cleanup of paint flakes should be done using a HEPA filter vacuum.



Balcony stair with curved winders and non-complaint guard around balcony opening.

The bottom chord of steel truss, at balcony, is placed low, relative to the balcony floor, and creates a risk of persons hitting their heads on the chord when being seated at front in the row near the wall. It is advisable to remove the seats that allow this condition.

The guard at the front of the balcony consists of tongue and groove pine boards with an oak top rail. The guard measures 25" in height. OBC 3.3.2.8. requires that the guard be 30" high in front of fixed seats and 36" high at the foot of steps at front row seats. Modifications to increase guard height can include reinforcing of the guard to increase lateral-loading resistance.

All three, existing single-occupant washrooms are located at 1<sup>st</sup> Floor. The number for toilet fixtures may just be adequate for existing occupancies, provided specially designed child washrooms are not required for the childcare tenant. A preliminary Code review indicates that the performance hall may require its own toilet fixtures, three male and 5 female (approximately). It may be possible to modify the main floor to allow other tenants use of these same washrooms. Otherwise, more ensuite toilet fixtures will be required to service individual tenant spaces. Public washrooms, directly accessed from the street, involve an increased level of security concerns and their access and finishes must be carefully considered.



Decorative pressed metal ceiling at performance hall.

Door hardware and clear widths of doorways require detailed review for compliance.

Recommendations regarding public washroom and general/barrier-free accessibility, through path of travel, will require significant changes at the 1<sup>st</sup> Floor. The resulting reallocation of space use and modified circulation systems may reduce the 1<sup>st</sup> Floor from three suites to two suites.

Relatively high levels of humidity were present in the basement, during our site visits. The two residential style dehumidifiers, located near the furnace, simply do not have sufficient capacity to make a real difference in controlling basement humidity levels. Addressing these conditions may require a number of interventions, which may include installing industrial dehumidifiers, excavating foundation walls at exterior, replenishing mortar between stones or installing a concrete dead-wall, installation of waterproofing and drainage system, installation of clay dams subgrade, surface grading and materials to control runoff and discharge from rainwater leaders. Industrial dehumidifiers are a quick solution that can allow for deferral of more extensive, long term infrastructure solutions.

In addition to signs of water seepage and potential rising-damp at foundation walls, there is evidence of significant accumulation of mortar fines at toe of walls. Mortar fines on the floor is generally directly related to breakdown of solid mortar to constituent components, most frequently due to moisture associated deterioration.

The rudimentary sump, adjacent to water meter, is without a pump and appears to simply be a recess in the soil below the floor slab, covered with a floor grate. The floor appears to have a natural slope to the pit, reinforced with a rough, shallow drainage trench cut into the concrete. Installation of a prefabricated sump pit with ejector pump is recommended.

The two, west-facing basement windows have ½" thick, Lexan panels, mechanically fastened to the inside of wood frames. The Lexan is cracked and broken at some screws.

## **Accessibility**

The existing building does not comply with accessibility standards. For example, the property lacks compliant, designated street parking adjacent to the site, barrier-free access into the building, paths of travel throughout the building, elevating device to 2<sup>nd</sup> Floor and properly size and appointed washroom facilities.

Reopening the 2<sup>nd</sup> Floor performance hall will require compliance with the Accessibility for Ontarians with Disability Act (AODA). Having said that, Codes, Standards and most people, recognize the principal of "reasonable accommodations" when applying such standards to existing buildings.

Doors in barrier-free paths of travel are likely to require replacement with wider doors and/or installation of swing-clear hinges. In a public building of this type, it is recommended that all door hardware be changed to lever style. The building area is greater than 300 m<sup>2</sup> and, therefore, a power door operator is required for the barrier-free entry door.

The exterior concrete ramp is complaint in terms of gradient and width, however, is not compliant in terms of landing sizes and the absence of a full railing system.

The entry door, at top of the ramp, accesses the east suite directly. This door is not equipped with lever door hardware. The public washrooms are accessed through an undersized, interior door.

Existing washrooms are not sized or equipped to comply with accessibility standards. At least one universal washroom will be required in the building.

A residential style, chair-glide system was previously installed from the entry lobby to 2<sup>nd</sup> Floor performance hall, in an attempt to address accessibility. This equipment has been maintained by Davidson-Hill Elevators, prior to closing of the 2<sup>nd</sup> Floor to use. A chair-glide is not considered appropriate for a public assembly building. It does not provide accessibility for the majority of potential users and it involves significant risk when transferring persons to and from the chair. There is also the matter of manually transporting mobility devices up to the 2<sup>nd</sup> Floor for continued travel. The permanent rail for the glide reduces the effective stairway width and could pose a trip hazard, especially in an emergency egress situation. It is recommended that the chair-glide be removed and an elevating lift device installed, if the 2<sup>nd</sup> Floor is to contain occupied space.

The chair glide system should be removed and replaced with a passenger elevator, a more appropriate and dignified form of vertical transport. Construction of the hoistway should be located to exterior of the existing building to avoid reduction of existing floor area. The hoistway would ideally be located in the alley at west side of Olde Town Hall, avoiding the higher visibility south and east facades. It will have to be verified if the alley is a legal, shared right-of-way and, if so, could that be changed to allow for an elevator addition. The elevator should be designed to access at least the 1<sup>st</sup> and 2<sup>nd</sup> Floor levels. A location and design for an elevator addition, including street level vestibule, would require a design study that is beyond the scope of this report.

The existing building, in general, is deficient, at main floor level, in terms of accessibility and is essentially inaccessible with regard to the performance hall floor levels when reopened to the public.



### **Life Safety Systems**

There currently is no automatic fire alarm system in the building and one is not required if only the main floor is occupied, with existing tenancies and occupant loads not exceeding 150 persons.

A new automatic fire alarm system is required if the 2<sup>nd</sup> Floor is to be occupied with an occupant load more than 150 persons. Existing seating at the performance hall and balcony exceeds this limit. Therefore, per, 1986 OBC 3.2.4.1.(1c), an automatic fire alarm system is required, if the performance hall is to return to use.

East and west exterior steel fire escapes, from 2<sup>nd</sup> Floor level, are generously sized, without apparent reason. Landings, stairs and railing/guards are constructed of structural steel channels and bar grating. Railings and guards do not comply with current Codes in terms of strength, member sizing, height and openings between members. Landings have visible deflection and bent supporting channels were observed at both landings.

Upgrading the existing fire escapes is not considered practical. It is more sensible and economical to replace the existing fire escapes with a new galvanized steel system, incorporating smaller landings, especially if exit double doors are replaced with single doors, support brackets and/or posts and foundations, and fixed stairs with handrails at two sides. Hard-surfaced sidewalks should be provided from fire escapes to the street, to facilitate winter maintenance of egress.

The existing steel ladder, on south exterior wall, should be removed. This would have been a form of emergency egress from an earlier time, when the entry lobby had a perimeter balcony above street level. The ladder is redundant.

### **Hazardous Building Materials**

Provincial law (Bill 208) requires that a building owner survey and be aware of the presence of all designated substances, including asbestos, on a property and in a building.

A building of this age is likely to have some of the scheduled "designated substances". A room-by-room survey should be conducted by a certified Industrial Hygienist to comply with Provincial regulations and laws.



Peeling paint, from underside of performance hall pressed metal ceiling, must be tested to determine if paint contains lead. Paint debris should be assumed to be lead containing until testing proves otherwise.

## Electrical

An electrical systems assessment was conducted by Chorley+Bisett Ltd. (London) on 08-May-2019. Refer to their detailed report in Appendix A for details.

Recommended electrical system upgrades include:

- ▶ If 2<sup>nd</sup> Floor returns to occupancy and total building occupant load exceeds 150 persons, a fire alarm system, including a fire monitoring panel, will be required.
- ▶ Existing security panel should be modified and expanded to increase coverage throughout the building.
- ▶ Replace receptacles with tamper-resistant receptacles, in spaces occupied by children.
- ▶ Replace exit signs and emergency lights with newer LED fixtures.
- ▶ Replace electrical distribution panel, at elevated performance platform, with new panel and tidy up adjacent walls space.
- ▶ Transition to LED luminaires (fluorescent and incandescent luminaires are soon to be discontinued). Upgrade controls when luminaires are replaced.
- ▶ Replace electrical heating devices throughout the building.
- ▶ Organize and tidy up data wiring and devices throughout the building. Provided dedicated space for communication and data equipment.
- ▶ A major renovation will initiate wholesale replacement of the electrical distribution system throughout the building.
- ▶ An electrical upgrade to 3-phase service may be required, in the future, when installing an elevator device.
- ▶ Existing meridian phone system is no longer supported and replacement will be required when next upgrading or modifying this system.

In addition, AAA provides the following electrical recommendations:

- ▶ Existing balcony exit sign, with emergency lighting heads, should be relocated to the stairway. A double-headed emergency light should be installed at the current sign location.
- ▶ The exit sign with emergency lighting heads, at sound control booth rear of performance hall, should be relocated to stair landing beside control booth.

## Mechanical

A mechanical systems assessment was conducted by Chorley+Bisett Ltd. (London) on 08-May-2019. Refer to their detailed report in Appendix A for details.

Recommended mechanical system upgrades include:

- ▶ As discussed earlier in this report, the basement ceiling requires a fire-rating. Installing a building-wide fire sprinkler system is an alternative to installing fire-rated gypsum board at basement ceiling. A sprinkler system will also provide other Code relief, in addition to providing early fire suppression and containment. A fire sprinkler system will require a water service upgrade (minimum 4" pipe), dedicated space in the basement for equipment and a combination wet/dry system due to pipes runs through unheated spaces.
- ▶ As an alternative to a fire sprinkler, upgrade 1<sup>st</sup> Floor assembly to provide required fire-rating, including replacement of all 1<sup>st</sup> Floor air grilles and registers.
- ▶ At a minimum, occupying the 2<sup>nd</sup> Floor performance hall will require a new ventilation system to provide tempered outdoor air. Full space air conditioning is a further upgrade.
- ▶ Upgrade domestic water service to a minimum 1" pipe. Modify water meter bypass piping to Code.
- ▶ Insulate all domestic water pipes throughout the building.
- ▶ If 1<sup>st</sup> Floor occupancies continue with existing uses, modify existing furnace system to incorporate a heat recovery ventilator (HRV) to provide make-up fresh air.
- ▶ Replace electric domestic water heater with a new gas-fired heater (within next +/- 2-5 years).
- ▶ Install zone dampers in existing ductwork, serving 1<sup>st</sup> Floor suites, to allow for individual suite controls. Existing ductwork at basement ceiling will require modification to separate suite ducts.
- ▶ Replace unit ventilator and air conditioning units at north suite with a combined electric heating/cooling unit ventilator and remote condensing unit.
- ▶ Modify return air intakes at 1<sup>st</sup> Floor, east and west suites, to low wall returns.
- ▶ Replace plumbing fixtures with new fixtures (optional).

In addition, AAA provides the following mechanical comments and recommendations:

- ▶ Major modifications should be expected for washroom facilities throughout the building and will include new sanitary sewer from building to street, unless there are records of sewer upgrades having been completed in recent years.
- ▶ Installing air conditioning at uninsulated performance hall has to be carefully designed to avoid causing damage by reverse vapour drive through mass masonry walls. Design of fan driven air system must also be carefully designed to avoid introducing unwanted noise in the performance hall. Equipment should be located to facilitate regular maintenance access. One solution would be to place new air conditioning equipment on a steel frame platform suspended above the north building addition. Alternatively, if the existing 1-storey building addition is not high-valued tenant space, perhaps it could be used as a mechanical room at grade level. Ducts would be installed within an enclosed chaseway at exterior north wall of the brick building to access attic elevation.
- ▶ The basement experiences elevated levels of humidity. Industrial dehumidification equipment may be required to control this condition, unless other effective moisture countermeasure are implemented.

### Building and Fire Code Compliance with Existing Uses

The Ontario Fire Code (OFC) has the power to require retrofits for unsafe conditions in existing buildings.

Requirements of the Ontario Building Code (OBC) are typically triggered by building construction or change of use. Otherwise, the OBC has few retrofit powers and an existing building is generally “grandfathered” forward as-is.

Important Code criteria:

- ▶ OBC Part 11 Renovation and OFC Part 9 Retrofit apply because this is an existing building.
- ▶ The building faces two streets and contains multiple occupancies.
- ▶ OBC Hazard Index for a mid-sized building, containing a more restrictive A2 Assembly Occupancy, is HI4.
- ▶ OBC Construction Index is C11 because existing 1<sup>st</sup> and 2<sup>nd</sup> Floor assemblies generally provide no fire-rating.
- ▶ If existing occupancies remain, it could be argued that there is no change of occupancy and, thus, the OBC typically allows for “match existing” conditions for most building systems. A limited number of critical building systems are excluded from the “match existing” relief.
- ▶ However, as the 2<sup>nd</sup> Floor spaces approach five years of non-use, the OBC normally considers the second storey space as vacant with no occupancy. Consequently, any space use will invoke Additional Upgrades in compliance with OBC Tables 11.4.3.4.A. and 11.4.3.3. Required upgrades are 45-minute fire-resistance rating at undersides of 1<sup>st</sup> and 2<sup>nd</sup> Floor structures and at supporting structural elements, and a zero fire-resistance rating at the roof structure. Alternatively, the above assemblies may be protected with a fire sprinkler system.
- ▶ Fire-rated separations and closures are also required, as follows:
  - 1 hr fire-resistance rating at horizontal and vertical suite separations (OBC 3.1.3.2.(1)).
  - 1 hr fire-resistance rating at mechanical service rooms (OFC 9.2.2.3.(2)).
  - The above 1 hr fire-resistance ratings can be reduced to 30 minutes if the building has a fire sprinkler system that is connected to a monitored fire alarm system (OFC 9.2.2.2.(2)(b)).
- ▶ The Fire Department can be asked to accept a fire sprinkler system as a compliance alternative for the above two requirements for fire separations. A sprinkler system would avoid extensive renovations required to install contiguous gypsum board ceilings and wall protections. Plus, a sprinkler system provides for early detection, suppression and containment in the event of fire. These are significant benefits in terms of life-safety and property protection.
- ▶ The existing balcony has 68 seats and requires two means of egress from the balcony. If 8 seats were removed and a sign posted to limit the occupant load, to not exceed 60 persons, then a single egress complies with OBC. Furthermore, because the stairway from balcony to 2<sup>nd</sup> Floor is an existing condition, the Code does not require it to be replaced, to remove its winders or to modify its steep slope.
- ▶ 2<sup>nd</sup> Floor performance hall and balcony has three egress doors. The east and west egress doors, to fire escapes, are double doors, extending well beyond the original single window opening that the doors are hosted in. The unusually large upper landing of the exterior steel fire escape is likely due to door swing clearances onto the landing. Double doors and enlarged landings are unnecessary to comply with Code. There are three, existing designated egress doors from the performance hall. It appears to be feasible to modify the existing fire escape doors to single doors, reverting back to the original window opening width and reducing the fire escape landing area. Reconstituting the removed portion of masonry wall would be beneficial from a structural standpoint, as well as being aesthetically and historically appropriate.
- ▶ Fire escape landings and stairs are exposed to unprotected window and door openings in walls below. According to OFC 9.2.3.10. & 1986 OBC 3.4.7.13(1), protection of these openings is not required because the fire escape does not serve storeys above the second storey.
- ▶ The performance hall and balcony provide occupancy of more than 150 persons above the first storey. Therefore, per OFC 9.2.4.1.(1) and 1986 OBC 3.2.4.1.(1c), a fire alarm system is required.

The following discussion focuses on Item #4 contained in the 10-Dec-2013 Fire Safety Inspection Report. This item references OFC 9.2.2.3.(4) stating “Fire separations shall be provided between theatrical stages and assembly occupancies in compliance with Sentences 3.3.2.14.(3) to (5) of the 1986 Building Code.”



The OFC and 1986 OBC defines the term "Stage" as:

*Stage means a space designed primarily for theatrical performances with provision for quick change of scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects and which is traditionally, but not necessarily, separated from the audience by a proscenium wall and curtain opening.*

The Dundalk Olde Town Hall performance area has the same characteristics as an elevated performance platform in a school performance hall or gymnasium. Such performance areas accommodate a variety of activities, including lectures, presentations, concerts and theatrical events. Performance areas are typically small in size, have good visibility from audience seating and do not have partition wall structures concealing adjacent support/ancillary spaces.

The Dundalk Olde Town Hall performance area does not have a fly tower or other facilities for quick change of scenery. The small area of storage, below the elevated platform projection, can be closed to use. There are no side-wings, storage rooms, workshops, dressing rooms or service rooms. The absence of such support/ancillary spaces represents a reduced fire load, compared to a stage equipped with such spaces.

The Building Code Commission (BCC) has recognized a distinction between an "elevated performance area" and a "stage". Previous BCC rulings pertaining to this matter include:

BCC Ruling #97-16-558, dated 28-May-1997;  
BCC Ruling #00-38-770, dated 10-Aug-2000; and  
BCC Ruling #10-03-1239, dated 21-Jan-2010.

The published details of all three of these Rulings are attached to this report for your convenience. The areas involved in these Rulings have similar characteristics to Dundalk Olde Town Hall performance hall. These three Rulings, spanning nearly 20 years, have been consistent in their decisions.

In each of the above deliberations, the Municipal Building Officials argued that the performance areas were "stages" and therefore required a deluge water curtain or a fire-rated curtain to separate the "stage" from the audience. The Applicants argued that their performance areas did not meet the OBC definition of "stage" and, therefore, fire curtain and deluge water curtain provisions do not apply.

For each of the above cases, the BCC ruled in favour of the Applicant. The rationale for these rulings include:

- ▶ The construction is considered to be a raised platform in a multipurpose facility.
- ▶ The subject platform area does not provide for quick change and storage of scenery, etc.
- ▶ There is no provision for quick change scenery or fly towers, which limits the combustible load on the stage.
- ▶ The theatre, stage and back of house areas are of limited size.
- ▶ The performance space does not have the fire load that is associated with the activities and occupancies described in the Building Code's definition of "stage".

BCC Ruling #10-03-1239 is particularly interesting in that the BCC concluded that the subject performance area was indeed a "stage" as defined by the OBC, however, the BCC determined that fire sprinkler protection was not required in this case because the performance area did not have the fire load associated with a "stage", i.e., the performance area did not have ancillary spaces such as workshops, dressing rooms and storage areas.

It is our opinion that the platform at Dundalk Olde Town Hall performance hall can be classified as an "elevated performance area", consistent with the BCC Rulings. This elevated performance area is not a "stage" as defined by Division A of the OBC and, therefore, the fire-rated curtain and deluge water curtain requirements at the proscenium opening are not applicable.

A consultation is required with Building and Fire Authorities to fully establish the nature and extent of Code requirements and acceptable solutions.

## Implementation Plan

The listing of work items and their costs are divided into five priority levels as follows:

**Priority 1: Current and Critical - Immediate**

Immediate necessities to maintain ongoing operations, address life safety and liability issues, structural issues, and maintenance issues that will avoid short-term causal building deterioration.

**Priority 2: Potentially Critical - Year 1**

Existing conditions that will become critical within the next year, if not corrected. Maintenance items, which should be attended to sooner rather than later due to expired service life, accelerated deterioration and/or escalating costs.

**Priority 3: Necessary But Not Yet Critical - Years 2 to 5**

Maintenance items, which should be scheduled in the next 5 years. The longer that maintenance repair is delayed, the more expensive it becomes.

**Priority 4: Recommended - Years 6 to 10**

Improvements that are sensible and/or reasonably anticipated to increase overall usability and/or reduce long-term maintenance costs.

**Priority 5: Discretionary**

Aesthetic or appearance issues; items that are important from a psychological standpoint and can be implemented when convenient. Enhancements that would be nice to have, if they are affordable.

### Notes Regarding Cost Estimates

Cost estimates are very conceptual and preliminary. The above list is not intended to be comprehensive or complete. No designs or accurate quantification of anticipated work have been prepared. Budget estimates are intended to provide a generalized magnitude of costs likely to be associated with the described work items.

Items of work have, in some instances, been grouped together to make efficient use of materials, equipment and labour. Scheduling the work into multiple, smaller projects will result in higher costs. It is recognized that the longer work is delayed the more expensive it becomes, not only in terms of inflationary cost escalation but also due to ongoing progressive deterioration of building systems.

Cost estimates and budgets have been prepared by Allan Avis Architects Inc. and represent the Architect's judgement as a design professional. It is recognized, however, that neither the Architect nor the Client has control over the cost of labour, materials, equipment, over the Contractor's methods of determining bid prices, over competitive bidding, market or negotiation conditions. Accordingly, the Architect cannot, and does not, warrant or represent that bids or negotiated prices will not vary from the estimate of construction cost or evaluations prepared or agreed to by the Architect.

The cost of work is estimated on a contracted-out basis, is based on our experience with projects of similar nature and information provided by contractors and suppliers. The estimates are in mid-2019 dollars. We cannot guarantee the accuracy of the estimate because market conditions are beyond our control. The estimates should be modified periodically to reflect actual or anticipated rates of inflation (at approximately 5.0% compounded annually).

A 20% construction contingency is carried in the budget to reflect the preliminary nature of the estimate and lack of detail at this early stage. This contingency is to cover unknown details in design and construction, layout variations and material selections, but excludes any scope increases.

Professional fees and HST are in addition to construction cost estimates.

<b>Summary of Cost for Implementation Plan by Priority</b> (HST not included)	2019 Budget Estimate
Priority No. 1 Recommendations Current and Critical - Immediate	\$325,000
Priority No. 2 Recommendations - Base Work Items Potentially Critical - Year 1	\$391,000
Additional Priority No. 2 Work to Allow for Occupancy of 2 <sup>nd</sup> Floor performance hall	\$1,248,000
Priority No. 3 Recommendations Necessary, But Not Yet Critical - Years 2 to 5	\$809,500
Priority No. 4 Recommendations Years 6 to 10	\$139,000
<b>Subtotal Priorities Nos. 1 - 4</b>	<b>\$2,912,500</b>
Priority No. 5 Recommendations Discretionary	\$55,000
<b>Total Priorities Nos. 1 - 5</b>	<b>\$2,967,500</b>

<b>Priority No. 1 Recommendations Current and Critical - Immediate</b>		2019 Budget Estimate
1.1	Commission a Designated Substances Survey. Note: Abatement of hazardous building materials, resulting from Survey, cannot be determined at this time and the cost for hazardous materials abatement and remedial work is not included in this report.	\$5,000
1.2	Establish an Asbestos Management Plan (if required).	\$4,500
1.3	Establish a Fire Safety Plan per Ontario Fire Code, Section 2.8.	\$2,500
1.4	Exterior brick masonry at south entry lobby: - Remove and replace damaged brick at bottom of walls. Install stone or concrete masonry units for first 12" above stairs and landing, isolating new base material with dampcourse membrane. Install new matching brick above. - Remove brick from south porch wall below landing and install stone or concrete masonry units.	\$15,000
1.5	Roofing: - Replace flat roofing at south entry lobby. - Replace downpipes and connect to storm sewer or provide positive runoff at grade.	\$20,000
1.6	Install panic hardware at south lobby aluminum door.	\$4,500
1.7	Temporarily reinforce cellar door, located in east yard, or provide barrier around areaway for safety reasons. Install temporary bracing of stone foundation walls of areaway. (Repair and replacement work schedule in Priority No. 3.)	\$3,000
1.8	1 <sup>st</sup> Floor structure: - Replace deteriorated and compromised 1 <sup>st</sup> Floor beam. - Reinforce 1 <sup>st</sup> Floor wood beams to provide 100psf live load capacity. - Miscellaneous structural repairs and upgrades.	\$95,000
1.9	Upgrade water service to 1" line from street. (Refer to associate water service upgrade, below, required for alternative fire sprinkler system)	\$5,000
1.10	Upgrading fire-ratings of floors, suite walls, egress enclosures and enclosures around fuel-fired appliances is commonly accomplished by installing fire-rated gypsum board membrane protection. Complexities of existing building layout and infrastructure suggests that it will be more cost effective to install a new, combination wet and dry, fire sprinkler system as a Code "Compliance Alternative". A fire sprinkle system will require a further upgrade in water service from 1" (Line Item above) to a minimum 4" pipe. The budget cost at right assumes adequate water pressure at municipal water main and that a fire pump is not required. The added cost of a fire pump is likely to tip the cost scale in favour of gypsum board membrane protection.  Line Item #1.16 on the following page, indicates the additional, premium cost associated with fire-rated gypsum board membrane protection.*	\$100,000
1.11	Install an industrial dehumidifier in basement to help control humidity levels. Provide a sump pit and ejector pump.	\$7,500
1.12	Modify and expand existing security panel.	\$9,000
1.13	Subtotal	\$271,000
1.14	Contingency (20%)	\$54,000
1.15	Total (HST not included)	\$325,000

1.16	<p>* Install gypsum board membrane protection, in lieu of a fire sprinkler system (per Line Item # 1.10 above), to provide fire-rating upgrades:</p> <ul style="list-style-type: none"><li>- Budget at right is an additional (premium) cost to be added to above Total, Line Item #1.15.</li><li>- Upgrade floor assemblies at 1<sup>st</sup> and 2<sup>nd</sup> Floor levels and at suite separations to provide a 1-hour fire resistance rating. This will require a double layer of fire-rated gypsum board over basement and 1<sup>st</sup> Floor level ceilings, supporting structural elements at partition walls separating suites and at walls enclosing egress stairways. Doors will also require fire-rating upgrades.</li><li>- Construct wall enclosure around fuel-fired HVAC equipment, located in the building. Enclosure requires a 1-hour fire resistance rating, including doors and duct penetrations.</li></ul>	\$60,000
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<b>Priority No. 2 Recommendations Potentially Critical - Year 1</b>		2019 Budget Estimate
2.1	Additional investigations and testing: - Dig test pits to review below-grade condition of stone foundation walls. - Probe in-ground storm drainage system, connected to rainwater leaders, to verify proper operation and determine outlet for drainage.	\$5,000
2.2	Site Work: - Prune or remove tree at southwest corner of building. - Replace existing timber and unit paver steps at south exterior door, to east suite, and replace with precast concrete stairs and landing, with aluminum railing system.	\$9,000
2.3	Roof structure: - Repair and reinforce purlins, including sistering purlins at 10 locations. - Roof rafter tie-down clips and anchors. - Reinforce collar ties.	\$38,000
2.4	Install short spreader beams at truss bearing points, located over or close to window openings in walls. Temporary shoring will be required.	\$75,000
2.5	New ventilator and air conditioning condenser at 1 <sup>st</sup> Floor, north suite. (This item can be deferred if the suite continues to be unoccupied).	\$39,000
2.6	Accessibility: - Replace exterior ramp access with new ramp and Code compliant railing system. - Provide power door operator at entry door. - Renovate 1 <sup>st</sup> Floor to provide universal washroom with power door operator at door. (Adding this washroom could impact available suite rental space.) - Provide vandal resistant finishes and fixtures, if washrooms are to be accessible to the public directly from street.	\$150,000
2.7	Plumbing: - Insulate hot and cold domestic water pipes. - Modify piping at water meter bypass.	\$10,000
2.8	Subtotal Priority No. 2 Base Work Items	\$326,000
2.9	Contingency (20%)	\$65,000
2.10	Total Priority No. 2 Base Work Items (HST not included)	\$391,000
<b>Additional Priority No. 2 Work to Allow for Occupancy of 2<sup>nd</sup> Floor</b>		
2.11	Reinforce floor framing at 2 <sup>nd</sup> Floor elevated performance platform.	\$10,000
2.12	Replace east and west exterior steel fire escapes.	\$50,000
2.13	Install building-wide fire alarm system, due to increased occupant load for building.	\$45,000
2.14	Reinforce ceiling joist over performance platform to increase load capacity for lighting, etc.	\$15,000
2.15	Provide contrasting coloured nosings at interior egress stairs. Modify locations of exit signs and emergency light fixtures.	\$5,000
2.16	Upgrade public washrooms to increase toilet fixture counts to comply with building occupancy loads at 2 <sup>nd</sup> Floor.	\$80,000
2.17	Replace doors and/or hardware at barrier-free paths of travel, throughout 1 <sup>st</sup> Floor, to provide required clear width and lever hardware.	\$35,000

2.18	Install a hoistway and hydraulic passenger elevator to provide dignified access to performance hall at 2 <sup>nd</sup> Floor level. Elevator to have at least three stops; street, 1 <sup>st</sup> and 2 <sup>nd</sup> Floor levels. If constructed as a building addition, a vestibule or lobby will be required at street level. The elevator machine room would be located in the basement. An electrical service upgrade may be required, at an additional cost. Location of elevator has yet to be determined. The southwest corner of the building is the ideal location, if the laneway between buildings could be utilized. Remove existing chair glide system.	\$435,000
2.19	Performance Hall metal ceiling: <ul style="list-style-type: none"> <li>- Pending results of hazardous materials testing (recommended in Priority No. 1), it is assumed that the existing paint system contains lead and removal will require lead paint abatement removal procedures, using scaffolding access.</li> <li>- Once cleaned, existing metal ceiling panels will be chemically neutralized, primed and painted.</li> </ul>	\$192,000
2.20	Balcony: <ul style="list-style-type: none"> <li>- Remove 8 seats from balcony and post notice of occupant limit of 60 persons. Remove seats at locations of head clearance conflicts, with steel trusses, and at less desirable seating locations.</li> <li>- Install continuous handrails at both sides of balcony stairs. Have handrail sweep wide around stairs, through turning winders, to force people to walk at deeper tread depths.</li> <li>- Upgrade balcony guard to provide Code required heights and reinforce balcony guard (if required).</li> </ul>	\$18,000
2.21	Replace electrical panel at elevated performance platform with a new breaker panel and tidy up wiring at adjacent wall.	\$5,000
2.22	New dedicated outside air system (DOAS) at performance hall, complete with insulated distribution ducts and controls. This system is designed to provide tempered make-up fresh air for the auditorium and performance platform, but not cooling. See air conditioning option below **.	\$95,000
	Allowance for building modifications or addition of outdoor platform for air conditioning equipment.	\$40,000
	Allowance for architectural modifications to reduce interior visual impact of duct system.	\$15,000
2.23	Subtotal Additional Work to Allow for Occupancy of 2 <sup>nd</sup> Floor	\$1,040,000
2.24	Contingency (20%)	\$208,000
2.25	Total Additional Work to Allow for Occupancy of 2 <sup>nd</sup> Floor (HST not included)	\$1,248,000
2.26	Grand Total of Priority No. 2 Base Work Items <u>and</u> Additional Work to Allow for Occupancy of 2 <sup>nd</sup> Floor (HST not included)	\$1,639,000
2.27	** Optional upgrade from DOAS at performance hall to provide full air conditioning system. <ul style="list-style-type: none"> <li>- Budget at right is an additional cost to be added to above Total Line Item #2.25 and Grand Total Line Item #2.26.</li> </ul>	\$40,000

<b>Priority No. 3 Recommendations Necessary, But Not Yet Critical - Years 2 to 5</b>		2019 Budget Estimate
3.1	Foundation walls: <ul style="list-style-type: none"> <li>- Excavate perimeter of building to expose foundation walls, repair/replace deteriorating foundation stone units (including repair at northwest corner where severely eroded), remove face parging, point 100% of foundation mortar joints (alternatively, install poured concrete dead-wall at exterior side of stone wall), provide footing drain and waterproofing systems. Backfill and grade surface to drain away from foundations.</li> <li>- Point 100% of foundation mortar joints at interior side of foundation wall.</li> <li>- Infill basement windows with masonry or replace windows.</li> </ul>	\$220,000
3.2	Cellar entry located in east yard: <ul style="list-style-type: none"> <li>- Repair or rebuild stone masonry foundation walls at areaway.</li> <li>- Install new replacement cellar door at grade elevation.</li> </ul>	\$17,000
3.3	Above-grade masonry walls: <ul style="list-style-type: none"> <li>- Localized pointing of approximately 25% of mortar joints in exterior brick masonry walls.</li> <li>- Stabilize failing masonry arches at south wall and install local reinforcement.</li> <li>- Remove redundant wall-mounted steel ladder from south wall.</li> </ul>	\$135,000
3.4	Chimney: Repair chimney top and install new lead-coat copper cap flashing. Alternatively, if chimney is redundant, remove it and extend roof through.	\$6,000
3.5	Windows and Doors: <ul style="list-style-type: none"> <li>- Replace exterior aluminum storm windows with new fixed windows, with insulated glass.</li> <li>- Modify existing leaded windows, at interior, to provide top and bottom venting on interstitial space.</li> <li>- Restore leaded glass windows, where required.</li> <li>- Strip, repair and paint exterior wood windows, including wood storm windows.</li> </ul>	\$85,000
3.6	Interiors: <ul style="list-style-type: none"> <li>- Replace carpeting and vinyl flooring at 1<sup>st</sup> Floor level and main stairway.</li> <li>- General upgrades to interior finishes.</li> </ul>	\$102,000
3.7	Exterior painting: <ul style="list-style-type: none"> <li>- Paint belfry.</li> <li>- Replenish exterior caulk sealants throughout.</li> <li>- Restore and paint south wall louvres, or replace with prefinished metal louvres.</li> </ul>	\$65,000
3.8	Provide a dedicated space for communication/data panels and tidy up wiring throughout building.	\$16,000
3.9	Expand coverage of security system throughout building.	\$9,000
3.10	Replace domestic hot water heater.	\$13,000
3.11	Replace exit signs and emergency lights with LED units.	\$6,500
3.12	Subtotal	\$674,500
3.13	Contingency (20%)	\$135,000
3.14	Total (HST not included)	\$809,500



<b>Priority No. 4 Recommendations Years 6 to 10</b>		2019 Budget Estimate
4.1	New ductwork and ceiling diffusers for 1 <sup>st</sup> Floor, north suite.	\$14,000
4.2	Add electric reheat coils at existing basement furnace system, including zone dampers and new controls.	\$14,000
4.3	Add make-up fresh air duct to existing basement furnace system.	\$7,500
4.4	Install wall return air grilles in east and west suites at 1 <sup>st</sup> Floor. Modify interior finishes as required.	\$15,000
4.5	Electrical distribution and wiring: <ul style="list-style-type: none"> <li>- General upgrade of electrical distribution system and equipment.</li> <li>- Extend and modify electrical distribution system to accommodate planned interior space changes.</li> <li>- Replace electric baseboard heaters with new units in areas of renovations.</li> </ul>	\$28,000
4.6	Lighting and controls: <ul style="list-style-type: none"> <li>- Replace existing fluorescent and incandescent luminaires with LED luminaires, including house lights in performance hall.</li> <li>- Provide new control devices.</li> </ul>	\$37,500
4.7	Subtotal	\$116,000
4.8	Contingency (20%)	\$23,000
4.9	Total (HST not included)	\$139,000

<b>Priority No. 5 Recommendations Discretionary</b>		2019 Budget Estimate
5.1	Replace existing double doors, at second storey fire escape landing, with single doors and reconstruct missing wall areas.	\$30,000
5.2	New telephone, communications and data systems.	\$16,000
5.3	Subtotal	\$46,000
5.4	Contingency (20%)	\$9,000
5.5	Total (HST not included)	\$55,000

## **Appendix A**

Structural Site Report, prepared by Pow Peterman Consulting Engineers (Ingersoll), dated 08-May-2019.

Mechanical Building Condition Assessment Report, prepared by Chorley+Bisett Ltd. (London), dated 23-Jul-2019.

Electrical Building Condition Assessment Report, prepared by Chorley+Bisett Ltd. (London), dated 23-Jul-2019.



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## **Site Report 20190508**

Project No.: 19-05-0030

Project Name: DUNDALK OLDE TOWN HALL  
80 MAIN STREET EAST  
DUNDALK, ONTARIO

Date: MAY 8, 2019

Report By: Chris Willie, M.A.A.T.O., CAHP, Senior Project Coordinator

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We attended the site today to undertake a cursory structural review of the Olde Town Hall located in Dundalk, Ontario.

The building is a two storey multi-wythe brick masonry exterior walls and stone foundation structure with wood floor structure and steel riveted trusses.

### **EXTERIOR**

It was noted that the exterior masonry walls were repointed previously.

There are open brick joints in the masonry above the arch of the main entrance.

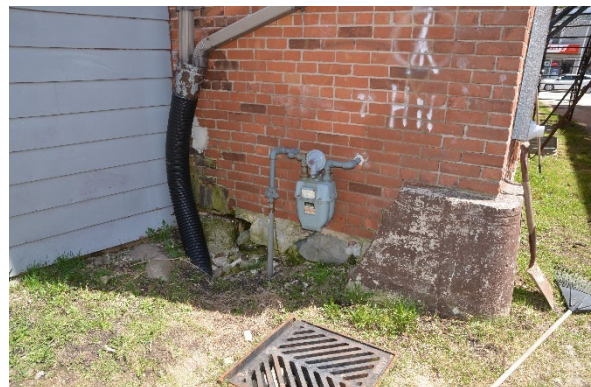
Brick adjacent to the entrance stairs is severely deteriorated. This is assumed to be from salt and salt laden water rising up through the porous brick masonry units.

Some foundation deterioration was noted on the north elevation at the gas meter location as well as around the entrance stair area. Mortar is missing from joints and stones appear to have shifted.

There are two steel exterior emergency exit stair assemblies. Both are fabricated of structural steel channels with bar grating treads with open risers. The stair and landings are fully exposed to the elements. Railings do not meet current Ontario building code requirements for height and opening spacing. With the member sizing and connections we assume that the guards do not meet the loading requirements of the code. Landings are formed with bar grating. A significant amount of deflection was observed on both landings. Guards on the landings also are deficient in member sizing, openings and height requirements.



Front (South) Elevation



North (Rear) Elevation



**West Exterior Stair**

Flat bar triangulated sections are embedded and bolted to the masonry wall assembly.

Diagonal legs are 1-1/2" square and 2" square hollow structural sections. One section is bent. As the stair is in a drive area, it is assumed that this was struck by a vehicle.

Bar grating landing

Triangulated flat bar assembly

Diagonal support

West Stair

**East Exterior Stair**

The east stair is similarly framed to that of the west stair with the upper landing having triangulated flat bar assemblies embedded into the masonry wall assembly and two 1-1/2" x 1-1/2" square hollow structural section legs supporting the exterior edge of the landing. The southern leg is bent.

Bar grating landing

Triangulated flat bar assembly

Vertical support



East Stair





## INTERIOR

### **BASEMENT**

The foundation is rubble stone. There is a large amount of mortar sand at the base of the exterior walls that has washed out from the wall assembly.

At some point poured concrete buttresses were installed on the interior of the basement walls. This was reported to be to support new steel columns that were installed as part of a reinforcing program. No notable deterioration was observed in these buttresses.

The floor is poured concrete with unknown the thickness.

A concrete cistern with 12" poured concrete walls is located in the north-east area of the basement. The floor of the cistern is approximately 36" deeper than the basement floor.

First floor is framed with two wood beam lines running from the front to the back of the building (north-south). These beams are rough sawn units measuring 9-1/2" wide x 12" deep. Shear failure was noted in two beam sections on the west beam line; where the beams have longitudinal fractures and have rotated. Bearing of the northern beam section at the foundation wall is compromised with both the beam and the wall being deteriorated.

Solid sawn beams are deficient in required strength.



Beam Failure



Beam Failure

A beam located over the cistern area has been cut out for a plumbing waste line.

Beams bear on masonry columns 17" x 17" as well as a series of wood columns.



Notched Beam



Masonry Piers



Floor framing for the first floor is sawn dimensional lumber. Joists were measured to be 1-3/4" x 9-3/4" spaced at 16" on centre. A flat bar 3-1/2" in width was placed in the stone foundation to act as a moisture break between the stone and the wood floor framing. This steel plate is severely deteriorated in locations.

A single row of cross bridging is located in each joist span. Joists are spanning approximately 11'-6" for the exterior bays and 13'-4" for the centre pan. Floor capacity of the joists is determined to be 100p.s.f. live load. Floor joists are notched and nest into notches in the wood beams. Generally all of the joints are in fairly good condition but have only toe nails for existing connections.

Wood species of members was not determined.



North Wall Beam Bearing

## FIRST FLOOR

This area has been divided up into different commercial suites.

Steel columns are located on the exterior walls that support steel floor beams spanning across the 37'-6" building width. These steel beams were added to remove columns that would have been in alignment with the basement masonry piers. The floor of the auditorium above is sloped downward towards the elevated performance platform. The southern beam appears to be a W24x56, the remaining 2 units appear to be W21x48.

The original wood beams running north-south are supported by the new steel beams. In one location, an 8" steel beam was added to support a failed wood beam.

Floor joists for the auditorium were measured to be 2" x 9-1/2" @ 16" on centre and span 11'-6" and 13'-6" similar to the basement spans.



## SECOND FLOOR

The auditorium area has a raked floor sloping downward towards the elevated performance platform. Two 4-1/2" diameter round cast columns support the balcony level. These columns line up with the steel beam installed in the ceiling space below.

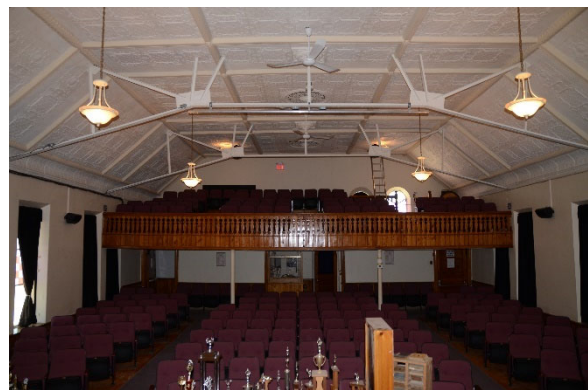
The elevated performance platform is elevated above the auditorium floor. Elevated performance platform framing was measured to be 2"x12" joists @ 16" on centre. The spans were not able to be confirmed but it is assumed that these joists will span 11'-6" and 13'-6" to match the floors below. An extension was added to the elevated performance platform and is framed with 1-1/2" x 5-1/2" SPF#2 members spaced at 24" on centre. These joists span 32" and also cantilever 13" beyond the support point. The supporting wall is a 2x4 framed wall spaced at 16" o.c.

A control room is located at the upper level of the balcony and a former exterior balcony located above the main entrance. The viewing area has been framed in with wood framing and vinyl siding.

Balcony framing was not accessible and not able to be confirmed at the time of review.



Balcony



Auditorium



Riveted Truss Detail



Auditorium Truss





## ATTIC

For the purpose of this report, roof frames are numbered one to four with frame one being the frame located closest to the entrance.

Attic floor (second floor ceiling) framing consists of 1-3/4" x 5-1/2" rafters spaced at 24" o.c. These rafters are hung from the roof rafters.

Roof frames are riveted steel trusses spaced at approximately 14'-0" o.c. dividing the attic space into four bays. While wood trusses are more common, we have witnessed the use of riveted trusses in this age of buildings previously. We do not know if these trusses are original to the building or not. There have been some structural interventions to the support of second floor framing. Base plates for the trusses are exposed on the exterior of the building. The northern-most bay over the elevated performance platform area is framed down approximately 48" over the elevated performance platform area.

Ceiling joists are 1-3/4" x 9-1/2" spaced at 16" o.c. spanning approximately 13'-8". The steel frames are built up from angles and flat bar. No notable deterioration was observed in the connections.

There are two purlins spanning across the roof trusses. Exposed purlin was measured at 8" wide x 7-1/2" deep. These are bolted to the top chord of the roof truss with two 1/2" diameter bolts. Considerable sag was noted in all of the exposed purlins with units being split at bolted connections and having open gaps in the butted connections.

Roof rafters span across the purlins and are 1-3/4" x 5" deep spaced at 24" o.c. Rafters are notched at and overlapped at the purlin. There are no collar ties or a ridge board. Roof sheathing is 1x boards running perpendicular to the rafters.



Attic Roof Truss Elevation  
*Steel riveted connections*



Purlin Connection @ Truss  
*Purlin split at bolted connection*





Roof Framing – no collar ties



Ceiling rafter support member hung from rafter/purlin

Attic Framing Elevation  
Diagonal members support ceiling joists



Framing over Elevated Performance Platform  
No additional support at rigging locations  
Purlins sagging



Transition from Attic floor to Elevated Performance Platform Area  
Ceiling/floor joists bear on purlins

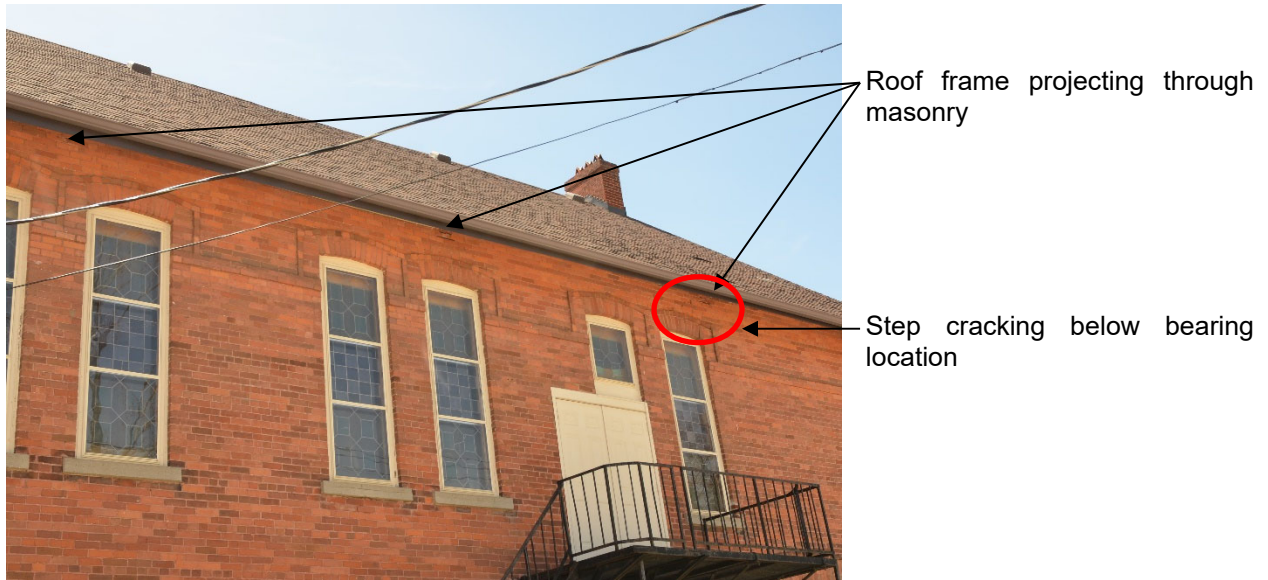


## TRUSS BEARING AT EXTERIOR WALLS

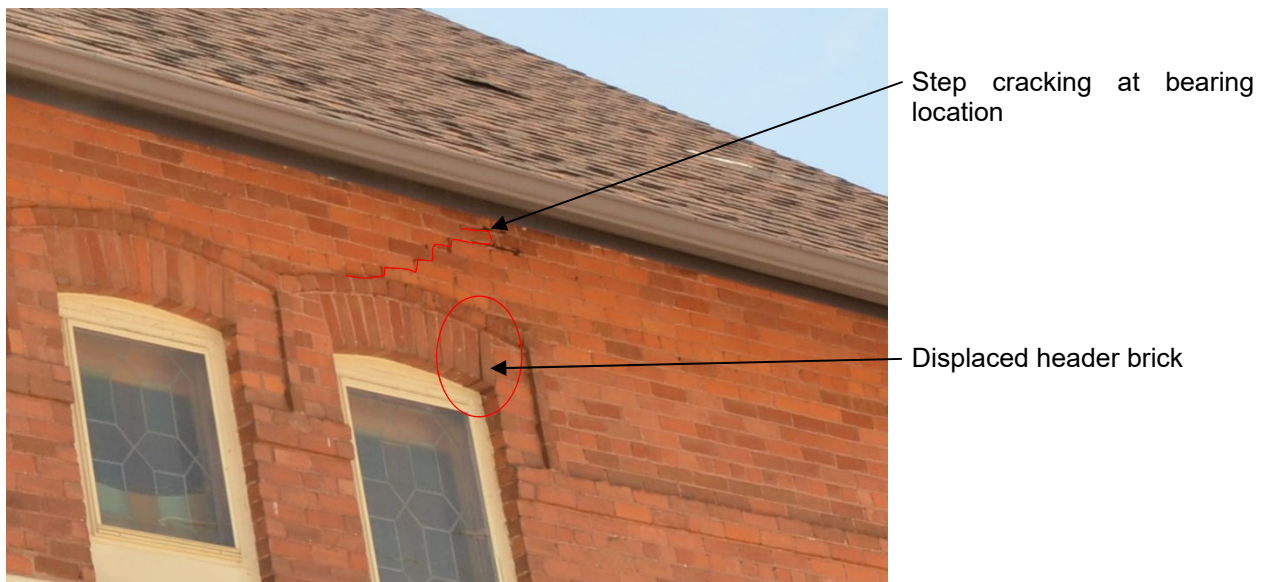
Roof frame three bearing is located immediately above a window opening. Roof frame four bearing is located adjacent to a window opening. This occurs on both the east and west elevations.

At frame four bearing location on the east elevation, there is displaced masonry which is indicative of an overloading condition. There weren't any apparent indications of displacement on the interior of the building.

Repairs including reinforcing of the masonry in these locations is required and is recommended to be completed in the short term.



East Elevation



Truss Bearing Detail







Truss bearing above window location. No apparent interior distress was noted

Frame 3 Interior Elevation – East Wall

Truss bearing above window location. No apparent interior distress was noted



Frame 3 Interior Elevation – West Wall

Record photos were taken and placed in the file.

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<b>Dundalk Olde Town Hall Preliminary Budget</b>			
<b>Item</b>	<b>Description</b>	<b>Value</b>	<b>Priority</b>
1	Deteriorated first floor beam replacement	\$ 15,000.00	1
2	Reinforce first floor beams for 100psf LL and miscellaneous repairs for mechanical intervention	\$ 50,000.00	1
3	Reinforce/repair bearing locations of two trusses at four locations including masonry repairs	\$ 75,000.00	1
4	Roof purlin repair/reinforcing		
	Sister existing purlins 10 locations	\$ 25,000.00	2
	Roof rafter tie down anchors	\$ 3,500.00	2
	Roof rafter collar ties	\$ 1,500.00	2
	Reinforce framing over stage - this could be discretionary depending on stage use and further review	\$ 10,000.00	3
5	Replace west exterior stair and landing section	\$ 20,000.00	2
6	Replace east exterior stair and landing section	\$ 20,000.00	2



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# Dundalk Olde Town Hall

## Mechanical Building Condition Assessment Report

23 July 2019

### INTRODUCTION

Chorley+Bisset Ltd. were retained by Allan Avis Architects to review the condition of the mechanical systems for potential building renovation at the Dundalk Olde Town Hall in Dundalk, ON. Future renovations to the building in the form of performance hall upgrades and associated support facilities were discussed on site, however, a detailed renovation concept has not been developed to date. A high level assessment of the ability of existing mechanical systems to support this proposed renovation is provided, however, a detailed design brief outlining exact equipment sizes and requirements is not in the scope of work of this report.

This building condition assessment report outlines the existing equipment condition and provides recommendations with Class D budget estimate for the proposed upgrades and replacement of equipment.

### MECHANICAL SYSTEMS

Mechanical systems include:

- Plumbing
- Space heating/cooling
- Ventilation
- Fire protection

### CODES AND STANDARDS

The requirements of the following legislation, codes, standards and authorities apply to the design of the mechanical system in this building:

- CSA B149.1-10 – *Natural Gas and Propane Installation Code*
- Ontario Building Code 2012
- Ontario Fire Code 2006
- ASHRAE Standard 62.1-2010 – *Ventilation for Acceptable Indoor Air Quality*

### BACKGROUND AND EXISTING SYSTEMS

The Dundalk Olde Town Hall is a three storey building, constructed in 1905 and consists of ground floor office, kitchen and washroom space, a 2<sup>nd</sup> floor performance hall with two levels of seating with mezzanine and elevated performance platform, and basement mechanical and electrical service space. Over the years, this building has served the town of Dundalk in a variety of capacities, including but not limited to: events and political assembly space, jail, horse stable, and firehall. Currently, half of the ground floor is used as a daycare, and the other half as CCAC office space and public washrooms. The performance hall is temporarily closed to use due to a fire department order.

## Space Heating, Cooling, and Ventilation

### Original Building Ground Floor

The original ground floor of the building is heated and cooled by a 135 MBH gas fired heating, 4 ton DX cooling furnace installed in the basement. The furnace supplies and returns air to/from the above spaces through residential style floor grilles. The thermostat for this unit is located in the CCAC offices on the ground floor. The daycare centre adjacent to the CCAC offices, kitchen, and lounge room is not equipped with its own thermostat, but rely on the setting in the CCAC offices.

There did not appear to be an outside air connection for the furnace, which suggests this unit only recirculates air within the building. In accordance with ASHRAE 62.1, outside air must be supplied to the building corresponding to the room type, occupancy, and room areas. A preliminary calculation of outside air required for the ground floor of the building is approximately 400cfm.

The kitchen is also served by this furnace system. Air is exhausted from the kitchen through a ceiling mounted exhaust fan.

### Ground Floor - Addition

An addition was added on to the back of the original building and is easily distinguishable from the rest of the building by its white siding façade. This section of the building is heated and cooled by a unit ventilator and DX cooling system, respectively. The unit ventilator is floor mounted and features an electric heating coil, supply fan and outside air connection. This unit only operates during the heating season. In the cooling season, the wall mounted A/C unit, manufactured by Fedder, provides 1 ton of cooling to the space. This A/C unit only recirculates air within the space and does not provide any ventilation air to the space.

The adjacent storage space to the main room of the addition is not served by the unit ventilator or A/C unit, but is heated by an electric perimeter radiator.

### Performance Hall

The 2<sup>nd</sup> floor performance hall is heated with electric perimeter heaters. In the auditorium, two heaters run along the exterior wall, one on each side of the room. Two electric heaters are also installed along both sides of the performance platform. These 4 heaters are controlled by a thermostat, mounted on a column in the seating gallery. There is no cooling system serving the performance hall.

There is no system providing ventilation air in the performance hall. Two ceiling fans above the seating gallery provide minimal air circulation. The ASHRAE 62.1 required ventilation load is approximately 1,000 cfm, based on the number of seats. The elevated performance platform requires an additional 450 cfm of ventilation air.

The balcony seating area is not provided with any heating, cooling or ventilation.

### Basement

The basement is heated and cooled by the same furnace unit that serves the ground floor. There are two supply air grilles on the main supply duct. As the duct connections to the grilles are only 5" in diameter, and the age of the basement lends itself to a large amount of outside air infiltration, it is unlikely the air system is sufficiently sized to make a large impact on space temperature.

The first floor is likely to require a new fire rating, therefore fire dampers will need to be provided in all penetrations in the floor. This will require replacement of all of the existing floor registers.



## Washroom Exhaust

Washrooms are served by ceiling mounted exhaust fans which are operated manually by wall switches.

## Plumbing

A ½" domestic water service enters the building in the basement at the south end off of the alleyway. The municipal service appears to be a flexible, rubber type line which is joined to a copper pipe just inside the building. The building has a water meter and backflow preventer, however, the water meter appears to be piped in an arrangement that is likely to bypass most of the water around the water meter. This is shown in Figure 1. It is common for a bypass line to be piped around the water meter with a normally closed valve to allow water into the building when the water meter is being serviced or replaced. It appears this normally closed valve does not exist on this system, and thus, the current arrangement is not in compliance with Ontario Building Code.

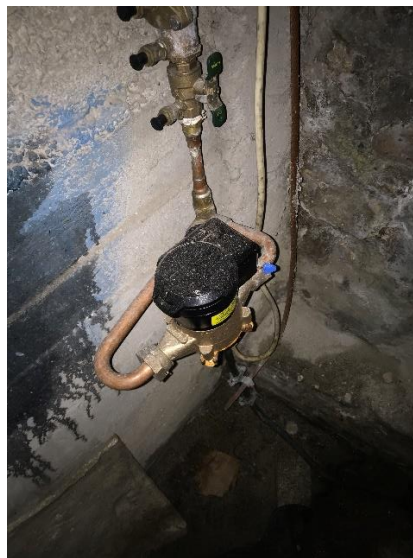


Figure 1: Domestic Water Service

Additionally, the existing water service is undersized to serve the building in conformance with OBC-2012. Building Code stipulates that the plumbing system must be designed to the building's peak demand flow rate. As the building is outfitted with 3 tank type water closets, 3 lavatories, and 1 sink, the peak domestic water flow would result in a water service size of at least 1". As well, OBC-2012, clause 7.6.3.4.1 stipulates a water service to a building can not be less than ¾" in size.

After the water meter and backflow preventer, the domestic cold water line is piped to the domestic water heater, which is a 3kW electric Knight Cascade model with 49 US gallon capacity. After the water heater, ½" domestic hot and cold water pipes serve each plumbing fixture above. None of the domestic water piping within the building is insulated.

The building has three washrooms, consisting of a public men's, public women's and staff washroom. Each washroom consists of one floor mounted, flush tank water closet and vanity lavatory. None of the washrooms are built for barrier free access. The kitchenette has a single, stainless steel sink.

There is a 3" ABS plastic sanitary drain in the ceiling of the basement. This drainage main leaves the building at the northwest corner, under Artemesia St N.

There is no municipal storm system serving the building. The roof is sloped and drains through an eavestrough system with downspouts to grade.

## Fire Protection

There is no sprinkler or standpipe system in the building. Fire extinguishers are installed periodically throughout the building. Ontario Fire Code stipulates a maximum travel distance for fire extinguishers of 25m to any part of the building. The locations of the fire extinguishers are in compliance with this Code.

## EQUIPMENT CONDITION

### Furnace

The furnace was installed in 2011 and appears to be in good operating condition. The cooling section of the furnace is manufactured by Carrier and has a cooling capacity of 4 tons. The gas heating section is manufactured by Lennox (model: G61MPV-60D-135) and has a heating capacity of 135,000 Btu/hr.

The remote condensing unit for the DX cooling coil is mounted several feet above grade in a vandalproof enclosure in the alleyway between buildings. This unit has some signs of aging and wear, as rust is observed on the unit's casing.

Overall, the furnace system appears to be operating as intended. Equipment replacement is not anticipated at this time. The average ASHRAE life expectancy of this type of system is 15 years. This unit is 8 years old, therefore, it should have approximately 6-7 years of remaining service life, however, as with any piece of mechanical equipment, future performance is not guaranteed. Pictures of the furnace and condensing unit are shown in Figures 2.



Figure 2: Furnace and Condensing Unit

### Unit Ventilator

The age and model of the unit ventilator is unknown, however, the unit appears to be in poor operating condition. There is significant rust on the inside grille, indicating the possibility of moisture entrainment from the outdoors. The outside air intake for the ventilator is also very small and obstructed by shielding. In our opinion, the opening size is not sufficient to satisfy the ASHRAE 62.1 required ventilation load for the space. As such, the unit ventilator should be replaced with a unit appropriately sized to both heat, cool and ventilate the space. A picture of the unit ventilator is shown in Figure 3.



Figure 3: Unit Ventilator

### Wall Mounted Air Conditioner

There is a wall mounted air conditioning unit, mounted above the unit ventilator. The unit is a Fedders model 1FE1012, 12,000 Btu/hr cooling only unit. The age of this system is unknown, however, both the indoor unit and condensing unit appear to be in reasonable condition. Pictures of the indoor unit and condensing unit are shown in Figure 4.



Figure 4: Addition Air Conditioning Unit



Although this unit can provide cooling to the space during the summer, it does not provide any ventilation air to the space. In order to provide the required ventilation air and cooling to the addition in the summer, both the unit ventilator and the air conditioning unit are required to run simultaneously, with the unit ventilator fan running and heating off, and the air conditioner running, recirculating the ventilation air.

### Domestic Water Heater

The age of the domestic water heater is unknown. The heater is showing significant signs of aging, including rusting on the casing and at joints. The heater appears to be functioning, however. The average ASHRAE life expectancy of this equipment is 15 years.

The manufacturer of the heater, Knight Industries Limited, has since been bought out by Giant. The Cascade model line has been taken over by Giant and is still supported, so replacement parts should be available should the heating element require replacement. As the unit does appear to be old, and the municipal water not treated or softened within the building, it is expected that there may be some scaling inside the heater on the heating elements. This cannot be verified however without opening up the heater.

### Plumbing Fixtures

The plumbing fixtures appear to be in good condition.

## RECOMMENDATIONS

Recommendations are arranged below in order of priority, with Priority 1 being the most critical and immediately required renovations, and Priority 5 being discretionary. An explanation of each priority rating is below:

### **Priority 1: Current and Critical - Immediate**

Immediate necessities to maintain ongoing operations, address life safety and liability issues, structural issues, and maintenance issues that will avoid short-term causal building deterioration.

### **Priority 2: Potentially Critical within 1 Year and Required to Reopen Performance Hall to Public**

Existing conditions that will become critical within the next year if not corrected. Maintenance items which should be attended to sooner rather than later due to expired service life, accelerated deterioration and/or escalating costs.

### **Priority 3: Necessary But Not Yet Critical - Years 2 to 5**

Maintenance items which should be scheduled in the next 5 years. The longer that maintenance repair is delayed, the more expensive it becomes.

### **Priority 4: Recommended - Years 6 to 10**

Improvements that are sensible and/or reasonably anticipated to increase overall usability and/or reduce long-term maintenance costs.

### **Priority 5: Discretionary**

Aesthetic or appearance issues; items that are important from a psychological standpoint and can be implemented when convenient. Enhancements that would be nice to have, if they can be afforded.

## Priority 1: Current and Critical- Immediate Renovation Required

As part of earlier building condition assessment reports of this building, the requirement for a 45 min fire rating of the floor was identified to comply with Ontario Building Code. As this would be a very significant renovation to the building's structure, a viable alternative to this renovation is to provide a sprinkler system in the building. This would exempt the building from needing a floor fire rating.

To provide a sprinkler system in the building, a new municipal water service will need to be provided to the building as the existing service is not sufficient. A dedicated DCVA check valve, zone valves, supervised valves, etc will need to be provided as well in compliance with NFPA 13 code. This equipment will be installed in the basement in the area adjacent to the existing water service. For the purposes of this report and budget, we will assume that the available municipal pressure is enough to serve a sprinkler system. If it is found that the municipal pressure is not sufficient, a fire pump and other measures to increase municipal pressure such as reservoir pond, may be required.

## Priority 2: Potentially Critical within 1 Year and Required to Re-open Performance Hall to Public

### Performance Hall

At a minimum, to support assembly in this space, approximately 1,300-1,500 cfm of outside air needs to be supplied into the performance hall. This air would need to be tempered to 70-75F to provide neutral air to the space (neither heating or cooling), and thus the dedicated outside air system (DOAS) would require an energy recovery wheel, and either gas or electric heating coil. The existing perimeter baseboard heaters would remain, and there would be no mechanical cooling available. This DOAS unit could be installed in the attic above the performance hall, on grade behind the building, or on the lower north roof.

The above option provides a minimum level of control over occupant comfort, and would allow the room to be used again for assembly per ASHRAE 62.1. If increased operational and temperature control is desired (i.e. heating, cooling, demand controlled ventilation, etc), this increases the unit size and cost, however, as plans for the use of the space have not been fully developed, speculation on exact equipment requirements is outside of the scope of this report.

### Plumbing

At a minimum, we suggest that all domestic water plumbing pipes be insulated. On the hot water service, this saves energy by not wasting heat. On the cold water service, this helps avoid pipe sweating, which can damage walls and insulation over time. The incoming domestic water service and water meter should also be re-piped to fix the bypass of the water meter.

As well, the existing municipal water service should be replaced with a 1" minimum service in compliance with OBC-2012 requirements.

### Furnace

In our opinion, the furnace can remain provided the occupancy on the ground floor remains similar to how it is currently being used (office space). If this is the case, the heating and cooling capacity of the furnace should be sufficient to serve future renovations.

We do recommend however, that an outside air connection be made with the furnace to comply with ASHRAE 62.1 guidelines. As mentioned above, the estimated ventilation rate required for the ground floor is approximately 400cfm. This would correspond to a 10"x8" duct, connected to the main return duct back to the furnace. This duct would be connected to outdoors via a small brick vent. To ease the ventilation load on the existing furnace, we also recommend a small, residential style heat recovery ventilator (HRV) be installed prior to the connection to the main return duct. A small amount of return

air will be sent to the HRV to pre-heat/pre-cool incoming ventilation air, reducing the amount of energy required to be used by the furnace.

If a fire rating does end up being required between the basement and first floor, all penetrations of this floor, including floor grilles and registers, will require fire dampers. As such, all floor grilles and registers will require replacement if a fire rating is required.

### **Priority 3: Necessary but Not Yet Critical – Years 2-5**

#### **Domestic Water Heater**

Although the domestic water heater is still operational, due to its age, and the high possibility of significant scaling inside, we suggest the water heater be replaced within the next 2-5 years with a small, gas fired heater. The reason we suggest the heater be switched from electric to gas fired is due to the low cost of gas relative to electricity in Ontario. This will lower the annual utility costs of the building, and as the natural gas service is located next to the heater, the initial upfront cost for the gas heater will only be marginally more than a replacement electric heater.

### **Priority 4: Recommended – Years 6-10**

#### **Air Distribution**

We recommend that zone dampers be installed in the ductwork serving individual suites and support spaces. This comes as part of a VVT kit available by Carrier and other furnace manufacturers and would allow each of these spaces to have individual control over their temperature, increasing occupant comfort. Currently, all spaces are controlled by the temperature in the CCAC office, which may be unoccupied while the daycare is in operation. In order to install these zone dampers, ductwork in the basement will have to be revised slightly so that all of the air serving a space passes through the same damper before branching off to individual registers.

#### **Ground Floor Addition**

We recommend both the unit ventilator and air conditioning unit in the north suite be replaced with a combined electric heating/cooling horizontal unit ventilator with remote condensing unit. This unit would be able to provide both the heating/cooling and ventilation for the space at all times of the year without the need for two separate systems to be running at the same time. To provide ASHRAE 62.1 compliant outside air, a larger outside air opening and louvre will be provided. This unit will only be slightly larger than the current unit ventilator serving this area.

Alternatively, a vertical style unit ventilator can be installed in the corner, and a small closet built around the unit to conceal it. This style of unit would discharge air out of the top of cabinet above the ceiling grid, allowing ductwork and traditional ceiling diffusers to be installed. This will increase occupant comfort as currently, due to the geometry of the room, it is unlikely air is fully mixed and the far side of the room remains unconditioned. Additionally, with the vertical style unit ventilator, ductwork can be sent to the adjacent storage room to provide heating/cooling, and ventilation there as well. Currently this room is only served by a perimeter rad. This is especially important if there are future plans to renovate this space into an office.

### **Priority 5: Discretionary**

#### **Air Distribution**

We recommend revisions to the floor return grilles to increase occupant comfort and useability in the CCAC offices and daycare. The return grilles can be moved from the floor to low level along the walls. This would be done by constructing a small knee wall in a discreet location and extending return ductwork to a grille mounted on the face of the knee wall. This would be a much more user friendly approach than the current, large floor mounted grille. In an environment where furniture may be moved around, office chairs moved, or children playing on the floor, these large open grilles mounted in the

floor serve as a nuisance, and over time get dented, chipped, etc, impacting the overall aesthetic of the space.

### Plumbing

While the existing plumbing fixtures are operational, aesthetically, they are showing some age. At the Owner's discretion, these fixtures can be replaced with modern fixtures to increase the overall aesthetic of the space.



## BUDGETS

Please note budget numbers presented for the performance hall are based on the minimum work required to provide ventilation in accordance with ASHRAE 62.1. These numbers are high level and depend greatly on final location of equipment, structural and architectural implications, changes to occupancy in the performance hall, etc. As such, the budget number presented is intended as a rough estimate to start the conversation about renovation in the performance hall, and not as an accurate estimate of true construction cost. If a unit capable of heating and cooling the space is provided, the budget price should be increased by approximately \$50,000.

There is a 6" municipal water line located at the southwest corner of the building. The cost of excavating to tie into the municipal system and running new pipe below grade is highly variable on particular site conditions, and should be considered by the civil consultant. We have included an allowance for this work in our budget below.

Item	Price (\$)
<b>Plumbing</b>	
Insulate Hot and Cold Water Lines	5,000
Re-pipe Domestic Water Meter	1,500
Replace Domestic Water Heater (incl. installation, gas fitting, venting, etc)	10,000
Optional: Provide new water closets, lavs and sinks	9,000
Demolition	500
<b>Subtotal:</b>	<b>26,000</b>
<b>HVAC</b>	
Provide and Install New Unit Ventilator for north Addition Space	30,000
Install Ductwork and Ceiling Diffusers for north Addition Space	10,000
Provide and Install Electric Reheat Coils for Furnace System (incl. thermostats and wiring and ductwork revisions)	10,000
Provide Outside Air Duct Connection to Furnace	5,000
Install Wall Return Grilles in CCAC, Daycare, Kitchen, and Lounge (incl. ductwork revisions)	7,500
Demolition	5,000
<b>Subtotal:</b>	<b>67,500</b>
<b>Performance Hall</b>	
Provide and Install 1,500 cfm DOAS Unit	35,000
Sheet Metal (ductwork and diffusers)	25,000
Insulation	10,000
Controls (local control only)	5,000
Structural	TBD
Architectural	TBD
<b>Subtotal:</b>	<b>75,000</b>
<b>Fire Protection - Sprinkler System</b>	
Provide and Install Sprinkler System, incl. Backflow Preventer, Zone Valves, etc.	35,000
Fire Hydrant, Site Service Connections (allowance)	10,000
<b>Subtotal:</b>	<b>45,000</b>
<b>Project Subtotal:</b>	<b>213,500</b>
Contractor Overhead and Profit	16,000
Construction Contingency	20,000
Mobilization, Closing, Post Construction	10,000
<b>Project Total Cost:</b>	<b>259,500</b>



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# Dundalk Olde Town Hall

## Electrical Building Condition Assessment Report

23 July 2019

### INTRODUCTION

Chorley+Bisset Ltd. were retained by Allan Avis Architects to review the condition of electrical systems for potential renovation or replacement at the Dundalk Olde Town Hall in Dundalk, ON. The purpose of this building condition assessment is to assess the viability of existing infrastructure to support full performance hall re-occupancy of the building. Future renovations to the building in the form of performance hall upgrades and associated support facilities were discussed on site. A high level assessment of the ability of existing electrical systems to support this proposed renovation is provided, however, a detailed design brief outlining exact equipment sizes and requirements is not in the scope of work of this report and is not provided.

This building condition assessment report outlines the existing equipment condition and provides recommendations with Class D budget estimate on required upgrades, or replacement of equipment.

### ELECTRICAL SYSTEMS

Electrical system types are expected to include:

- Electrical Service, Distribution and Wiring Devices
- Lighting and Controls
- Fire Alarm System
- Voice/Data (Communications) Systems
- Security System
- Audio System

### Codes and Standards

The following Codes and Standards will be used as design guides for this project:

- The Ontario Building Code (OBC) 2012
- Ontario Electrical Safety Code (OESC), 27<sup>th</sup> Edition, 2018
- ASHRAE/IES Standard 90.1-2013 *Energy Efficient Design of New Buildings*

### BACKGROUND AND EXISTING SYSTEMS

The Dundalk Olde Town Hall was originally constructed in 1905 and consists of ground floor offices, kitchen and washroom space, a 2<sup>nd</sup> floor performance hall with two levels of seating and an elevated performance platform, and basement mechanical and electrical services space. Over the years, this building has served the town of Dundalk in a variety of capacities, including but not limited to: events and political assembly space, jail, horse stable, and firehall. Currently, half of the ground floor is used as a daycare, and the other half of the ground floor as administration office space and public washrooms. The performance hall is temporarily closed for use due to a Fire Department order.

## Electrical Service, Distribution and Wiring Devices

The hydro service is a 400A, 1PH 3W service with main panel and distribution located in the basement. A utility meter base is located on the exterior facing Artemesia St and served by an overhead service to the local utility hydro line.

In general, the existing panels are older and out of date, but appear to be in good repair. Most panels have some space available to add additional loads. The panel at performance platform is full and the surrounding wall space is full of devices and wiring. Existing wiring is installed haphazardly throughout the entire building. Armoured cable is primarily used.

Existing devices appear to be in working order. Ground Fault Circuit Interrupter protected receptacles were found nearby sinks as required by Code.

The childcare area did not appear to have tamper-resistant receptacles. Although the electrical code is not retroactive, we recommend upgrading these devices.

Electrical heating appears to be in working order but is older, out of date in some cases housings are rusted and showing age.

## Lighting and Controls

Most of the existing luminaires are fluorescent troffers. They appear to be in reasonable condition with some sagging lenses. Some areas have surface strip fluorescent luminaires without lenses.

Storage and service spaces have a combination of older incandescent bulbs and fluorescent luminaires.

Lighting controls are mostly toggle switch type with some dimming.

Existing exit signs are older fluorescent style. Coverage in general appears to be adequate.

Emergency lights are incandescent dual and single heads served by several battery packs. Coverage appears to be adequate.

## Fire Alarm

The existing building has combination smoke and carbon monoxide detectors throughout. Coverage appears to be adequate. This is a requirement for the daycare space is sleeping is part of the service.

It is not clear if the existing detectors are monitored through the security system.

The potential occupancy load of the building is over 150. Based on this number, a fire alarm system is required by current Building Code. Any significant renovations should include installation of a new fire alarm system.

## Voice/Data (Communications) System

The existing Bell phone demarcation point is located in the basement. The existing system will be adequate for future use of the facility.

The existing Meridian phone system is older and out of date. This platform is no longer supported by the manufacturer and will require replacement in the near future.

It is unclear how internet and network service is distributed throughout the facility. In general, both phone and data wiring is installed haphazardly with outlets on walls in poor condition, wiring strung surface mounted across walls and floors.

### Security System

An existing DSC 1500 series security panel was observed. This panel is in good condition and the manufacturer still supports the system. Coverage was minimal, utilizing motion sensors.

### Audio System

The existing performance platform and auditorium audio system appear to be in working order. This was not verified during our investigation.

## RECOMMENDATIONS

Recommendations are arranged below in order of priority, with Priority 1 being the most critical and immediately required renovations, and Priority 5 being discretionary. An explanation of each priority rating is below:

### **Priority 1: Current and Critical - Immediate**

Immediate necessities to maintain ongoing operations, address life safety and liability issues, structural issues, and maintenance issues that will avoid short-term causal building deterioration.

### **Priority 2: Potentially Critical within 1 Year and Required to Reopen Performance Hall to Public**

Existing conditions that will become critical within the next year if not corrected. Maintenance items which should be attended to sooner rather than later due to expired service life, accelerated deterioration and/or escalating costs.

### **Priority 3: Necessary But Not Yet Critical - Years 2 to 5**

Maintenance items which should be scheduled in the next 5 years. The longer that maintenance repair is delayed, the more expensive it becomes.

### **Priority 4: Recommended - Years 6 to 10**

Improvements that are sensible and/or reasonably anticipated to increase overall usability and/or reduce long-term maintenance costs.

### **Priority 5: Discretionary**

Aesthetic or appearance issues; items that are important from a psychological standpoint and can be implemented when convenient. Enhancements that would be nice to have, if they can be afforded.

### **Priority 1: Current and Critical – Immediate**

#### Fire Alarm

If the performance hall is re-occupied, the occupant load of the facility will be over 150, requiring a fire alarm system.

### Security System

A new fire monitoring panel is required as part of the ULC monitoring requirement for a fire alarm system. This system will also provide perimeter security monitoring. An existing DSC 1500 series security panel can be utilized and expanded. We recommend more thorough coverage of all spaces be considered.

### **Priority 2: Potentially Critical within Next Year 1 and Required to Reopen Theatre to Public**

There are no Priority 2 electrical recommendations.

### **Priority 3: Necessary But Not Yet Critical - Years 2 to 5**

#### Lighting and Controls

Replace exit signs and emergency lights with newer LED type. Existing batteries have likely reached or nearly approached their end of useful life.

### **Priority 4: Recommended - Years 6 to 10**

#### Electrical Service, Distribution and Wiring Devices

Consider replacing the panel at elevated performance platform with new and tidy up the wall space.

A substantial renovation will initiate a complete distribution replacement.

Additional wiring devices may be required to suit any planned renovations. Consider replacing the receptacles with tamper-resistant devices in areas subject to occupancy by children.

#### Lighting and Controls

Fluorescent and incandescent luminaires are soon to be discontinued by manufacturers. It is recommended that a transition to LED luminaires be considered.

When replacing luminaires with LED, new controls can be provided at that time.

### **Priority 5: Discretionary**

#### Electrical Service, Distribution and Wiring Devices

Replace baseboard heaters with new in areas receiving renovations.

#### Voice/Data (Communications) System

We recommend cleaning up the cabling throughout the facility and locate a dedicated space for both phone and data cabling. This will be dependent on the type of occupancy and user groups.

#### Audio System

The existing audio systems can likely be used and expanded upon to serve the space.

## **BUDGETS**

Please note budget numbers presented for the performance hall are based on the minimum work required to provide Code compliant ventilation. These numbers are high level and depend greatly on final location of equipment, structural and architectural implications, changes to occupancy in the performance hall, etc.

As such, the budget number presented is intended as a rough estimate to start the conversation about renovation at second floor level, and not as an accurate estimate of true construction cost.

Item	Price (\$)
<b>Electrical Distribution and Wiring Devices</b>	
Replace Panels (approx. 4)	20,000
Organize and replace wiring	2,500
Wiring device replacements	2,500
<b>Subtotal:</b>	<b>25,000</b>
<b>Lighting and Controls</b>	
Provide new LED luminaires throughout	15,000
Provide LED house lights in performance hall	10,000
Provide new controls	5,000
Provide exit and emergency lighting	5,000
<b>Subtotal:</b>	<b>35,000</b>
<b>Fire Alarm</b>	
Provide new fire alarm system	35,000
<b>Subtotal:</b>	<b>35,000</b>
<b>Voice/Data</b>	
Provide new wiring	5,000
Provide new phone system	7,500
<b>Subtotal:</b>	<b>12,500</b>
<b>Security System</b>	
Provide expansion	7,500
<b>Subtotal:</b>	<b>7,500</b>
<b>Project Subtotal:</b>	<b>115,000</b>
Contractor Overhead and Profit	10,000
Construction Contingency	10,000
Mobilization, Closing, Post Construction	5,000
<b>Project Total Cost:</b>	<b>140,000</b>



## **Appendix B**

1986 OBC definition of "stage"  
BCC Ruling #97-16-558, dated 28-May-1997  
BCC Ruling #00-38-770, dated 10-Aug-2000  
BCC Ruling #10-03-1239, dated 21-Jan-2010

## 1986 Ontario Building Code

### 1.3.2

*Smoke detector* means a *fire detector* designed to operate when the concentration of airborne combustion products exceeds a pre-determined level.

*Soil* means that portion of the earth's crust which is fragmentary, or such that some individual particles of a dried sample may be readily separated by agitation in water; it includes boulders, cobbles, gravel, sand, silt, clay and organic matter.

*Space heater* means a *space-heating appliance* for heating the room or space within which it is located, without the use of ducts.

*Space-heating appliance* means an *appliance* intended for the supplying of heat to a room or space directly, such as a *space heater*, fireplace or *unit heater*, or to rooms or spaces of a *building* through a heating system such as a central *furnace* or *boiler*.

*Sprinklered* means equipped with a system of automatic sprinklers.

*Stage* means a space designed primarily for theatrical performances with provision for quick change scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects and which is traditionally, but not necessarily, separated from the audience by a proscenium wall and curtain opening.

*Starting platform* means a rigid platform located entirely on the *pool deck* consisting of a top which, if projected horizontally over the water surface, would be less than 1 m in vertical height above the surface and that is designed to be used by a swimmer to dive from at the start of a swimming race.

*Storage garage* means a *building* or part thereof intended for the storage or parking of motor vehicles and which contains no provision for the repair or servicing of such vehicles.

*Storage-type service water heater* means a *service water heater* with an integral hot water storage tank.

*Storey* means that portion of a *building* which is situated between the top of any floor and the top of the floor next above it, and if there is no floor above it, that portion between the top of such floor and the ceiling above it.

*Stove* means an *appliance* intended for cooking and space heating.

*Street* means any highway, road, boulevard, square or other improved thoroughfare 9 m or more in width, which has been dedicated or deeded for public use, and is accessible to fire department vehicles and equipment.

*Subsurface investigation* means the appraisal of the general subsurface conditions at a *building* site by analysis of information gained by such methods as geological surveys, in situ testing, sampling, visual inspection, laboratory testing of samples of the subsurface materials and *groundwater* observations and measurements.

*Suite* means a single room or series of rooms of complementary use, operated under a single tenancy, and includes *dwelling units*, individual guest rooms in motels, hotels, boarding houses, rooming houses and dormitories as well as individual stores and individual or complementary rooms for *business and personal services occupancies*. (See Appendix A.)

*Supply duct* means a duct for conveying air from a heating, ventilating or air-conditioning *appliance* to a space to be heated, ventilated or air-conditioned.

*Theatre* means a place of public assembly intended for the production and viewing of the performing arts or the screening and viewing of motion pictures, and consisting of an auditorium with permanently fixed seats intended solely for a viewing audience.



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You are here > [Home](#) > [Your Ministry](#) > [Ontario Building Code](#) > [Appeals & Approvals](#) > [Building Code Commission](#) > [Rulings of the Building Code Commission](#) > [1997](#) > BCC Ruling No. 97-16-558

## BCC Ruling No. 97-16-558

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### **BUILDING CODE COMMISSION DECISION ON B.C.C. #97-16-558**

**IN THE MATTER OF** Subsection 24 (1) of the Building Code Act, 1992.

**AND IN THE MATTER OF** Article 3.3.2.13. of "the Building Code" (Ontario Regulation 419/89 as amended by Ont. Reg. 183/88, 581/88, 11/89 and 115/89).

**AND IN THE MATTER OF** an application by Mr. Stephen Roth, General Manager, Waterloo Stage Theatre, 24 King Street North, Waterloo, Ontario, for the resolution of a dispute with Mr. Anthony Krimmer, Chief Building Official, City of Waterloo, concerning whether the performance area is a stage and thus subject to the requirements of Article 3.3.2.13 of the Ontario Building Code, at the Waterloo Stage Theatre, Waterloo, Ontario.

#### **APPLICANT**

Mr. Stephen Roth, General Manager  
Waterloo Stage Theatre  
24 King Street North  
Waterloo, Ontario

#### **RESPONDENT**

Mr. Anthony Krimmer  
Chief Building Official  
City of Waterloo

#### **PANEL**

Mr. Michael Lio, Chair  
Ms. Susan Friedrich  
Mr. Ross Thomson

#### **PLACE**

Toronto, Ontario

#### **DATE OF RULING**

Wednesday, May 28th, 1997

**APPEARANCES**

Mr. Stephen Roth  
General Manager  
Waterloo Stage Theatre

**The Applicant**

Mr. Peter Ciuciura  
L. Alan Grinham Architects &  
Mr. Johnathan Rubes  
Leber Rubes Inc.

**Agents for the Applicant**

Mr. Anthony Krimmer  
Chief Building Official  
City of Waterloo

**The Respondent****RULING****1. The Applicant**

Mr. Stephen Roth, General Manager, Waterloo Stage Theatre, is a person who has applied for a permit under the *Building Code Act, 1992* to renovate an existing 500 seat cinema for live theatre productions. The building is 1 storey with a partial mezzanine at one end that had previously been used as a projection booth and a small basement for mechanical equipment. The building contains a fire alarm system and has sprinklers servicing the stage area.

**2. Description of Construction**

The proposed renovation would erect a new stage. Across the rear portion of the stage would be a small open mezzanine space. The seating capacity would be reduced to 252. Some modifications are to be made to the existing projection booth to allow for light and sound control.

**3. Dispute**

The issue under dispute between the Applicant and the Respondent is whether the proposed performance area is a stage as defined by the 1990 Ontario Building Code (OBC) and whether the subject area is required to be designed in accordance with OBC Article 3.3.2.13.

**4. Provisions of the Building Code****3.3.2.13. Stages for Theatrical Performances**

1. Stages for theatrical performances and ancillary spaces, such as workshops, dressing rooms and storage areas shall be *sprinklered*.

2. A *fire separation* with a *fire-resistance rating* of not less than 1 h shall be provided between every stage for theatrical performances and ancillary spaces, such as workshops, dressing rooms and storage areas.

3. Every *stage* for theatrical performances and ancillary spaces, such as workshops, dressing rooms, and storage areas, shall be separated from the seating space by a *fire separation* having a *fire-resistance rating* of not less than 1 h, except for a proscenium opening which shall be protected with

- (a) a sprinkler deluge system conforming to the requirements of paragraph 4-4.20 of NFPA 13 "Standard for the Installation of Sprinkler Systems",
- (b) an unframed fire curtain when the opening is not more than 20 m (65 ft 7 in) wide, or
- (c) a semi-rigid fire curtain when the opening is more than 20 m (65 ft 7 in)

4. Every fire curtain as required by Sentence (3) shall be designed to close

- (a) automatically by heat-actuated devices,
- (b) automatically upon the actuation of the sprinkler system,
- (c) automatically upon the actuation of the fire alarm system, and
- (d) manually by remote control devices located at the curtain control panel and at each side of the stage.

5. Not less than 2 vents for the purpose of venting fire and smoke to the outside of a *building* shall be provided above every stage designed for theatrical performances and shall

- (a) have an aggregate area of not less than one eighth of the area of the stage behind the proscenium opening, and
- (b) be arranged to open automatically by means of
  - (i) heat-actuated devices, or
  - (ii) actuation of the sprinkler system.

#### **1.1.3.2. Definitions of Words and Phrases**

*Stage* means a space designed primarily for theatrical performances with provision for quick change scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects and which is traditionally, but not necessarily, separated from the audience by a proscenium wall and curtain opening.

#### **5. Applicant's Position**

The Applicant submitted that the performance area of the Waterloo Stage Theatre does not meet the OBC definition of a stage. Accordingly, they believe the provisions of Article 3.3.2.13. should not apply. This view is based on the fact that while the subject stage does include lighting equipment, it does not contain facilities to provide quick change scenery, especially side stages, a fly tower and accompanying equipment. The lack of these facilities means that ancillary space is limited and any fire would be quite noticeable by the audience. Further, the exit capacity is approximately double the occupant load, the

farthest travel distance is 20 m, and the stage is currently sprinklered.

## 6. Chief Building Official's Position

The Respondent submitted that the proposed performance area should be considered a stage under the OBC and therefore should be designed to meet the full requirements of Article 3.3.2.13. As a result the stage should include 1 h rated proscenium opening, either a "fire curtain" or deluge sprinkler system, and a fire and smoke venting system.

## 7. Commission Ruling

It is the decision of the Building Code Commission that the stage provides sufficiency of compliance to the requirements of the Building Code provided:

1. quick response sprinklers are installed over the stage and ancillary areas,
2. smoke detection, connected to an alarm system, is installed over all stage areas including the ancillary room at the rear of the stage and below the mezzanine area, and
3. the area under the stage is sealed such that it cannot be used for storage.

## 8. Reasons:

1. The theatre, stage and back of the house areas are of limited size.
2. The theatre has limited seating capacity.
3. A sprinkler system will be provided.
4. Adequate exits will be provided.
5. The maximum travel distance does not exceed 20 m.
6. There are no provisions for quick change scenery or fly towers, which limits the combustible load on the stage.

Dated at Toronto this 28th day in the month of May in the year **1997** for application number **1997-19**.

Michael Lio, Chair  
Susan Friedrich  
Ross Thomson

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## BCC Ruling No. 00-38-770

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### **BUILDING CODE COMMISSION DECISION ON B.C.C. # 00-38-770**

**IN THE MATTER OF** Subsection 24 (1) of the Building Code Act, 1992.

**AND IN THE MATTER OF** Articles 1.1.3.2. and 3.3.2.12 of Regulation 403, as amended by O. Reg. 22/98, 102/98, 122/98, 152/99, 278/99, 593/99, 597/99 and 205/00 (the "Ontario Building Code").

**AND IN THE MATTER OF** an application by Mr. Franco Lora, Project Coordinator, City of Toronto, Economic Development, Culture & Tourism, Toronto, Ontario, for the resolution of a dispute with Mr. Yaman Uzumeri, Chief Building Official, City of Toronto, Ontario, to determine whether the proposed elevated platform should be considered a stage and must therefore comply with Article 3.3.2.12. of the Ontario Building Code at the Lakeshore Grounds Assembly Hall, 3121 Lakeshore Blvd. West, Toronto, Ontario.

### **APPLICANT**

Mr. Franco Lora, Project Coordinator  
Economic Development, Culture & Tourism, City of Toronto  
Toronto, Ontario

### **RESPONDENT**

Mr. Yaman Uzumeri  
Chief Building Official  
City of Toronto

### **PANEL**

Dr. Kenneth Peaker, Chair  
Mr. Michael Steele  
Mr. Donald Pratt

### **PLACE**

Toronto, Ontario

### **DATE OF HEARING**

August 10th, 2000

**DATE OF RULING**

August 10th, 2000

**APPEARANCES**

Mr. David Hine, Principal  
Hine Reichard Tomlin Inc.  
Toronto, Ontario

**Agent for the Applicant**

Mr. Sait Toprak  
Manager, Plan Examination  
City of Toronto

**Designate for the Respondent****RULING****1. The Applicant**

Mr. Franco Lora, Project Coordinator, City of Toronto, Economic Development, Culture & Tourism, Toronto, Ontario, has received a building permit under the Building Code Act, 1992 and is currently constructing an addition onto, and renovating the interior of, a facility known as the Lakeshore Grounds Assembly Hall, 3121 Lakeshore Blvd. West, Toronto, Ontario.

**2. Description of Construction**

The building at issue is an existing community centre that is described as two storeys in building height, 740 m<sup>2</sup> in building area, facing one street and is of combustible construction. (The new construction will be of noncombustible material.) The existing structure contained meeting rooms for a variety of purposes and a multipurpose room and was classified as having a Group A - Division 2 major occupancy. As part of the renovations currently underway, the multipurpose room is being converted into a multiuse assembly hall that can accommodate dances, lectures and theatrical events. This portion of the building is classified as having a Group A - Division 1 occupancy.

The completed facility will be equipped with a sprinkler system and a single stage fire alarm system.

The construction in dispute involves the renovation of the multipurpose assembly hall, specifically the proposed addition of a raised platform to be constructed at the south end of the hall. This platform will serve as the area upon which theatrical performances, lectures and speeches will occur. To enhance the viewing of these activities on the platform, telescopic seating is proposed to be installed in approximately the northern half of the hall facing the platform. The platform area is 78.5 m<sup>2</sup>, the curtain area (at 6.6 m in width and 4.5 m in height) is approximately 30 m<sup>2</sup> and the ceiling height is 6 m, as measured from the platform. It does not include a fly tower above nor a backstage area. As well, the platform area, as is the case for the rest of the building, will be sprinklered, but the Applicant does not intend to equip the proscenium opening with a fire curtain nor a sprinkler deluge system.

**3. Dispute**

The issue at dispute between the Applicant and Respondent is whether the proposed elevated platform should be considered a stage and must therefore comply with Article 3.3.2.12. of the Ontario Building Code.

This provision sets out certain fire safety requirements for stages used for theatrical performances that address the greater hazard associated with the production of theatrical performances such as increased fire load and overhead lighting. It includes requirements to sprinkle the stage (Sentence (1)), to provide a 1 hour fire separation between the stage and its ancillary spaces (Sentence (2)), to provide a 1 hour separation between the stage (including ancillary spaces) and the seating area and, to maintain this separation at the proscenium opening, to install a fire curtain or a sprinkler deluge system (Sentence (3)), and to provide at least two vents (Sentence (5)). These provisions, however, obviously only apply when a stage is involved. In order to ascertain if the requirements of Article 3.3.2.12. apply, it must be determined whether the raised platform is a stage.

#### **4. Provisions of the Ontario Building Code**

##### **Article 1.1.3.2. Defined Terms - Stage**

Stage means a space designed primarily for theatrical performances with provision for quick change scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects and which is traditionally, but not necessarily, separated from the audience by a proscenium wall and curtain opening.

##### **Article 3.3.2.12. Stages for Theatrical Performances**

1. A stage for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas, shall be sprinklered.
2. A fire separation with a fire-resistance rating not less than 1 h shall be provided between a stage for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas.
3. Except as permitted by Sentence (6), a stage for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas, shall be separated from the seating area by a fire separation having a fire-resistance rating not less than 1 h, except for a proscenium opening protected with
  - a. a sprinkler deluge system conforming to the requirements of NFPA 13 ?Standard for the Installation of Sprinkler Systems?,
  - b. an unframed fire curtain if the opening is not more than 20 m (65 ft 7 in) wide, or
  - c. a semi-rigid fire curtain if the opening is more than 20 m (65 ft 7 in) wide.
4. A fire curtain required by Sentence (3) shall be of a type designed to close
  - a. automatically upon the actuation of the sprinkler system,
  - b. automatically upon actuation of the fire alarm system,
  - c. manually by remote control devices located at the curtain control panel and at each side of the stage, and
  - d. automatically by heat-actuated devices.
5. At least 2 vents for the purpose of venting fire and smoke to the outside of a building shall be provided above a stage designed for theatrical performances and shall
  - a. have an aggregate area not less than one eighth of the area of the stage behind the proscenium opening, and
  - b. be arranged to open automatically upon actuation of the sprinkler system.
  - c. The fire separation referred to in Sentence (3) is not required between a stage and a seating area in a

floor area that is sprinklered, provided a sprinkler deluge system is installed at the boundary between the stage and the seating area.

## 5. Applicant's Position

The Agent for the Applicant submitted that the proposed raised platform does not meet the definition of stage as set out in the OBC. He argued that the platform is simply an elevated area that is to be used as the focal point of the room and is raised to enhance the viewing of activities that will occur in the hall. He noted that the platform does not have a fly tower nor a backstage area. Moreover, since at least approximately 85 percent of the platform is visible from the seating area there is also very little in the way of wing space at the sides of the platform. Because of these limitations, the facility is not capable of accommodating productions that include large moveable scenery that may have a high combustible load.

The Agent then stated that Article 3.3.2.12. and its stage requirements, in his view, is intended to apply to large theatres such as the Princess of Wales Theatre in Toronto and others of its size. As he argued, OBC 3.3.2.12. deals with large stages that have the capacity for quick change scenery for which a fly tower is necessary. Such theatres also have large combustible loads, are equipped with sophisticated lighting systems and they are able to produce many complicated visual effects. This is not the case with the subject building, the Agent noted.

The Agent continued by stating that the hall is a multipurpose space and is not specifically designed for theatre productions. He noted that the seating can be folded up and the space can be used for athletic activities like fitness classes or for weddings, etc. The hall, the Agent added, is "reminiscent of a high school (auditorium) stage or a gymnasium with a stage", or even a raised sanctuary in a church. Larger theatres, on the other hand, are not multipurpose as such and are designed specifically for musicals and full-sized stage shows which have greater potential for higher fire risk. Accordingly, facilities that specialize in large theatrical productions must be built to higher building standards to reflect the level of associated hazard. The OBC, in particular Article 3.3.2.12., addresses this.

The key, however, is knowing how to differentiate between a stage and a raised platform and when to apply Article 3.3.2.12., the Agent stated. And to differentiate requires a certain level of judgement of Code requirements based on the circumstances at hand. It is because of the requirement to make a judgement, the Agent argued, that there are many facilities across the City and the Province that have a "stage"-like platform but have not been required to meet OBC 3.3.2.12. To require this in the building at hand would be onerous.

The Agent then discussed NFPA 101, the "Life Safety Code" standard, as a means by which some light might be shed on this situation. This standard, he indicated, separates stages into two main categories; legitimate stages where the height from the stage surface to the ceiling above it is more than 15.2 m (50 ft), and regular stages where the height is less than 15.2 m (50 ft). This standard provides higher requirements for legitimate stages than for regular stages. The requirements for legitimate stages are more in line with those in Article 3.3.2.12., he noted. Thus, since the "stage" to ceiling height is 6 m, he asserted that the hall should not be considered a legitimate stage subject to higher construction standards.

The building, especially the hall, is receiving some physical improvements as a result of the renovation work they are doing, the Agent indicated. For example, the "stage" area is being equipped with a mechanical exhaust system that is capable of six air changes per hour to vent smoke. As well, two, and in some areas three, additional layers of drywall are being added to the ceiling of the platform space. Also, the building is being fully sprinklered throughout.

In response to the question that the hall provide a guarantee that it only be used as a theatre on a limited

basis, the Agent stated that it should not have to offer such a restriction because the facility is not capable of accommodating bigger and potentially more dangerous productions.

In summation, the Agent reiterated his view that the platform should not be considered as a stage. It does not meet the Code's definition as a stage, especially because it lacks the capacity for quick change scenery. Consequently, he concluded that the requirements for a stage found in Article 3.3.2.12. do not apply.

## **6. Respondent's Position**

The Designate for the Respondent submitted that the elevated platform should be considered a stage and it should be built in conformance with Article 3.3.2.12. He then proceeded to offer some background to the present dispute.

The Designate noted that the application for permit originally came in, in part, as a change of use from an A2 general use assembly building to an A1 occupancy to be used for performing arts. It was as an A1 occupancy that the building was reviewed. This change required that the building be sprinklered because the existing building is of combustible construction, and if it were built new would be required to be of noncombustible material. As a result, however, the sprinkler system cannot be seen as a compensating measure for the items mandated in Article 3.3.2.12.

The Designate then argued that it is clear that the hall will be used primarily for staging theatrical performances. And while full scale productions cannot be housed in the space, there will certainly be productions that will involve props, thus resulting in an increased fire load. Indeed, it doesn't matter how small the production is, the scenery can contribute to a high combustible load, he asserted. Moreover, since it is anticipated that the building will be rented out to any interested party, professional or non-professional, to use for their productions, there will be very little control over the space and its use. This could mean, the Designate argued, that the hall could be used by individuals who have little or no experience in terms of theatre fire safety. Also, there will be no control over how many times the building is used for theatrical events. As it stands, it could be used every night for such purposes and the more times it is, the greater the risk of a fire occurring.

The Designate explained that the proponents are spending a considerable amount of money to make the building conducive for performing arts, but, in his view, they are not willing to pay what is required to meet OBC 3.3.2.12.

In conclusion, the Designate expressed concern regarding the safety of the stage if the requirements of Article 3.3.2.12. are waived. He stated that as an A1 building to be used for performing arts, the stage must be separated by a one hour fire separation, except for the proscenium opening which must be protected with a deluge sprinkler or a fire curtain.

## **7. Commission Ruling**

It is the decision of the Building Code Commission that the proposed elevated platform is not considered a stage and therefore does not need to comply with Article 3.3.2.12. of the Ontario Building Code at the Lakeshore Grounds Assembly Hall, 3121 Lakeshore Blvd. West, Toronto, Ontario.

## **8. Reasons**

1. The construction is considered to be a raised platform in a multipurpose facility.
2. The subject platform area does not provide for quick change and storage of scenery, etc.

Dated at Toronto this **10th**, day in the month of **August** in the year **2000** for application number **2000-45**.

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Dr. Kenneth Peaker, Chair

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Mr. Michael Steele

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Mr. Donald Pratt

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Ontario

Ruling No. 10-03-1239  
Application No. B-2009-39

## BUILDING CODE COMMISSION

**IN THE MATTER OF** Subsection 24(1) of the *Building Code Act*, S.O. 1992, c. 23, as amended.

**AND IN THE MATTER OF** with Article 3.3.2.12 of the Regulation 350/06, as amended,  
(the Building Code).

**AND IN THE MATTER OF** an application by Rocky Varcoe, 1570789 Ontario Ltd., Park Playhouse and Performing Arts Centre, for the resolution of a dispute with Frank Lukes, Chief Building Official, to determine whether the proposal to not sprinkler the performance area of the subject performing arts centre provides sufficiency of compliance with Article 3.3.2.12. of Division B of the Building Code, when considering the definition of a "stage" as defined in Division A of the Building Code at the Performing Arts Centre, 60 King Street East, Town of Cobourg, Ontario.

<b>APPLICANT</b>	Rocky Varcoe 1570789 Ontario Ltd Town of Cobourg, ON
<b>RESPONDENT</b>	Frank Lukes Chief Building Official Town of Cobourg, ON
<b>PANEL</b>	Tony Chow, Chair Marina Huissoon Gerry Egberts
<b>PLACE</b>	Toronto, Ontario
<b>DATE OF HEARING</b>	January 21, 2010
<b>DATE OF RULING</b>	January 21, 2010
<b>APPEARANCES</b>	Rocky Varcoe 1570789 Ontario Ltd Cobourg, ON <b>The Applicant</b>
	Frank Lukes Chief Building Official Town of Cobourg <b>The Respondent</b>

## RULING

### 1. Particulars of Dispute

The Applicant has received a permit under the *Building Code Act, 1992*, to renovate an existing building at Park Playhouse and Performing Arts Centre, 60 King Street East, Town of Cobourg, Ontario

The subject building is a one storey, Group A, Division 1 building, comprised mostly of non-combustible construction, however a small portion of the building is combustible. The structure has a building area of 769 m<sup>2</sup> and is equipped with a fire alarm system but has no sprinkler or standpipe and hose system. The existing building was built circa 1940 and used as a movie theatre for over 40 years. In the mid 1990's the theatre was converted to a bar having an elevated dance floor in the area previously occupied by the movie screen. The former elevated dance floor is now proposed to be used as a stage for the purpose of holding live performances. The stage has a floor area of approximately 135 m<sup>2</sup>. It is the "stage" that is the subject of the dispute before the Commission.

The dispute revolves around the application of the definition of "stage" as provided by Article 1.4.1.2. of Division A of the Building Code and associated with it, the provisions of Division B, outlined in Article 3.3.2.12., "Stages for Theatrical Performance". More specifically, at dispute is whether the sprinklering requirements outlined in Article 3.3.2.12. are applicable to the subject "stage" in question and whether the proposal not to sprinkler the performance area or "stage" sufficiently complies with the Building Code.

### 2. Provisions of the Building Code in Dispute

#### Division A, 1.4.1.2. Defined Terms

**Stage** means a space that is designed primarily for theatrical performances with provision for quick change scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects, and that is traditionally, but not necessarily, separated from the audience by a proscenium wall and curtain opening.

#### Division B, 3.3.2.12. Stages for Theatrical Performances

- (1) A *stage* for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas, shall be *sprinklered*.
- (2) A *fire separation* with a *fire-resistance rating* not less than 1 h shall be provided between a *stage* for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas.
- (3) Except as permitted by Sentence (6), a *stage* for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas, shall be separated from the seating area by a *fire separation* having a *fire-resistance rating* not less than 1 h, except for a proscenium opening protected with,
  - (a) a sprinkler deluge system conforming to the requirements of NFPA 13 "Installation of Sprinkler Systems",
  - (b) an unframed fire curtain if the opening is not more than 20 m wide, or
  - (c) a semi-rigid fire curtain if the opening is more than 20 m wide.

- (4) A fire curtain required by Sentence (3) shall be of a type designed to close,
- (a) automatically upon the actuation of the sprinkler system,
  - (b) automatically upon actuation of the fire alarm system,
  - (c) manually by remote control devices located at the curtain control panel and at each side of the *stage*, and
  - (d) automatically by heat-actuated devices.
- (5) At least 2 vents for the purpose of venting fire and smoke to the outside of a *building* shall be provided above a *stage* designed for theatrical performances and shall,
- (a) have an aggregate area not less than one eighth of the area of the *stage* behind the proscenium opening, and
  - (b) be arranged to open automatically upon actuation of the sprinkler system.
- (6) The *fire separation* referred to in Sentence (3) is not required between a *stage* and a seating area in a *floor area* that is *sprinklered*, provided a sprinkler deluge system is installed at the boundary between the *stage* and the seating area.

### 3. Applicant's Position

The Applicant submitted that the subject building was converted to a bar in the 1990's and that the subject performance area or "stage" was used to host live musical performances and as a dance floor. The Applicant explained that the building had subsequently been abandoned and therefore, was now in need of decorative updating and renovations to use the building as a performing arts center.

The Applicant submitted that the platform in question does not meet the definition of "stage" provided by the Building Code, as the subject stage does not have "the provision for quick change scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects", which are essential criteria for the performance area to be considered a "stage" as defined by the Code.

The Applicant described the stage as being 86% open and visible to the audience, containing no grand wing space, for quick change scenery. He explained that at each side of the stage was a relatively small space of about 1.2 x 3.6 m and provided a very limited space for quick change scenery. Elaborating on the description of the performance area, the Applicant added that the stage was not equipped with a curtain or screen and contained a low fire load when scenery was fixed on stage and that the combustible materials on stage was limited to the paint used on the flats, props, tables and other furniture. In response to questions, the Applicant explained that there were no rooms or area behind the stage for performers to use or change in and that in fact, performers changed in the neighbouring building when required. The Applicant noted that due to the limited space available in order to accommodate quick change scenery, a building permit would be required to have the building and stage extended.

The Applicant stated that the types of performances that would most commonly take place on the subject stage were musical bands, comics, and amateur theatre productions. In response to questions, the Applicant advised that previously the subject building had an occupant load of 560 people but currently has an occupant load of approximately 400 people.

In summary, the Applicant maintained that in his opinion the subject performance area is not considered a "stage" as defined by Division A of the Building Code and therefore, the requirement to sprinkler the subject performance area is not applicable in this case.

#### **4. Respondent's Position**

The Respondent submitted that the existing raised area described as the performance area is to be used primarily for live theatrical performances and in his opinion, falls within the scope of the definition of "stage" provided in Division A of the Building Code. The Respondent submitted that the subject stage, being used for live performances was also equipped with overhead lighting, and having considered the definition of "stage" in the Building Code, must conform to the requirements of Division B, Article 3.3.2.12.

The Respondent explained that the stage area does not have a sprinkler system and therefore, does not achieve compliance with the requirements for Article 3.3.2.12. The Respondent submitted that Article 3.3.2.12. stipulates a variety of fire safety measures for "stages", including sprinklers to mitigate the increased fire hazards associated with scenery and lighting arrangements, thereby, affording protection to the viewing audience and other building occupants.

In summary, the Respondent submitted that the performance area was indeed considered a "stage" as defined by the Code and further, the proposal not to sprinkle the stage would not be in conformance with Article 3.3.2.12. of Division B of the Code, which was an applicable Code requirement in this case.

#### **5. Commission Ruling**

It is the Decision of the Building Code Commission the proposal to not sprinkle the performance area of the subject performing arts centre provides sufficiency of compliance with Article 3.3.2.12 of Division B of the Building Code, when considering the definition of a "stage" as defined in Division A of the Building Code at the Performing Arts Centre, 60 King Street East, Cobourg, Ontario.

#### **6. Reasons**

- i) Article 1.4.1.2. of Division A of the Building Code defines stage as "a space that is designed primarily for theatrical performances with provision for quick change scenery and overhead lighting, including environmental control for a wide range of lighting and sound effects, and that is traditionally, but not necessarily, separated from the audience by a proscenium wall and curtain opening". It is the Commission's opinion, based on the testimony and submissions made by the parties, that the performance area is a "stage" as defined by the Code.

Article 3.3.2.12. of the Building Code requires that a "stage" for theatrical performances and ancillary spaces, including workshops, dressing rooms and storage areas, be sprinklered. The subject performance area does not have the fire load that is associated with the activities and occupancies described in the Building Code's definition of "stage". As a result, the requirements of Article 3.3.2.12. of Division B of the Building Code are not applicable in this case.

Dated at Toronto this 21<sup>st</sup> day in the month of **January** in the year **2010** for application number **B-2009-39**.

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Tony Chow, Chair

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Marina Huissoon

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Gerry Egberts