Agenda Item # Page #

TO:	**CHAIR AND MEMBERS PLANNING & ENVIRONMENT COMMITTEE MEETING ON DECEMBER 12, 2011**
FROM:	**GEOFFREY P. BELCH CORPORATION COUNSEL**
SUBJECT	**LONDON HEALTH SCIENCES CENTRE SOUTH STREET CAMPUS DECOMMISSIONING**

RECOMMENDATION

That, on the recommendation of the City Solicitor's office the following actions be taken with respect to LHSC South Street Campus lands:

a) that the reports of Allan Avis, B.Arch., OAA, MRAIC, CAHP concerning the War Memorial Children's Hospital (Building No. 52) and the Colborne building (Building No. 67) be received for information;

b) that following the completion of the 2012 budget process, that a source of funds **BE IDENTIFIED** by the City Treasurer in an amount estimated to be up to $2,500,000 to contribute to the overall cost of Phase A decommissioning work to be carried out by LHSC on City lands located south of South Street in late 2012 and 2013;

c) that the balance of this report be received for information.

BACKGROUND

Purpose of Report

This report advises Council concerning the detailed assessment by Mr. Allan Avis concerning the War Memorial Children's Hospital (Building No. 52) and the Colborne building (Building No. 67) which have been cross hatched on Schedule "A." Each building is designated on Schedule "A" by a number.

This report also seeks direction to the City Treasurer to identify a source of funds that the City will access in late 2012 and 2013 in the likely event that the buildings on the South Side of South Street are demolished by LHSC beginning in late 2012 as part of Phase A decommissioning work for buildings located south of South Street.

Status of the Site Decommissioning

LHSC have indicated to the City that they will likely be in a position to proceed with the decommissioning in late 2012 of all of the buildings on City lands south of South Street, except Thameswood Lodge. In order to proceed with this demolition work, LHSC have asked the City to confirm which, if any, of the subject buildings the City wants demolished. The issue surrounding decommissioning and the demolition of the buildings has been the subject of previous reports to Council. A tentative cost sharing formula has been discussed by which the City's contribution to the entire decommissioning project would be limited to the value of the City's land, or $3,180,000. There is a substantial benefit to the City in cost sharing with LHSC to remove the buildings. This work will occur in two phases, referred to as Phase A and Phase B work. It is noted that in 2010 the City confirmed to LHSC that it would contribute the value of the land or up to $3,180,000 toward demolition costs on the South Street campus, assuming all the buildings on the City lands are demolished. It would therefore be appropriate to identify a source of funds for project which funds would be required in late 2012 and 2013 for Phase A work. The balance of the City's commitment would be payable in 2015 and 2016 when the Phase B work is expected to proceed.

Heritage

In May 11th, 2011 Nancy Tausky, an independent heritage consultant, provided the City's Planning Division with a report entitled "Cultural Heritage Assessment: Buildings in the South Street Hospital Complex". The City's Planning staff has taken to LACH. A separate report on this issue will be taken by the City's Planning staff to Planning Committee on December 12, 2011.

Report from the Heritage Architect

Allan Avis Architect Inc. of Goderich, Ontario was retained by the City Solicitor's office to carry out an assessment of two buildings, the War Memorial Children's Hospital (Building No. 52) and the Colborne building (Building No. 67) on the south side of South Street. His report for the Colborne building is attached as Schedule "B". His report for the War Memorial Children's Hospital is attached as Schedule "C" to this report. He has been invited to attend Planning Committee to present his work on December 12, 2011.

Colborne Building

The Colborne Building was constructed in 1899 with two small additions in 1911 and 1920 and consists of 26,225 sq. feet considered usable floor area. In his report Mr. Avis concludes that the building is "structurally robust and it is generally in good condition with no significant structural deficiencies". In his opinion "the building is sound and it warrants strong consideration for adaptive reuse and continued service".

Adaptive Re-Use: One of the key issues that Mr. Avis was asked to consider the potential for adaptive reuse of this building. In this regard, he notes that the placement and layout of the masonry walls limits potential reconfiguration of interior spaces. Essentially, this was a purpose built structure for hospital use with a generous central corridor and narrow room widths on either side of the corridors ranging from 14-17 feet. Mr. Avis notes that this feature of this building limits the potential for adaptive reuse. This is because it would be expensive to take out the corridor walls, except for the third floor.

The report considers adaptive reuse beginning at page 36. One key conclusion of Mr. Avis is that the site and buildings were not well suited for commercial and institutional uses. Furthermore, the existing space configurations in Mr. Avis's assessment do not work for residential, condominiums and high end residential units. Assuming 1,200 to 1,500 sq. ft units, only eight to ten such suites could be accommodated in the building. Each unit would have to sell for a minimum of $350,000 - $500,000 each just to cover the raw cost of renovations. Mr. Avis concluded that this level of pricing exceeds that of the local marketplace for similar properties based on his meeting with local realtors and developers.

Mr. Avis next considered the possibility of social housing with input from Louise Stevens, the City's Director of Municipal Housing. Mr. Avis developed a conceptual design for affordable housing in his report to illustrate how 19 one-bedroom apartment suites and 1 two-bedroom suites could fit within the existing building. This assumes a unit sizes ranging from 450-850 sq. ft. The major difficulty with the affordable housing approach is that the full cost to preserve the existing building and convert it to a residential use such as affordable housing would be approximately $8,000,000 plus HST. An itemized breakdown of this cost is found on page 46 of the report. Over 20 units this would represent a per suite cost of slightly over $400,000 per unit in the Colborne building. Given this high unit cost the civic administration is not recommending this building for adaptive re-use for affordable housing.

Mothballing: Mr. Avis was asked to report on the cost to the City if it elects to keep the Colborne building but does not immediately undertake its renovation. These costs are estimated at page 48-51 of Mr. Avis' report and would be $609,000 not including HST for such things as urgent roofing repairs, a new heating system (boiler) and fire alarm system. In addition, Mr. Avis estimates a monthly cost of about $1,075 for security and ongoing monitoring of the building.

War Memorial Children's Hospital

The War Memorial Children's Hospital is a T-shaped building over five floors with 36,370 sq. feet considered usable. The front part of the building was constructed in 1922 with an addition in 1945 extending north from the original building. Mr. Avis expresses the opinion that the original building and the addition are "sound buildings and they warrant strong consideration for adaptive reuse and continued service."

As with the Colborne Building, Mr. Avis considered the adaptive reuse of the building. This analysis is found beginning at page 39 of his report. He concluded that "the location, site and buildings were not well suited for commercial and institutional uses" and his reasons are set out in his report. As far as residential condominium or high-end rental use, he notes that only 14 – 16 suites could be accommodated in the building and the suites would be 80' long. These condos would have to sell for a minimum of $350 - $500,000 just to cover the raw costs of renovations. He believes this cost is well in excess what the local marketplace dictated for similar properties.

Mr. Avis looked at the option of affordable housing. He concluded that 37 such apartment suites could fit within the existing building. His overall analysis notes that the cost to convert to a residential use would be $11,000,000 plus HST (at page 2 of his report) representing a per suite cost of nearly $300,000. Given this high unit cost the civic administration is not recommending this building for adaptive re-use for affordable housing.

Mothballing: Mr. Avis was asked to report on the cost to the City if it elects to keep the War Memorial building but is retained but is not renovated. These costs are estimated at page 52-55 of Mr. Avis' report and would be $386,000, not including HST, for such things as masonry repairs, electrical services and fire alarm system. He estimates a monthly cost of about $1,125 for security and ongoing monitoring of the building.

Affordable Housing

Louise Stevens, Director, Municipal Housing advises as follows: The London Community Housing Strategy (LCHS) approved by Municipal Council in June 2010, sets a target of 900 units of affordable housing through new construction, acquisition, affordable homeownership, and rent supplements/subsidies. Of these units, 375 are slated to be new construction or acquisition, 75 are to be affordable homeownership, and the remaining 450 can be a combination of different approaches depending on available resources. Within this target the intent is to develop units that are more affordable – such that someone on social assistance is likely to afford – through deeper subsidy in capital costs, thereby reducing operating costs and rent.

The new Investing in Ontario Program & Fiscal Delivery Plan approved by Municipal Council on November 21, 2011, indicates a total capital subsidy required from government of up to $115,000 per unit, resulting in the creation of one hundred and ninety (190) new one-bedroom units for households without dependents utilizing a "housing first" approach. Households without dependents can include persons with disabilities, working poor, Aboriginal people, and recent immigrants. The target is 84 units in 2012/13, 69 units in 2013/14 and 37 units in 2014/15. The optimum project size is 20 to 25 units.

The rental units can be either new build or acquisition/rehab. The cost of the rental housing component is proposed at $11,460,808 in federal/provincial capital funding and $10,450,000 in municipal capital funding. The municipal portion is subject to the annual approval by Council of the affordable housing capital budget. The federal/provincial portion is time sensitive and on an annual "use-it-or-lose-it" basis up to March 31, 2015.

Acknowledgements
This report was prepared with assistance from Louise Stevens, Director, Municipal Housing and Patrick McNally, Executive Director of Planning, Environmental & Engineering Services.

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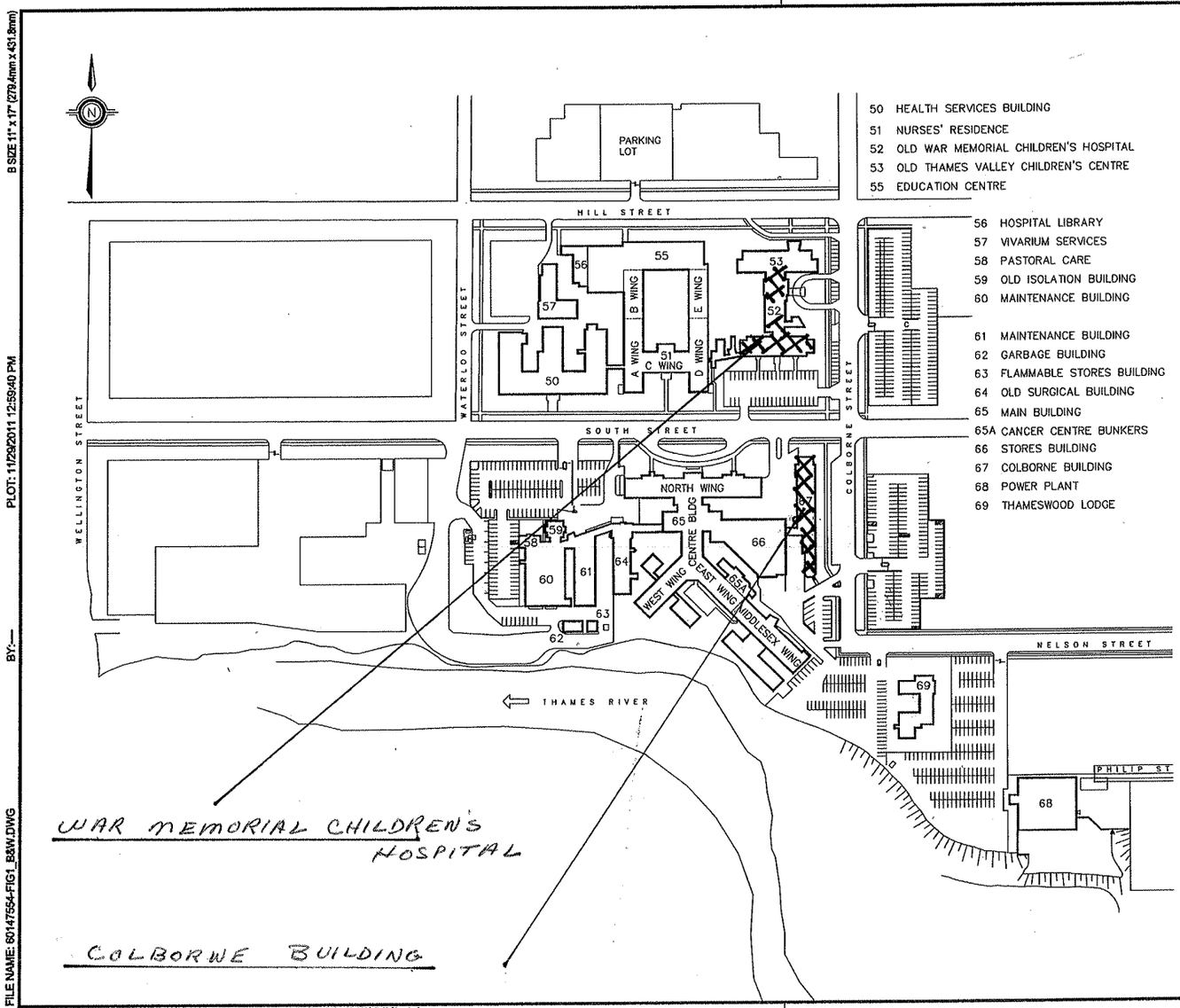
PREPARED BY:	REVIEWED & CONCURRED BY:
GEOFFREY P. BELCH CORPORATION COUNSEL LL.B, M.B.A.	PATRICK McNALLY EXECUTIVE DIRECTOR-PLANNING, ENVIRONMENTAL & ENGINEERING SERVICES
	REVIEWED & CONCURRED BY:
	ROSS FAIR EXECUTIVE DIRECTOR COMMUNITY SERVICES

Encls. – "A" – drawing
"B" – Colborne Building (Building 67)
"C" – Report for War Memorial's Children Hospital (Building 52)

c.c. Jeff Fielding - Chief Administrative Officer
Pat McNally - General Manager and Chief Engineer
John Fleming - Director of Planning
James Barber - City Solicitor
Ross Fair – Executive Director of Community Services

SCHEDULE "A"



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Note:
Base drawing from G+G Partnership Architects drawing A1 "Existing Site Plan Building Legend" dated July 97.

DO NOT SCALE THIS DOCUMENT.
ALL MEASUREMENTS MUST BE OBTAINED FROM STATED DIMENSIONS.

AECOM

London Health Sciences Centre

Site Plan - South Street Campus Hospital

PROJECT NUMBER	DATE	FIGURE
60147554	Nov. 2011	1

B SIZE 11" x 17" (279.4mm x 431.8mm)
PLOT: 11/29/2011 12:59:40 PM
BY:—
FILE NAME: 60147554-FIG1_B&W.DWG
L:\work\60140000\60147554 LHSC\Phase 1 ESA\ACAD\60147554-FIG1_B&W.dwg Layout:FIG 1 Plotted: Nov 29, 2011 @ 12:59pm by Jongr

SCHEDULE " B "

Allan Avis Architects Inc.
60 West Street, Goderich, Ontario N7A 2K3 Tel(519)524-5313 Fax(519)524-5253

November 23, 2011 Project No. 1201.00

Mr. Geoff Belch
Corporation Counsel for City of London
City Hall
300 Dufferin Street, Suite 1014
London, ON N6A 4L9

Re: Building Condition Assessment and Adaptive Reuse Study for Colborne Building at London Hospital, South Street Campus

Dear Mr Belch;

Attached is the Building Condition Assessment and Adaptive Reuse Study for Old War Memorial Children's Hospital.

We look forward to the opportunity to present this report to City Council as you may require. Please contact us with any questions or comments you may have with respect to the report.

Yours truly,
ALLAN AVIS ARCHITECTS INC.

Allan Avis
B. Arch., OAA, MRAIC, CAHP

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Executive Summary

A February, 2011 Cultural Heritage Assessment determined that the Colborne Building is architecturally, historically and contextually significant. The original building was constructed in 1899 and two small additions were added at north end in 1911 and c1920. The linear building measures 32,435 sq.ft. (3,013.2 sq.m) of gross building area over four floors with 26,225 sq.ft. (2,436.3 sq.m) considered useable floor area. The difference in area is comprised of exterior wall structures, utility shafts, hoistways and stairways. Basement levels include for approximately 25% unfinished, utility space and 75% crawlspace.

This assessment has concluded that the building is structurally robust and it is generally in good condition with no significant structural deficiencies. Various building elements and systems, such as windows and roofing, require repair or replacement. Upgrades in insulation, provision of barrier-free accessibility and abatement of hazardous building materials will be required. A change of building use will involve extensive removal and renovation throughout the building with some new partitions, all new interior finishes, and all new mechanical and electrical infrastructure. It is recommended that the existing fire sprinkler system be retained and modified to satisfy Ontario Building Code requirements for change in use to residential occupancy. Having said that, it is our opinion that the building is sound and it warrants strong consideration for adaptive reuse and continued service.

Brick and stone masonry and wood are the principal materials utilized in construction of the building. Wall structures are typically load-bearing mass masonry, including interior partitions, except for third storey walls, which are generally of wood framed construction. The placement and layout of the masonry walls limits potential re-configuration of interior spaces. Wood framed walls at third floor allows for greater flexibility to modify interior layouts. Existing central corridors restrict room widths on either side of corridors to between 14' and 17'. The relatively narrow width of rooms, overall size of floor plates and total floor area, create limits for potential adaptive reuses.

Staff from several City departments and experienced realtors were consulted to discuss potential building uses. It was concluded that some form of social housing offered the greatest potential when considering the urban context, size of building, adaptability of interiors and the community's needs. Redevelopment of the Colborne Building for social housing is consistent with the 2011 SoHo Community Improvement Plan.

The conceptual design presented in this report illustrates how approximately 20 apartment suites can fit within the existing building.

The estimated cost to preserve the existing building and to convert it to residential use is $8,022,000 plus HST. This represents a per suite cost of nearly $401,100 each. This per suite cost to convert this building is high relative to other recent adaptive reuse projects that the City has been involved with. Constructing a new apartment building could be done for close to one third of this conversion cost (not taking into account the cost for land acquisition and site services).

As the Hospital winds down and abandons the South Street Campus, there is increasing risk of unauthorized access, mischief, vandalism and unnoticed building damage and deterioration. If the building is to be de-activated (mothballed) for any length of time, the structure should be stabilized and the building perimeter secured and made weathertight. This would involve replacement of the existing slate roofing at north end of building and existing asphalt shingle roofing at intermediate and low roofs at south end. A new boiler heating system would be required to maintain minimal heating since the existing central heating plant is scheduled to be disconnected from the Colborne Building in 2012. Some form of natural or mechanical ventilation is required to control moisture. Interior doors should be removed from hinges to assist with air movement. Abandoned furniture, equipment and unneeded materials in the building should be removed to eliminate potential fuel for fire, safety hazards and food source for mould. An intrusion and fire alarm system is recommended, powered by a basic electrical service to provide lighting. Properly mothballing the building is anticipated to cost approximately $609,000 plus HST.

Ongoing mothballing operations include alarm monitoring, regular site and building inspections, security walk-throughs, pest and vermin control and roof inspections. The monthly budget for mothballing costs is approximately $1,075 plus HST.

Purpose of this Report

This report assesses the condition of the Colborne Building (Building #67) located at the corner of Colborne and South Streets, forming part of the London Health Sciences Centre in the City of London. This assessment focuses on building enclosure and building structure.

It is the intent of this report to provide City Council and City Administration with an assessment of the condition of the existing subject building, its potential for adaptive reuse and the magnitude of probable cost associated with preserving, rehabilitating and renovating the building.

The project and maintenance work identified in this report describes the work in general terms only. Individual work items will require more detailed documentation to fully establish the scope of work in contract terms, prior to engaging contractors to execute work.

The information and recommendations contained in this report reflect our best judgement based on observed conditions. We cannot guarantee that all building related problems have been encountered during preparation of the report, or that unreported building conditions will not develop after the report has been submitted. Use of the report content by a third party is the responsibility of such third party and we do not accept responsibility for damages resulting from third party use of the report.

Methodology

Multiple visual examinations of the building were conducted between March and October 2011. Limited invasive disassembly and testing were conducted on exterior masonry during the examinations.

The following personnel were involved in the site visits:

Prime Consultant: Allan Avis of Allan Avis Architects Inc., Goderich
Structural Engineer: Bob Peterman of Pow Peterman Consulting Engineers, Ingersoll
Contractor: Doug Hazen of Hazen Masonry & Restoration Inc., Ingersoll

For the purposes of this report, the linked addition to the Main Hospital Building is considered to be located in the west wall of the Colborne Building.

This report views the building as a detached, stand-alone structure. In other words, existing abutting and link structures are assumed to be removed and the building enclosure made good at these locations.

Preface

Masonry
The purpose of mortar is threefold: firstly to provide a mechanical bond between masonry units, secondly to protect the wall from moisture ingress and thirdly to provide a means of egress for moisture present in the wall assembly.

Properly formulated mortars will always be weaker than the masonry being bonded together; it will also be more permeable than masonry. Mortar is designed to be sacrificial; it is more economical to replace weathered mortar than to replace damaged masonry units.

Although mortars are a relatively durable material, they do require periodic maintenance and renewal. It is reasonable to expect that masonry joints will require some amount of repointing approximately every 25 to 40 yrs. For larger buildings, we suggest a regular maintenance programme where selected wall areas are targeted on a periodic basis (e.g., every 5 yrs.) eventually working around the entire building over the course of 25 to 40 years.

Masonry elements which are exposed to cold on multiple sides (e.g., parapets, elevator hoistways and chimneys) typically experience more severe weathering due to increased exposure and require more frequent attention. These elements are usually situated high on the building and involve expensive scaffolding or use of lift devices to provide access. It is advisable to complete all work that has to be done from the access system at one time because of the significant cost for access.

Barrier-Free Accessibility and Facilities
The Ontario Building Code (OBC) may require barrier-free access and facilities for new construction and renovation projects, depending on the building size and occupancy. The OBC does not currently have retroactive provisions for existing buildings where there is no construction or application for a building permit. Many of the recommendations contained in this report are considered voluntary upgrades on behalf of the building owner, in an attempt to comply with the intent of barrier-free initiatives.

The 2005 Accessibility for Ontarians with Disabilities Act requires that all facilities intended to be used by the public comply with barrier-free design standards for access and facilities. Organizations are required to have action plans established by 01-Jan-2012 with built environment compliance anticipated by 2025.

Regardless, individuals or interest groups may have the ability to force barrier-free upgrades through Human Rights Legislation. Human Rights Legislation is a higher law than Building Code Legislation and has successfully been applied to existing buildings not otherwise considering renovation. In other words, a formal complaint made to the Human Rights Tribunal can result in court-ordered renovations to provide barrier-free access and facilities.

Hazardous Materials
Asbestos containing materials (ACM) are likely to be present on the property. Other designated substances, such as lead in paint coatings, mercury in fluorescent light tubes and thermostats may also be present on the property.

Bulk samples of representative suspect ACM materials have been tested by a qualified laboratory. The results of such tests speak to the presence or absence of asbestos in the particular sample. Prior to commencing any construction activity, additional sampling may be required for materials that will be disturbed to ensure compliance with Ontario Regulations.

Asbestos Management Program
Asbestos containing materials (ACM) in good condition, which are non-friable products with bound asbestos, pose no danger of releasing airborne fibres unless cut, broken up or otherwise physically abraded, and need not be removed, unless the owner wishes to do so. If such materials are retained, an asbestos management program must be established per Ontario Regulation 278/05, Section 8. A copy of O.R. 278/05 is appended to this Report.

Lead
Comply with requirements of Ministry of Labour "Guideline-Lead on Construction Projects" dated September 2004, a copy is appended to this Report.

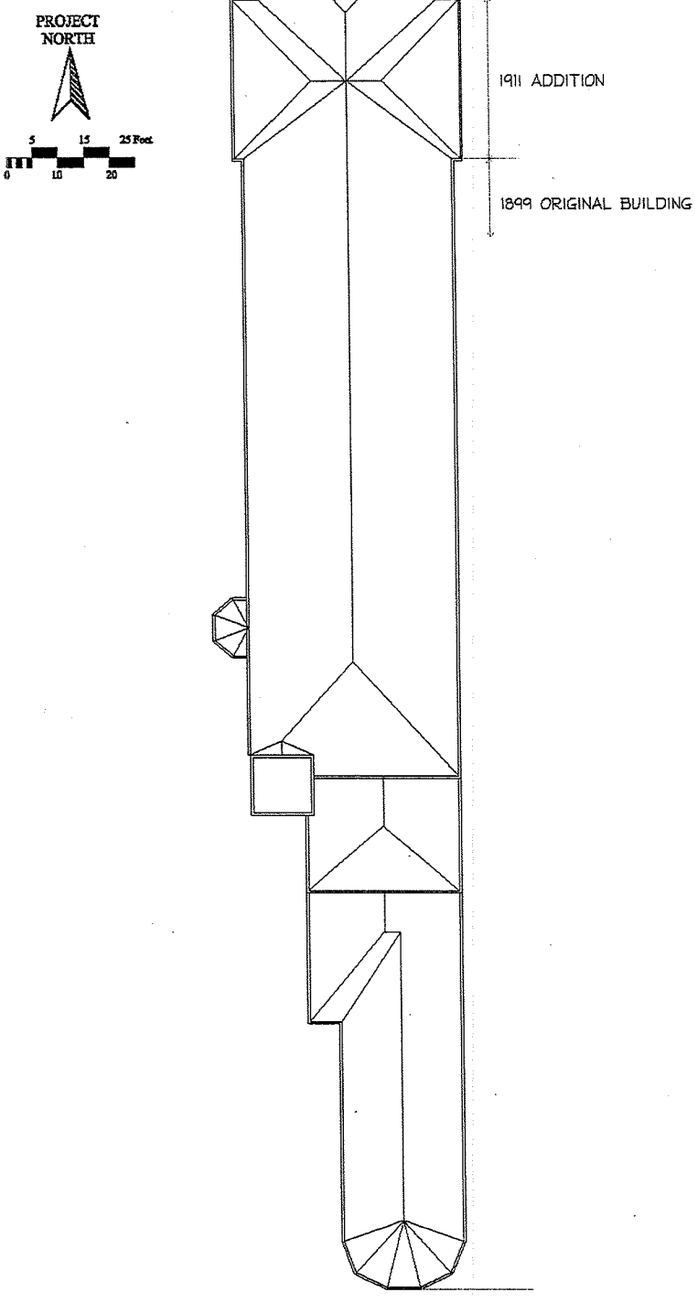
Mercury
Handle and dispose of mercury waste per Ontario Regulation 347, as amended by O.R. 102/07.

PCBs
Handle, store and dispose of PCBs and PCB containing equipment per The Federal Chlorobiphenyls Regulation SOR/92-507 and O.R. 362/90.

Federal Legislation Bill C45
Property owners should be aware of Bill C45, which was enacted in the aftermath of the 1992 Westray Mine disaster in Nova Scotia. This federal legislation holds property owners and corporations, including their directors and officers, as criminally liable for inaction in addressing unsafe conditions at their property, that are known to be present or should have known to be present.

The contents of this report may identify unsafe building conditions or other conditions that may represent a liability. It is incumbent upon the property owner to address such conditions or risk prosecution.

Building History



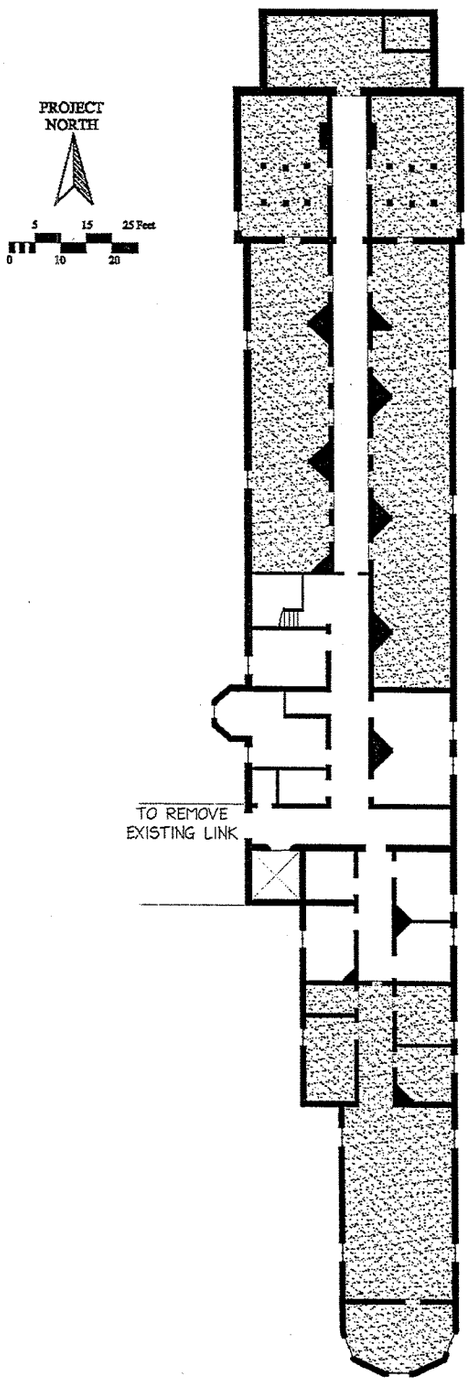
1899 Original building constructed as part of Victoria Hospital with the northern, two-storey end known as the Paying Patient's Pavilion and the southern one and two-storey end known as the Children's Pavilion. The building was designed by H.C. McBride Architect.

1911 Building addition constructed at north end of original structure. Designed by H.C. McBride.

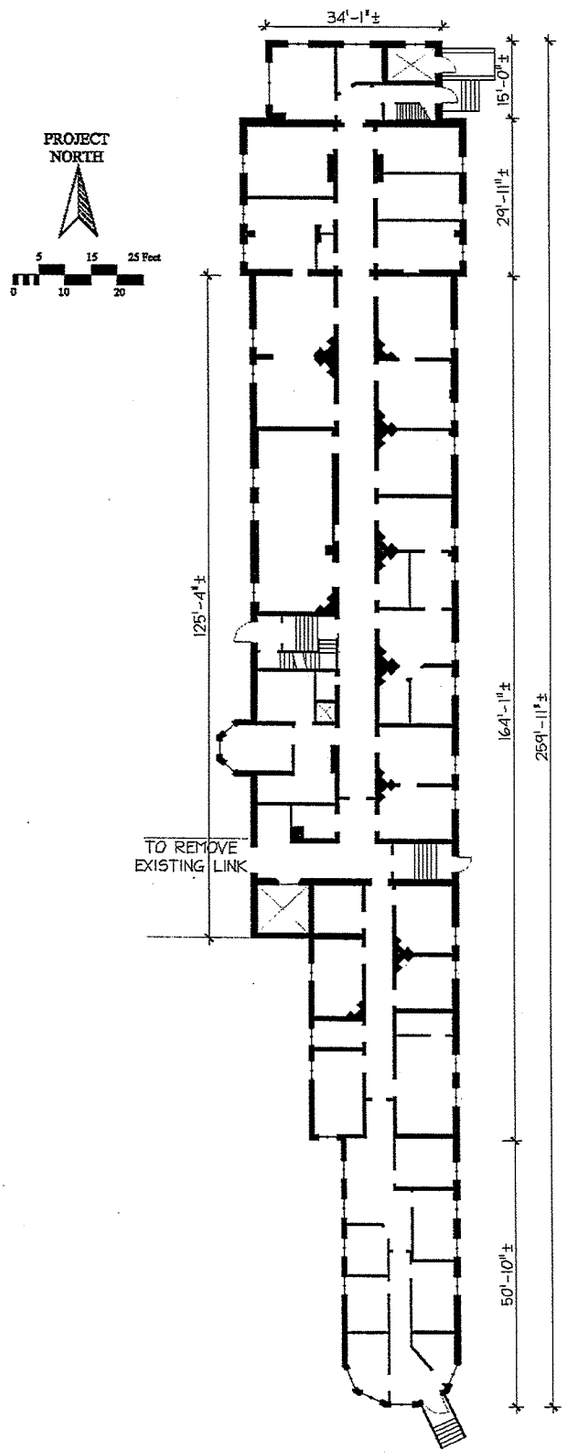
1920 The second building addition was constructed between 1920 and 1940.

Drawings of Existing Building

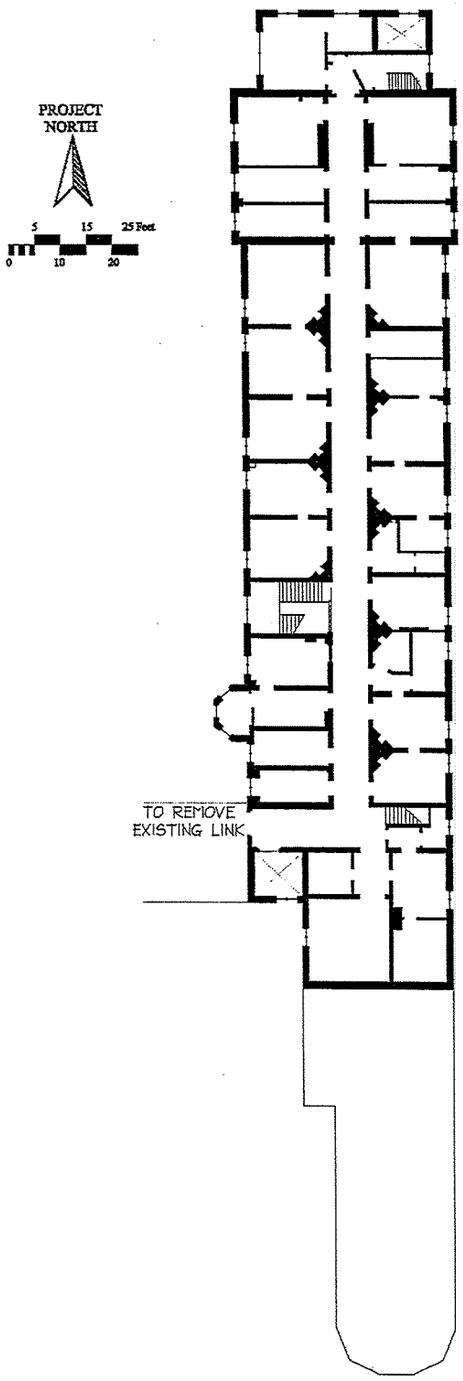
Basement Floor Plan



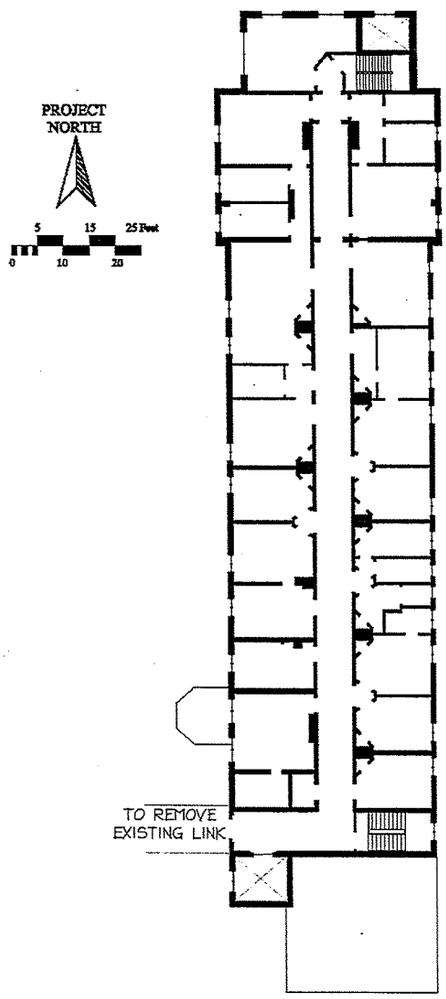
First Floor Plan



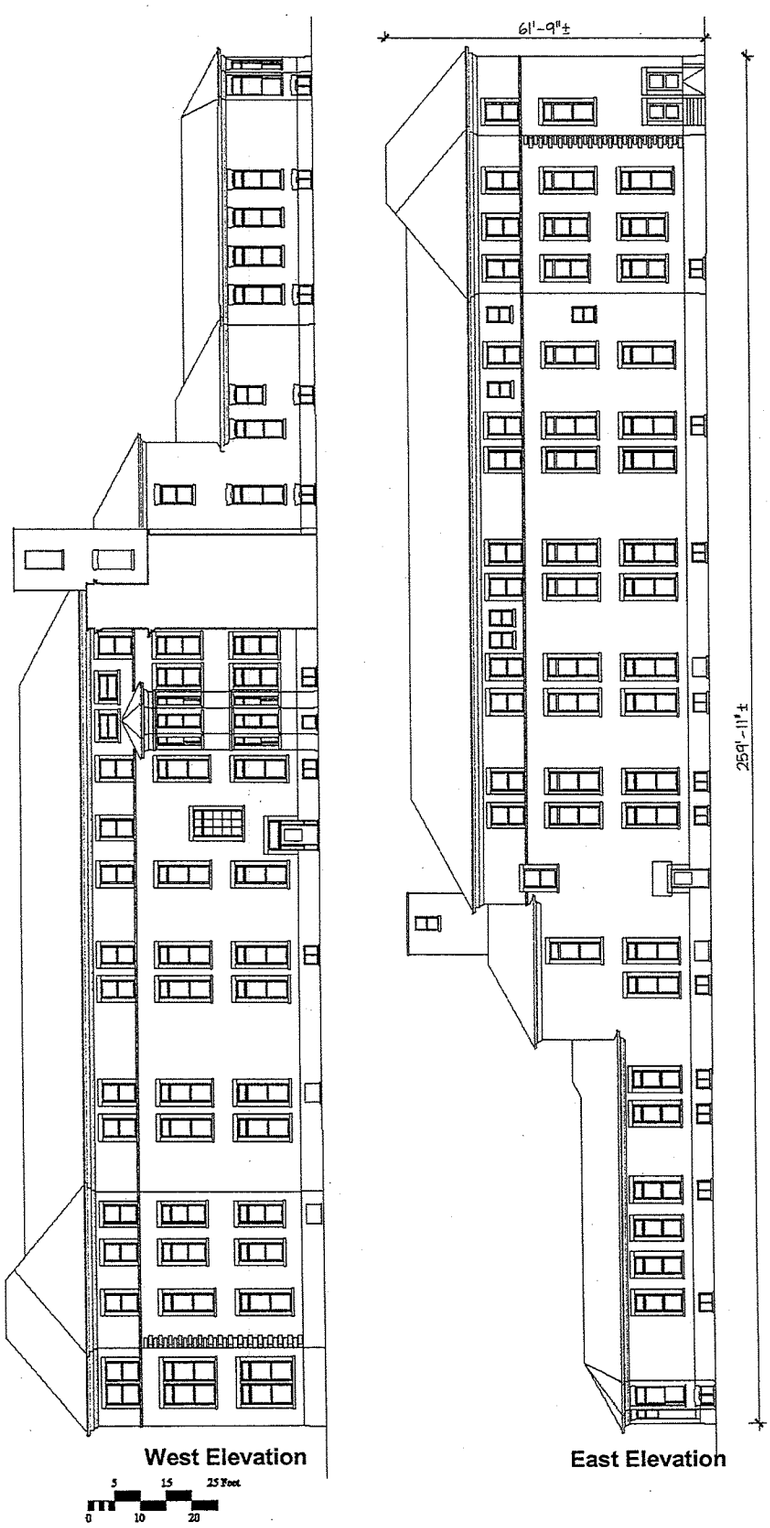
Second Floor Plan



Third Floor Plan

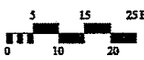


Colborne Building
London Hospital, South Street Campus



North Elevation

South Elevation



Cultural Heritage Status

The Colborne Building was included in the "Cultural Heritage Assessment: Buildings in the South Street Hospital Complex, London, Ontario" prepared by Nancy Z. Tausky, dated Feb-2011. Based on the reported historical, architectural and contextual values, the Colborne Building was assigned a Priority 1 rating in terms of it remaining on the City of London's Inventory of Heritage Resources.

The Tausky report states that the "Colborne Building has design and physical value because of its fine interpretation of the 1899's Colonial style, because of the unusually skilful integration of the original building with its additions, and because of the way in which it integrates and differentiates between the original paying patients' and children's pavilions. It is of historical interest because of its historic stylistic relationship with the administration building of the 1899 Victoria Hospital and because it illustrates the work of Hubert Carrol McBride, a respected London architect whose other works include the former Huron & Erie Loan and Savings Co. On Richmond Street and the Lawson & Jones Printing Company on Clarence Street. In addition to the reasons for contextual value mentions in section 5.0 (of Tausky report), the building is of special importance because its position on the corner of the former Victoria Hospital site gives it a landmark quality."

Observations

For the purposes of this report, the Colborne Building consists of the original 1899 and its two north-end additions. The link to the main hospital structure is assumed to be removed and is not part of this report.

Building Statistics
The gross floor area below represents the building area measured from outside faces of exterior walls. In other words, it is essentially the building footprint for each floor level.

Useable floor area is measured from inside face of exterior walls less vertical shafts, hoistways and stairways. The useable floor area is the maximum interior space available for occupancy/use, including corridors and interior partitions.

Floor Level	Gross Floor Area		Useable Floor Area	
	sq.ft.	sq.m	sq.ft.	sq.m
Basement	9,335	867.2	7,560	702.3
1	9,160	851.0	7,310	679.1
2	7,360	683.7	5,790	537.9
3	6,580	611.3	5,565	517.0
Total	32,435	3,013.2	26,225	2,436.3

Original 1899 Building and 1911 Addition
The building is considered to be three storeys in height with a partial unfinished basement and partial crawlspace. The building is long and narrow, measuring approximately 215" by 40". Building elevations and floor plan are generally symmetrical on both longitudinal and cross axes. Floor to floor dimensions measure approximately 15".

Foundation walls are stone masonry with coursed, dressed stone for most of exterior wall faces above grade level. Exterior walls above first floor level are multi-wythe, load-bearing brick masonry.

Floors consists of wood joists with tongue and groove wood decks covered with a bed of mortar and finished wood flooring. Mortar "pugging" is also installed between joists at underside of wood floor deck for most of the basement and crawlspace.

The elevator hoistway near centre of 1899 building was a more recent construction. The elevator at north end of 1920 Addition would have been an earlier installation.

The floor plan is organized around a double-loaded corridor with rooms to both sides of the continuous central corridor. Rooms are generally consistent in size with each room originally having a corner coal-burning fireplace. The fireplaces are no longer visible at the building's interior, however, brick chimneys and surrounds remain concealed behind existing room finishes.

Partition walls, including corridor walls, are of multi-wythe brick masonry, except for the third storey, where partitions are wood frames, with only a few exceptions. Passageway openings have been created through some of the masonry walls to connect rooms. Some masonry walls common, to adjacent rooms, have been removed and supplemental structural steel framing installed to support masonry walls above.

The original main entry faces west and is located just north of the window bay. Interestingly, the main stairway does not extend up to the third floor, and the only stairway that connected the original second and third storeys is the small southern stairway. Presumably, stairway access was a reflection of normal hospital functioning and containment practices of the day.

The distribution of original stairways is considered inadequate by today's standards for emergency egress. However, the horizontal exit facilities, provided by the built link to the main hospital building, and the stairway, incorporated in the 1920 addition, generally satisfy current exiting requirements.

All but two chimneys at 1911 Addition have been removed to below roof deck. None of the chimneys are functional.

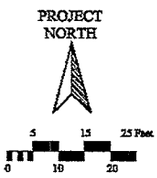
1920 Addition
The 1920 Addition is constructed of masonry walls (facebrick with vitreous clay tile backup) and poured-in-place concrete floor structures. The elevator hoistway has concrete walls that extend into the attic space to provide for an overhead machine room.

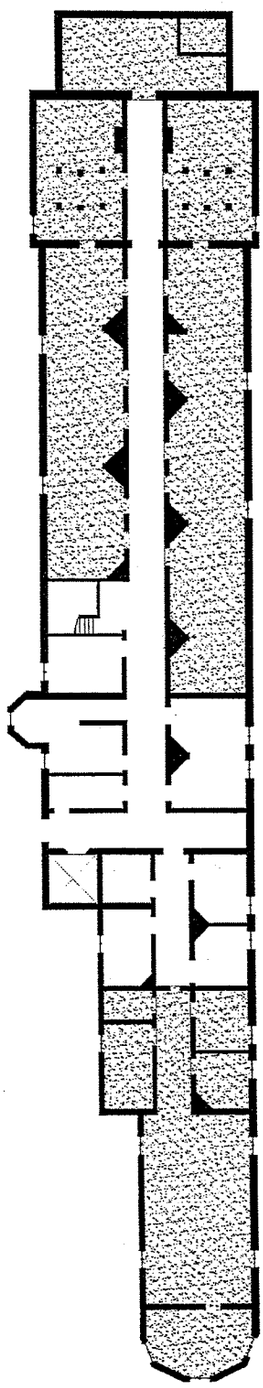
This addition provided for another egress stairway and elevator with vertical sliding wood gate. This stairway provided for dramatically improved stairway distribution in the building. The elevator has direct exterior access to a very steep exterior ramp. The exterior concrete stairs and ramp are deteriorated and should be considered unsafe for use.

Structural Parti Drawings
Floor plans on the following pages show the existing raw structural elements, such as exterior walls, load-bearing interior walls, columns and open shafts. Essential enclosures are also shown around existing stairways, hoistways and shafts.

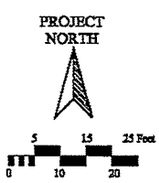
The purpose of these drawings is to indicate what elements would remain after non-essential constructions are removed from the building prior to renovations. Retaining the existing structural elements represents significant cost savings compared to removing/replacing and/or modifying the structure.

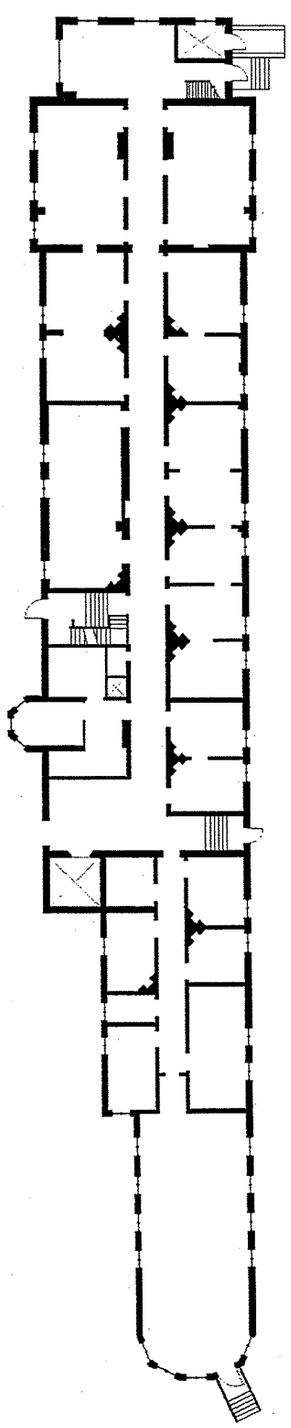
Structural Parti - Basement



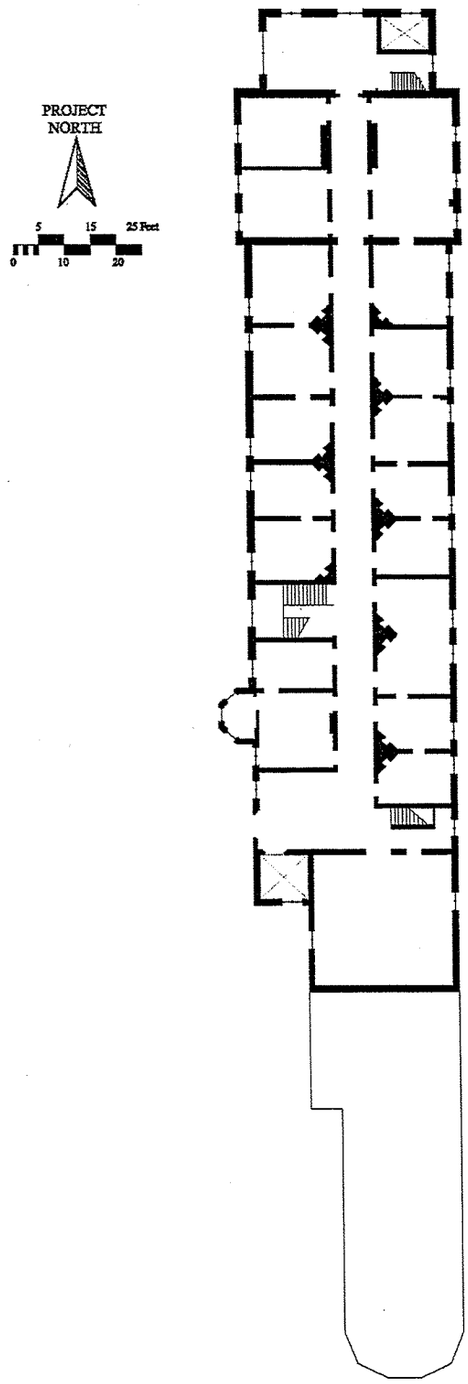


Structural Parti - First Floor

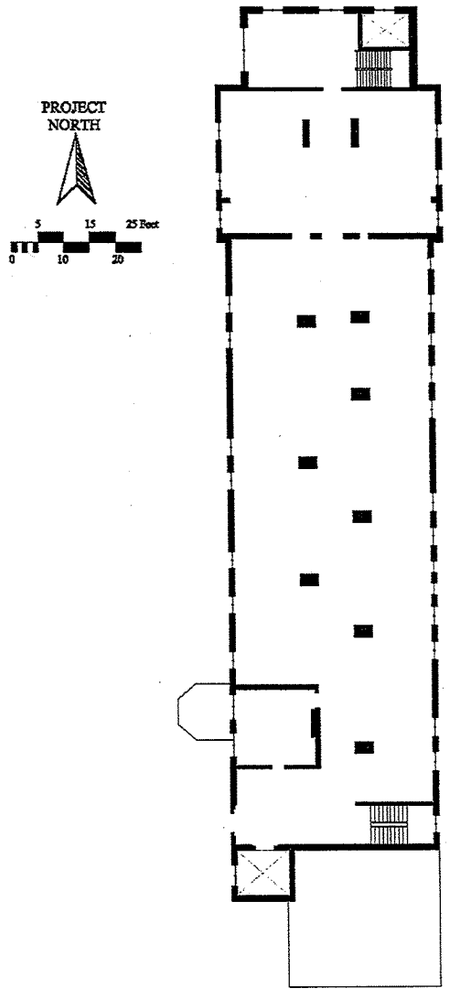




Structural Parti - Second Floor



Structural Parti - Third Floor



Colborne Building
London Hospital, South Street Campus

Exterior Masonry

The stone foundation has a subtle splay and is constructed of alternating courses of full and ashlar courses. Stone units are rough-faced limestone. Foundation stones at southern end of 1899 building not visible from Colborne Street, are of randomly coursed, roughly-shaped stones and field stones. Foundation masonry appears to be sound and in good condition when observed from exterior and from within the basement and crawlspace.

Exterior brick is buff coloured clay brick. Bricks were removed from walls at several randomly selected locations to review condition of brick units, mortar and backup masonry. At least one of these sampled areas included a section of severely weathered mortar joints near eaves at northeast corner of 1920 Addition. Buff brick units at all locations were found to be sound and in good condition. Mortar conditions generally varied from fair to good. Little mortar remains at deeply receded joints at northeast corner of 1920 Addition. Backup vitreous clay tile masonry was found to be in fair to good condition.

Exterior masonry, at the northeast corner of 1920 Addition, is in poor condition. Mortar joints below eaves are severely weathered and many are void for 1.5" depth. Moss was growing in deeper recessed joints that are protected from the sun. It appears that there has been significant roof leakage at this hipped corner. Surprisingly, notwithstanding the severity of mortar deterioration at this location, the remaining mortar was found to be robust and required force to remove sample brick units. Sampled brick units were found to be sound, intact and in reasonable condition.

Upon further investigation, it was concluded that significant heat loss from the interior has caused melting and ice damming during cold weather. The concrete elevator hoistway located at this corner has an equipment room on top of the hoistway. The concrete ceiling of the equipment room is tight to the underside of the wood roof structure. These concrete structures would contribute to significant heat lost through "stack effect" interior air movement. There is no insulation between the hoistway, equipment room and wood roof structure. In effect, the concrete hoistway and equipment room structure act as a large radiator, causing melting of snow at the slate roof. The absence of an effective roofing underlayment leaves the roof vulnerable to leaks caused by ice damming.

Water staining is visible at top of east walls at other building corners. These leaks may also be related to ice damming and/or failure of roof flashings, gutters and downpipes. At some locations, masonry walls have been repeatedly saturated from run-off directed through broken downpipes.

Exterior horizontal string courses, corner quoins and trim mouldings around windows are of red sandstone (consistent with Credit Valley Red Sandstone). It has been reported elsewhere that the window trims are of terra-cotta but this was not found to be the case. Close-up examination and rudimentary probing confirmed these elements to be of natural stone.

Historic photographs indicate that the sandstone trims were originally exposed in their natural finish, however, they have been covered with multiple coats of paint. Paint systems on sandstone trims have generally failed with large peeling paint fragments falling from the stone units all around the building. This is to be expected since most paint systems are impermeable and moisture from within stone units and wall assembly will typically blow paint films from their substrates as they attempt to exit the stone. The relatively lose sand matrix of the base sandstone unit does not provide for a particularly solid substrate to resist these forces. Layers of sand particles are typically embedded at backside of peeling paint fragments.

Individual stone units appear to be sound, although original carved profiles have eroded over time and lost some profile depth and detail. This is common with softer stone species such as sandstone.

Sandstone lintels at original 1899 building span window and door openings without assistance of steel support angles. Steel angles are provided at window opening in 1911 and 1920 Additions. The steel lintels have rusted and expanded in dimension, creating stress that has resulted in displacement of mortar from joints and fracture cracks in stone units. It is recommended that steel lintels be removed and replaced with new stainless steel or aluminum units.

Exterior brick masonry at south elevator hoistway is in poor to fair condition, with severely weathered mortar joints and some broken and deteriorated brick units. An east facing window at top of hoistway may have originally be provided for ventilation purposes. A portable air conditioner is currently installed through the window opening. Wood window components are no longer protected by paint finish and are fully exposed to weather elements. The window appears to be a retrofit in the wall since the opening is not square and a steel lintel is provided at top of opening instead of a masonry lintel.

Parapet walls at south hoistway are capped with terra-cotta tiles on east, south and west sides. The flat roof system has built-in slope to drain to the north edge of the roof.

Numerous sandstone mouldings are stored in the crawlspace. It appears that these materials may have been salvaged from the north walls of the building when constructing the additions. These stone units can be utilized to replaced damaged units found in the facades.

Colborne Building
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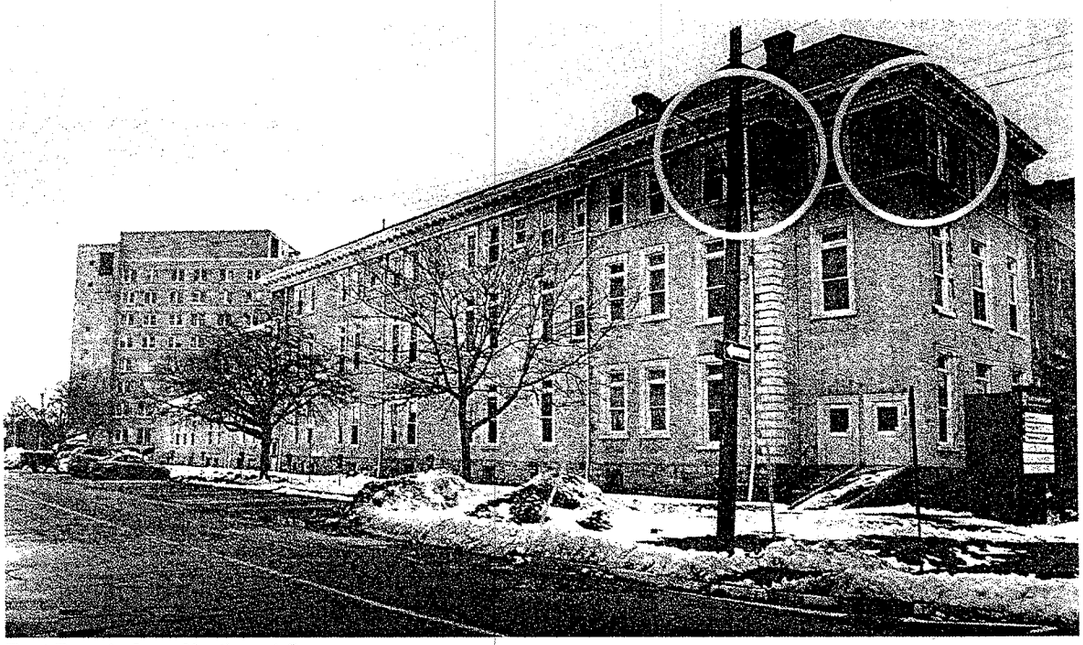
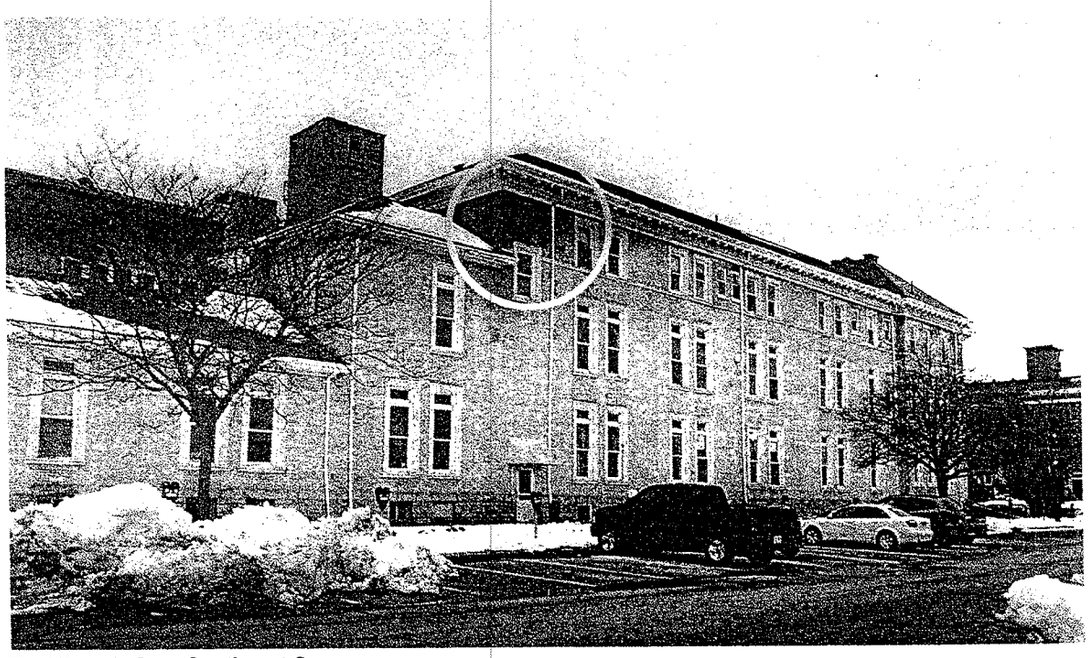
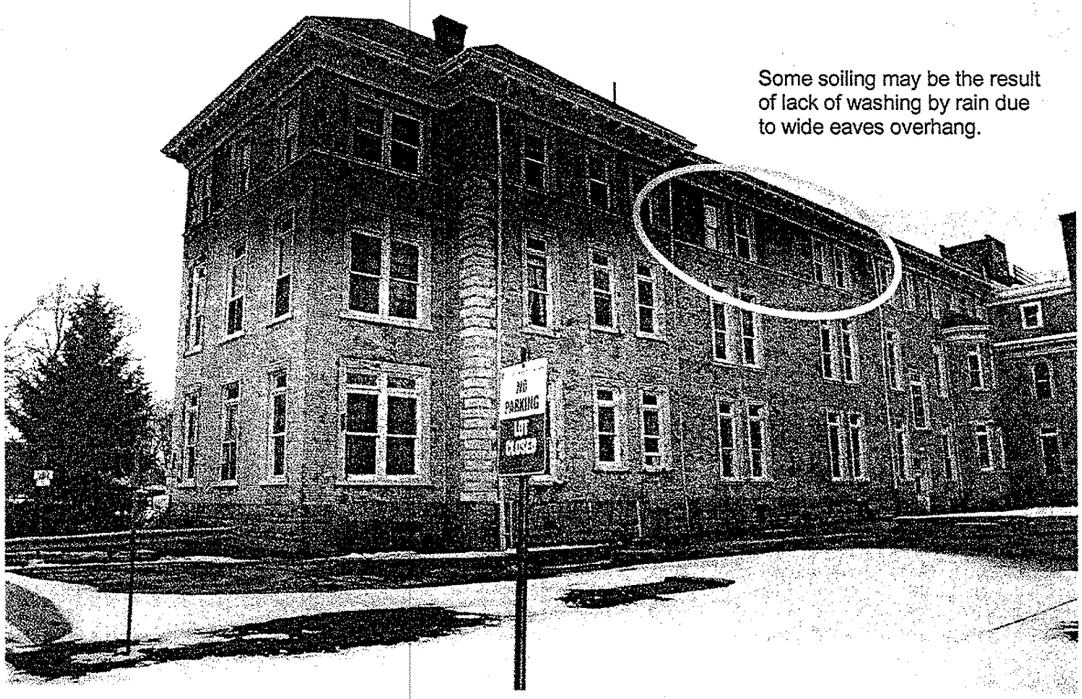


East Façade from Northeast Corner

Staining at corners (yellow circles) is primarily related to leaks at eave gutters, roof flashings and downpipes.

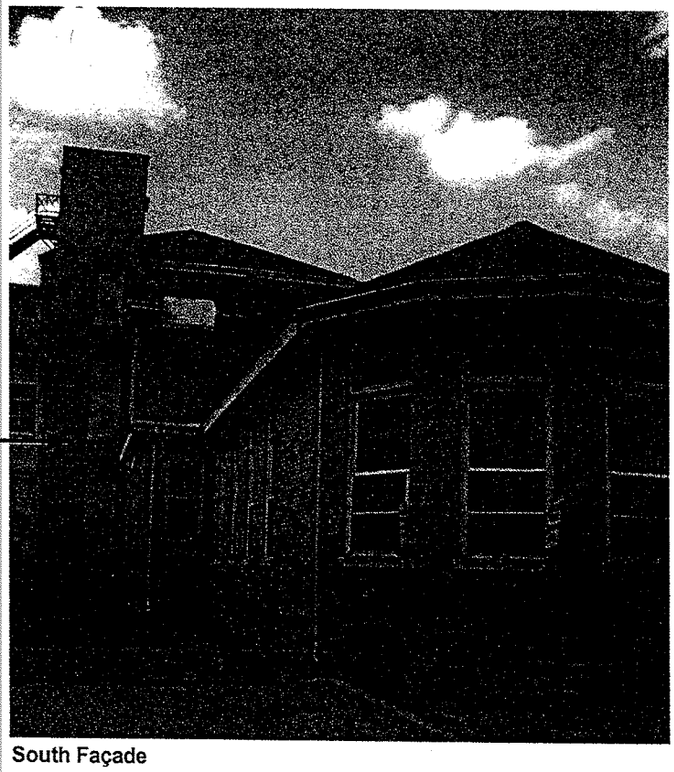


East Façade from Southeast Corner



Some soiling may be the result of lack of washing by rain due to wide eaves overhang.

West Façade from Northwest Corner

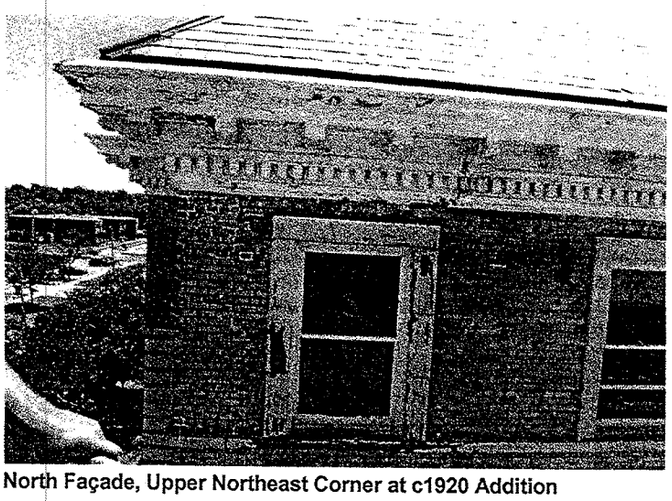


Elevator hoistway. Original wall openings have been infilled with painted wood panels.

South Façade

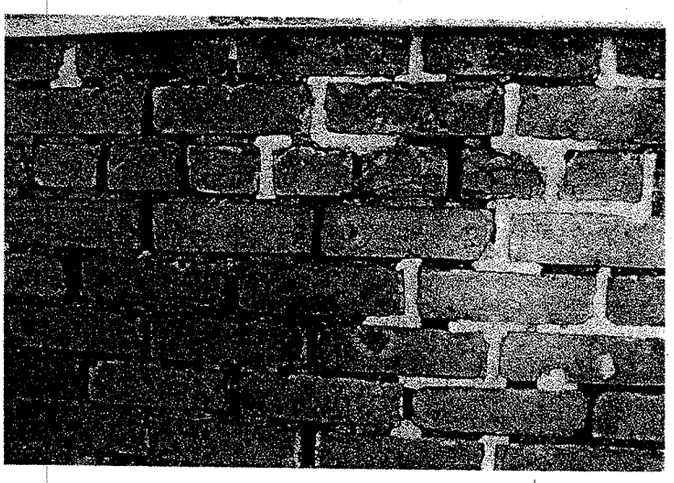
North wall appears to have been regularly saturated by water. Stains at underside of soffit indicate leaks in rain gutter.

It is suspected that heat loss and stack-affect at elevator hoistway inside this corner results in ice damming at roof and this is the primary contributing factor to masonry wall deterioration.

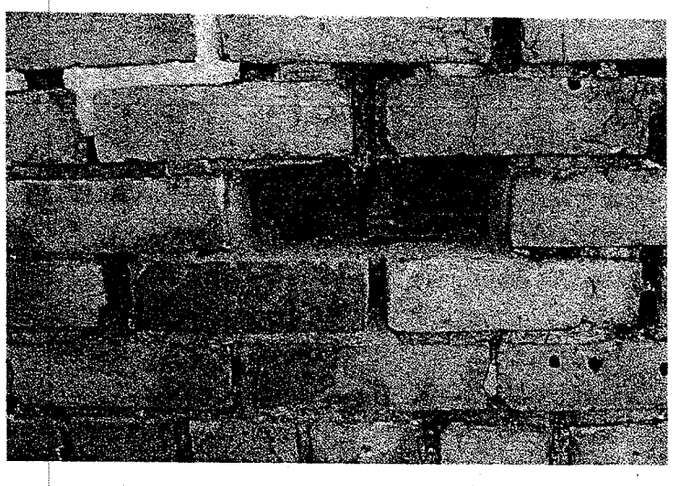


North Façade, Upper Northeast Corner at c1920 Addition

Mortar around this corner is in poor condition, with severely weathered and partially void joints. Previous repair attempts are visible as whiter coloured mortar.



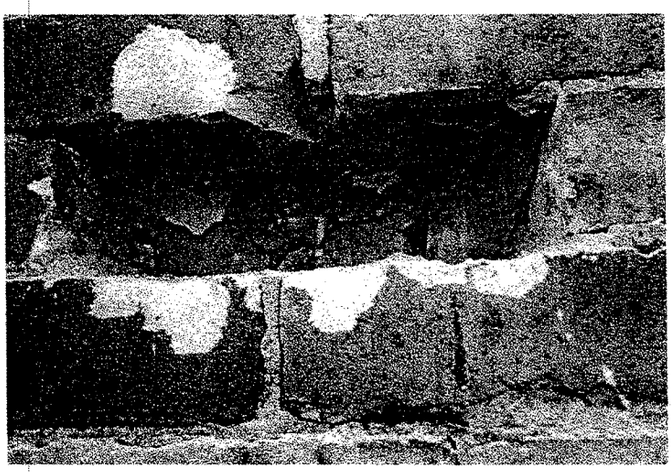
Surprisingly, the surviving mortar still provides resistance to removal, using hammer and chisel. Sampled brick unit was found to be in fair to good condition. Red coloured vitreous clay backup tile is visible beyond.



Decorative metal cornice is continuous around upper roof at original building and later additions.

East Façade, Original 1899 Building

Mortar was robust and required mechanical cutting equipment and hammer/chisel to remove brick. Brick units appear to be sound and in good condition as did inner wall core backup brick.



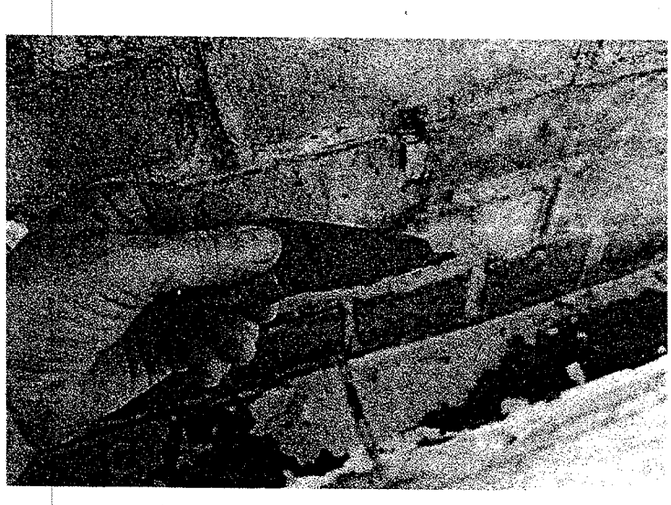
Random stone foundation wall throughout crawlspace appeared to be in good condition. Crawlspace floor is typically poured concrete.

Crawlspace below c1920 Addition

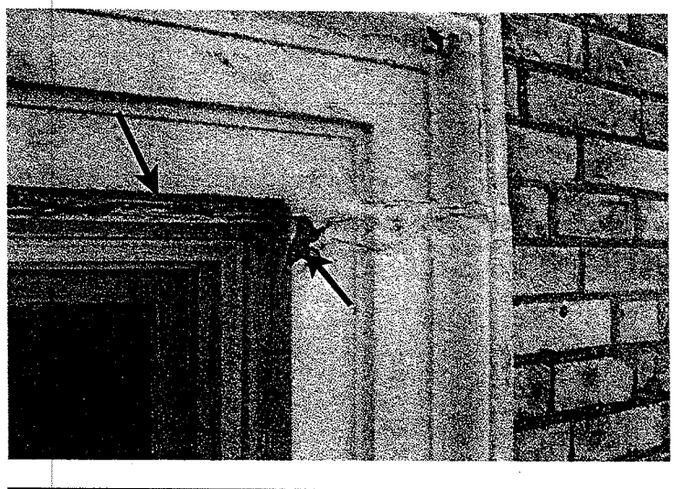
Peeling paint reveals underlying red coloured sandstone. Early reports suggested that the mouldings were of terra-cotta but this is not the case as confirmed by sampling stone fragments and drilling of pilot holes at random locations.

Typical Sandstone Moulding at Exterior of Window

Fragment of peeled paint contains embedded grains of red sandstone at backside of paint.



Steel lintels incorporated in 1911 and c1920 Additions are rusting, expanding and causing distress in surrounding stone units. Note diagonal fracture crack at edge of red stone where paint has peeled away.



Windows

Existing windows throughout the building are wood units with paint finish. The windows are typically single-glazed, single-hung wood units with operable vented awning with obscured glazing. The windows were designed as tall units to facilitate natural ventilation. More recently installed ceilings at interiors have been place part way down the window and conceal the upper awning vent panel.

There are no exterior storm units provided, nor have window openings been modified to accommodate portable air conditioning equipment.

Paint finish on windows is in fair condition, affording continued protection of wood substrates.

A detailed window-by-window assessment would be required to determine which windows can be restored for continued use. It should be expected that some windows will require significant repairs, involving replacement of wood components and glazing, or complete replacement of the window unit.

Expectations of building occupants for the proposed adaptive reuse may also drive the decision to replace all windows. It is reasonable to anticipate that the cost to repair and restore the existing windows, plus provide new storm units for increased thermal comfort, will likely be more than the cost to replace the windows with similar looking insulated glass units.

Roofing

Slate shingle roofing at 1911 and 1920 Additions is in poor condition. Slates have weather and delaminated to substandard thicknesses. Many slate shingles are broken, dislodged or missing, leaving wood sheathing exposed to weather elements. The slate roofing system is at the end of its service life and should be replaced as soon as possible.

The remainder of roof area is asphalt shingles. Single-tab shingles are provided on the high and low roofs of the 1899 building; 3-tab shingles are provided on the intermediate roof. The high roof appears to be the most recent installation and seems to be in reasonable condition with some remaining service life. The low, south roof and the intermediate roof are older installations that are in poor condition and require replacement as soon as possible.

Existing flat roofing at south elevator hoistway is a gravel-surfaced, built-up asphalt and felt roofing system.

Ornate cornice at eaves throughout the building is constructed from galvanized sheet metal with soldered seams. The cornice measures approximately 20" in height and consists of frieze, dentils and brackets and is finished with multiple coats of paint. Medallions with lion heads are space regularly along the eave gutter. Some of the paints are suspected to contain lead.

The metal cornice generally appears to be sound and in good condition, with some missing dentils and localized areas with staining and corrosion due to water leaks. Paint on metal cornice components has generally failed and it is not feasible to simply repaint these elements. Existing paint films must be removed prior to repainting with an appropriate paint system.

Galvanized metal gutters are built into the eaves. The galvanizing has partially dissipated over time, allowing the base metal to rust and corrode. Multiple applications of roofing mastic have been applied to interior lining of gutters in attempts to counter leaks. Such attempts have be largely unsuccessful as testified by the quantity of peeling paint from underside of soffit and ornate cornice.

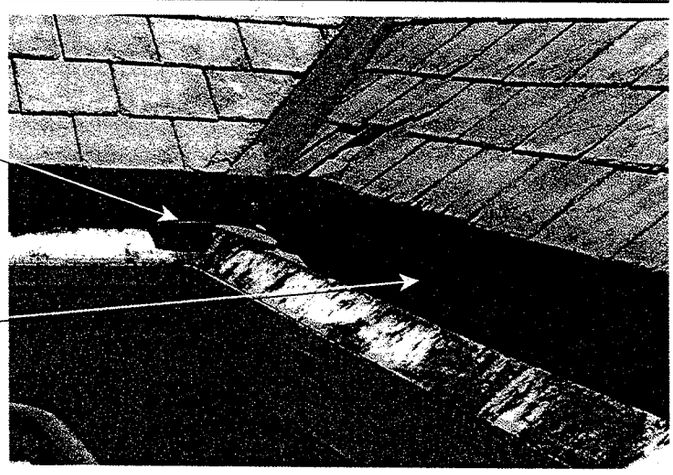
Aluminum, K-style residential grade gutters are installed at eaves of southern 1-storey structure. This gutter is deformed, bent and missing from various lengths of eaves. The aluminum gutter system should be replaced with new, commercial grade gutter, complete with hanging brackets and ice straps. This work is best coordinated with replacement of the asphalt shingle roofing.

Roofs should be inspected and cleaned at least twice per year; spring and fall are common inspection times. Until the building is renovated and re-occupied, it is recommended that regularly scheduled building walk-throughs be conducted to detect leaks at the earliest opportunity.

Slate Shingle Roofing at 1911 and c1920 Additions

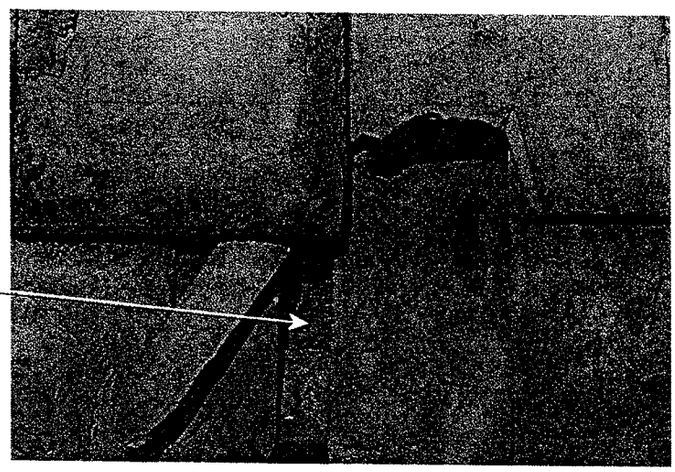
Broken shingles and fragments have gather in rain gutter at bottom of valley flashing.

Rain gutter has been coated with roofing mastic at inside of gutter numerous times to address leaks. Leading edge of gutter has rusted through paint finish.



Slate shingles are at end of service life. Shingles are severely weathered and delaminated, many are broken or cracked and many are dislodged and are sliding from place.

At some locations, missing slates exposed wood sheathing substrate to weather.



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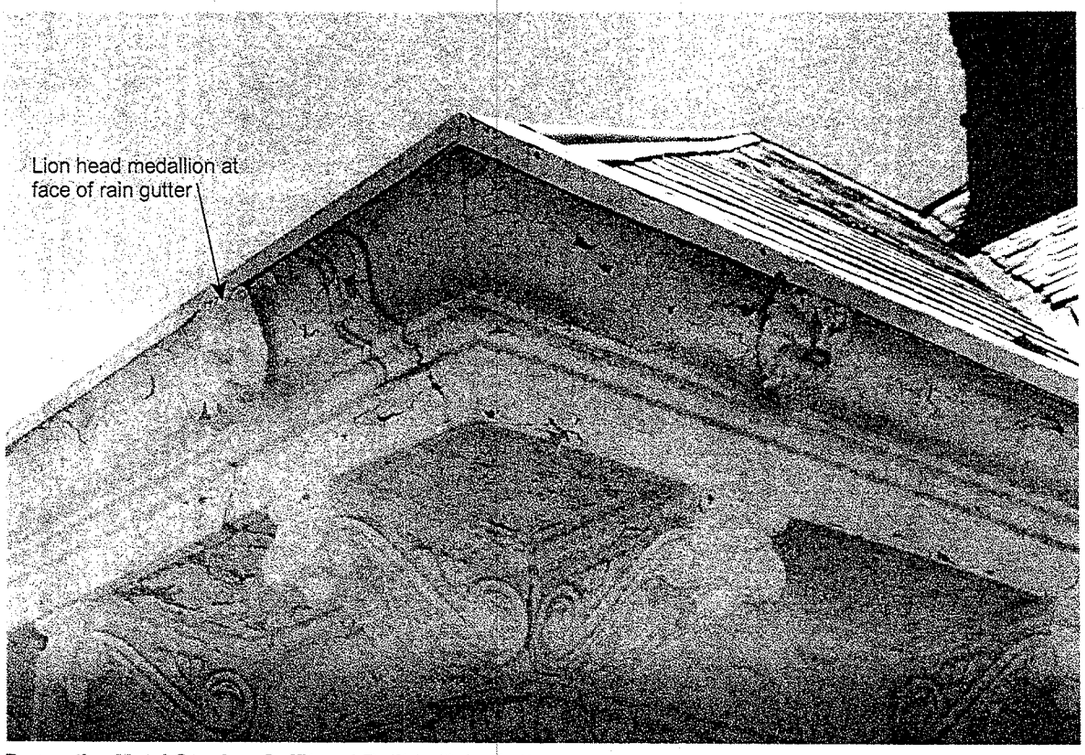
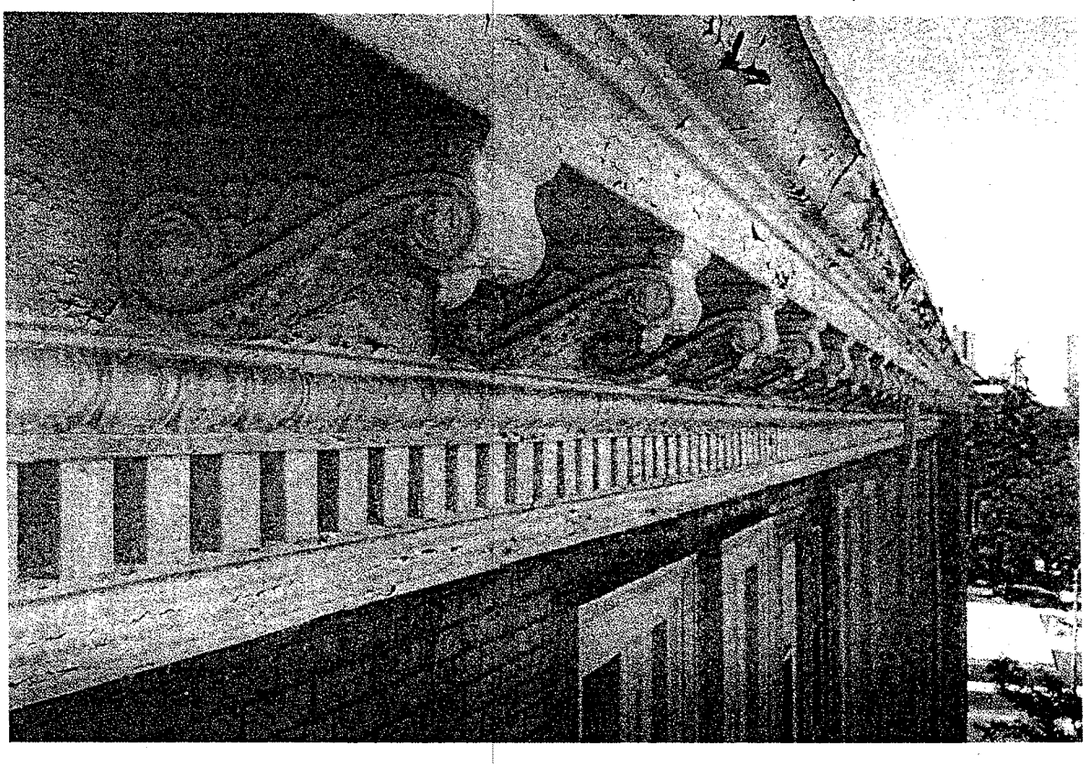
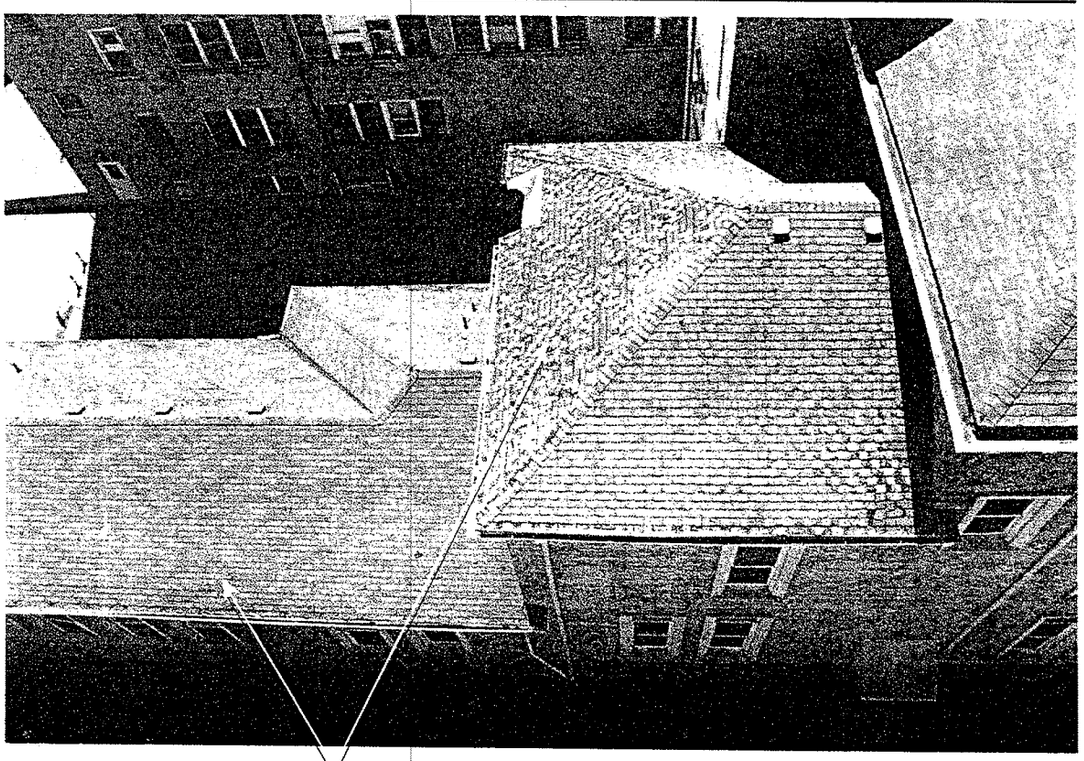


Decorative Metal Cornice, Soffit and Built-in Rain Gutter

Paint finish on metal components has failed.





Asphalt shingle roofing at low and intermediate roofs are in poor condition and require replacement as soon as possible.

Existing asphalt shingle roofing is essentially falling apart and sliding off of the roof.

Insulation
The existing building is essentially uninsulated except for a small area of third storey ceiling. Walls are typically 8" to 12" thick solid masonry with interior plaster finish. A thin layer of insulation is provided over some of the attic floor in the 1911 and 1920 Additions.

Installing insulation at inside of exterior walls is likely to be required by any adaptive reuse of the building. Increased levels of insulation can be easily installed in attics throughout the building.

Interiors
Is it anticipated that most interior finishes will require removal and new interior finish systems installed, to allow for replacement and upgrading of information technologies, mechanical, electrical, insulation and vapour barrier system. Consequently, this report did not include for detailed analysis of such existing systems, because where such systems are present they are outdated or inadequate.

There are some areas with severely damaged interiors caused by roof leaks. These rooms are concentrated below steps in roofs from high to intermediate and from intermediate to low roofs. General failure of asphalt shingle roofing and flashings are the source of leaks.

Barrier-Free Access and Facilities
Once detached from the main hospital building, the Colborne Building is left with stair access only at all entry points and, thus, the building does not provide for barrier-free access.

Internally, floor plates are at a single level for each floor with elevator access provided between floor levels. Existing corridors are generously wide and all but a few doors have minimum 36" wide door openings.

Some of the existing washroom facilities are equipped as barrier-free. This may be of little consequence since the interior is proposed to be gutted and completely renovated, including for barrier-free access and facilities as required to suit the adaptive reuse of the building.

Provision of barrier-free access is likely to involve modifications to one of the elevators to provide a thru-car configuration and grade level access, or construction of an elevated access to first floor level.

Barrier-free accessibility should be considered a primary objective for just about any adaptive reuse. Provincial legislation entitled "Access for Ontarians with Disabilities Act" requires accessibility compliance by the year 2025 for buildings intended for use by the public. A successful appeal to Human Rights Commission could initiate an earlier compliance date.

Hazardous Building Materials
A Hazardous Building Materials Survey was not included as part of this Report.

A Hazardous Building Materials Survey includes a room-by-room inspection of materials prepared by a specialized Environmental Consultant. Samples of suspect materials are sent for laboratory analysis and a written report is issued documenting the process and findings. As discussed in the Preface to this Report, building Owners are obligated by Provincial law to know of the existence of Designated Substance on their property and to take action to remedy and maintain same.

Current Occupational Health and Safety Act identifies eleven substances as Designated Substances in the workplace: acrylonitrile, arsenic, asbestos, benzene, coke oven emissions, ethylene oxide, isocyanates, lead, mercury, silica and vinyl chloride. A Hazardous Building Materials Survey will also typically comment on the presence of other non-listed materials such as mould and animal droppings (quano).

Asbestos
London Health Sciences Centre had commissioned an Asbestos Building Material Survey for this building. The purpose of the Survey, prepared by Golder Associates Ltd. of London, dated 26-Aug-2008, "was to identify accessible ACMs (asbestos containing materials) that require monitoring as part of an Asbestos Management Plan". This Survey is strictly for asbestos and did not review the presence of other Designated Substances. Furthermore, the 2008 Golder Survey is limited to visible ACMs stating that "it is possible that undiscovered ACMs may be present within inaccessible locations such as wall cavities or above inaccessible ceilings". This approach and scope of survey is standard for an intact building.

It was noted that the Golder Survey included for the building area immediately north of, and attached to, the section of building that is referred to in this Report as the North Wing. Therefore, the full scope of the Golder Survey would not apply to the building as defined in this Report.

The following asbestos containing materials have been identified in the building:
- preformed block on straight run pipes;
- parging cement on fittings;
- transite asbestos cement;
- aircell mechanical insulation on straight run pipes;
- various vinyl floor tile and vinyl sheet flooring;
- various lay-in ceiling tiles;
- ceiling plaster; and
- mastic.

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A Summary Report on Updated Decommissioning Cost Estimates for London Health Sciences Centre - South Street Campus was prepared by AECOM Canada Ltd. dated14-May-2010. In that update, two qualified and experienced asbestos abatement contractors provided estimated asbestos abatement and demolition costs. The contractors were provided with documentation and representatives conducted site visits. The two cost estimates for abatement work (not including demolition) were $100,000 and $180,000, averaging in at $140,000.

Of importance to the proposed adaptive reuse of the building, the Golder Survey "recommends the following be considered if future renovations are planned:

- Should planned renovations involve the removal of the materials identified as asbestos containing, ensure that all appropriate precautions (as detailed in O. Reg. 278/05) are followed;
- Disturbances to materials listed in this (Golder) report as presumed ACM should either be sampled prior to disturbance, such as building maintenance activities, renovation or demolition, or treated as ACM and handled in accordance with the requirement of O. Reg. 278/05; and
- It is possible that undiscovered ACMs may be present within inaccessible locations such as wall cavities or above inaccessible ceilings. If encountered during future renovations or demolition, suspect materials should be treated as asbestos-containing until proven otherwise."

The other Designated Substances were not included in the asbestos-only survey. Based on the age of the building and nature of use, it is reasonable to anticipate that some of the other Designated Substances are present on the site and could be encountered during renovations or demolition. Provincial Regulations require a comprehensive survey be conducted to determine the presence, location and condition of such materials.

The following is a list of potential hazardous materials that may be present at the site:

Lead
Lead containing paints may have been used throughout the building at both interior and exterior surfaces. Lead is also suspected in:

- pipe joint solder;
- cast-iron pipe bell joint sealant; and
- wall assemblies of medical diagnosis rooms.

Lead containing materials will not generate airborne lead dust in the absence of disturbance. Significant, harmful lead dust levels can result when uncontrolled work procedures are used on lead-based materials.

Procedures outlined in Ministry of Labour document "Guideline - Lead on Construction Projects (2004)" should provide an adequate standard for the handling or disturbance of the material.

Disposal of construction waste containing lead is regulated by Ontario Regulation 347, as amended by O. Reg. 558/00, and may be subject to Leachate Criteria of this Regulation.

Mercury
Mercury is suspected to be contained in wall-mounted thermostats and in fluorescent light tubes. The presence of mercury in these materials poses minimal risk to building occupants and workers, provided the equipment containing mercury is handled properly and mercury is not allowed to escape. Mercury waste must be handled and disposed of according to Ontario Regulation 347, as amended by O. Reg. 558/00, and may be subject to Leachate Criteria.

Silica
Silica may be present in concrete and masonry materials and in ceiling tiles. Disturbance of silica will occur during demolition of walls and ceilings, saw cutting of concrete floors and removal of lay-in tile ceilings containing silica. Work area enclosures, wetting of materials, negative air pressure and respiratory protection are required by Ontario Regulation 845/90, amended by O. Reg. 111/04, when dealing with silica.

PCBs
According to Hospital Maintenance Staff, all fluorescent lighting fixtures or ballasts have been replaced in recent years with non-PCB ballasts.

Each ballast has an identification number which can be checked against manufacturers listing of serial numbers available from Environment of Canada Identification of Lamp Ballasts Containing PCB's Report EPS 2/CC/2 (revised) August 1991.

Federal Regulation SOR/2008-273 requires that all PCB ballasts and PCB containing equipment be removed by 31-Dec-2025. PCBs must be disposed of as hazardous waste in accordance with Ontario Regulations 362/90.

Mould
Mould may be present at locations of water intrusion through the building enclosure and in areas of higher humidity. The lack of ongoing activity in the building, reduced air circulation and warm interior temperatures, provides conditions that will encourage mould growth.

Any mould affected materials should be removed and disposed of using Level 2 mould abatement guidelines per Environmental Abatement Council of Ontario's 2004 document titled "Mould Abatement Guideline".

Guano
Accumulations of bird and bat guano were not observed in the building.

Guano can contain fungi that causes a potentially serious respiratory illness known as Histoplasmosis. For health reasons, it is required that guano be removed using remediation procedures described in Appendix 'B' of the Environmental Abatement Council of Ontario's (EACO's) 2004 document, titled "Mould Abatement Guidelines".

Colborne Building
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General Hazardous Materials Recommendations:

- An Asbestos Management Program is required because asbestos containing materials (ACM) were identified in the building. A specialized Hazardous Materials Consultant should be engaged to assist in preparing this Program. Trained municipal staff or a qualified abatement contractor should be engaged to execute maintenance or removal/disposal work. An Asbestos Management Program would not be required if all asbestos containing materials are removed from the site.
- A detailed listing of required ACM repairs and removals starts on Page 12 of the Golder Associates Ltd. survey contained in the Appendices.
- A comprehensive, room-by-room Hazardous Building Materials Survey is required to determine what, if any, other Designated Substances are present at the site. This Survey is required prior to commencing work at the site.
- Construction workers require appropriate training and protective equipment when exposed to airborne particles of hazardous materials.
- Dispose of spent fluorescent light tubes as hazardous waste using a licenced recycling contractor.
- Recycle and/or dispose of refrigerant gases from mechanical equipment using a licenced recycling contractor.

Mechanical & Electrical Systems

Mechanical and electrical systems were not reviewed in detail as part of this Report. The change in use contemplated would generally require that almost all of the existing mechanical and electrical infrastructure in the building be removed and replaced.

The following is a general, brief assessment of these systems provided to emphasize the need for replacement systems when considering adaptive reuse of the building.

There is no building-wide air ventilation or air conditioning system. Heat from the central heating plant (Building #68) enters Colborne Building via an underground service tunnel system and connects to a steel pipe distribution system.

The heating system is low pressure steam that is distributed throughout the building to cast-iron terminal radiator units. LHSC has indicated that steam heat, provided by the central heating plant, will be discontinued in 2012.

The Colborne Building has a combination wet and dry fire sprinkler system but does have a fire standpipe system.

The electrical service to this building is fed from the main hospital building, which is scheduled to be removed. Therefore, a new electrical service will be required to service the subject building.

Conclusion

The overall building is structurally robust and it is generally in good condition with only minor or localized structural deficiencies or concerns. It is our opinion that the original building and its additions are sound structures and they warrant strong consideration for adaptive reuse and continued service.

Floor plan drawings, provided earlier in this Report, indicate existing load-bearing structural elements. Existing door and window openings are shown in walls. Basement, first and second storeys are defined by a series of thick interior and exterior masonry walls. The third storey is different in that there are few mass masonry structures and primarily wood frames partitions which can more readily be modified or removed.

Adaptive Reuse

It is our opinion that Colborne Building is a good candidate for adaptive reuse.

Some of the tangible attributes of the existing building include:

- the building is intact and structurally sound;
- provides for approximately 26.225 sq.ft. (2,436.3 sq.m.) of total useable floor area;
- approximately 15' (4.5 m) tall, floor to floor heights that will easily accommodate building structure and mechanical/electrical installations;
- durable exterior of stone and brick masonry;
- large windows with good distribution throughout exterior walls;
- efficient interior circulation system provided by central, double-loaded corridors; and
- existing elevator hoistway.

The configuration of interior spaces is limited by the building form and existing building structure. The building is long and narrow providing potential room depth of approximately 15' (4.6 m) to either side of existing central corridors. Corridor walls are typically double-wythe brick except for the third floor, which is primarily 2"x6" wood-framed partitions. Removal and/or modifications to masonry walls is involved and expensive. Greater flexibility is allowed for third-storey wood framed partitions.

The existing north stairway is appropriately placed in terms of egress, however, the configuration and discontinuity of the central stairways is deficient in that respect. The existing central hoistway appears to be large enough to accommodate a new car that can comply with barrier-free design standards.

Colborne Building
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Site Context
The site of the subject building has many positive attributes, including:

- The site is located close to the City's core, is accessible from Wellington Road (one of the City's major arterial streets) and South Street is a public transit route.
- The Thames River at south edge of the hospital campus provides for distant views and vistas, interfacing with the natural environment, and is connected to a continuous riverside park system.
- This building is just one property of many that forms the approximately 25 acre (8.5 ha) site. This is a substantial parcel of land that is available for redevelopment and is adjacent to the City core.
- A large existing parking lot is located across Colborne Street and is easily accessed. Street parking is provided along Colborne Street adjacent to the subject building.

The location of the building site on the former hospital campus, and in the context of the City, is a determining factor in the range of potential reuses. The 2011 SoHo Community Improvement Plan concluded that the Hospital lands provide an opportunity to preserve and celebrate heritage resources to ensure that the hospital remains etched in the community's memory. A diversity of housing types was promoted as a means for growing "in place".

The Colborne Building is located on the south side of South Street at the corner of Colborne Street. This building is located at the east edge of the hospital campus and thus is a transitional building between the existing residential neighbourhood and the yet to be developed bulk of the hospital campus.

There are some surface parking spaces adjacent to the west foundation wall. From a development standpoint, it would be preferable to have landscaping abut the foundation rather than asphalt. There should be ample parking in the existing lot across Colborne Street, which has capacity for approximately 146 vehicles. It is our understanding that the two surface parking lots on the east side of Colborne Street are not currently owned by the City.

At this time, there is a lack of local conveniences to support redevelopment of the Hospital property. It is anticipated that such conveniences (e.g. grocery store, laundry mat) will emerge as development of the site progresses.

Potential Building Uses

A meeting was convened in August 2011 to discuss various commercial, institutional and residential adaptive reuses for the building and overall Hospital property. This meeting was attended by members of City staff, including Administration, Social Services and Planning and Development, and by professional realtors experienced with commercial and residential developments and familiar with the London marketplace.

It was concluded that the location, site and buildings were not well suited for commercial and institutional uses. Generally, this type of tenant requires large open spaces as opposed to the restricted room sizes dictated by the existing building structure and circulation systems. The realtors reported that the subject building is too small for a single commercial tenant. It was also reported that there currently is surplus inventory of such spaces in the City and the potential rental rates required to pay for the proposed renovations would be in the range of $35/sq.ft. to $40/sq.ft. whereas the marketplace is currently offering and receiving close to $19/sq.ft. for rents. City operated long-term care facility was considered a no-go.

Existing structural and space configurations simply do not work for residential condominiums and high-end residential rentals. Suite sizes of approximately 1,200 to 1,500 sq.ft. are considered appropriate for these uses. The typical 14' to 15' wide rooms at either side of central corridor would require the suites to be approximately 80' long. Only eight to ten suites of that size could be accommodated in the building. It was estimated that each condo would have to sell for a minimum $350,000 to $500,000 just to cover the raw cost of renovations. This level of pricing well exceeds that of the local marketplace for similar properties according to input from local realtors and developers.

Some form of social housing was considered the best adaptive reuse for the building. The smaller suite sizes can fit within the existing structural system and floor plate configurations. Localized removal of some walls, creation of new wall openings and installation of new walls would be required. On average, one new residential suite can be created from every three to four patient rooms. Overall, it is anticipated that 20 suites could be accommodated in the existing building.

Social housing could take the form of affordable, geared-to-income, or assisted housing. It was reported by staff that a notional allocation of $150,000 per suite may be forthcoming to the City of London from Provincial agencies to support social housing projects. It was also reported that there is a strong demand for such housing; the current waiting list is approximately 2,000 households long for the under 60 age group. Conversion to social housing is consistent with SoHo Community Improvement Plan. It was suggested that the City might seek a partner to operate this type of facility.

The location of the property is ideal; it is located close to the city core, has available public transit and is a transitional property between the larger hospital site redevelopment and the existing mix of modest housing surrounding the site.

Colborne Building
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Preliminary Building Code Interpretation

The former use of the building as a hospital would classify the building's existing occupancy as Group B, Division 2 for care and treatment facilities. Changing the use of the building to Group C, residential occupancy, will involve application of sections of the Ontario Building Code (OBC) applicable to the proposed new use, and it is also likely to require re-zoning and potential amendments to the Official Plan.

The existing building area (footprint) is 9,335 sq.ft. (867.2 m^2). The building is constructed of a combination of combustible and non-combustible construction and is considered to face two streets.

The building is three storeys in building height and it has a fire sprinkler system. In this configuration, OBC Article 3.2.2.48 would apply. This Article permits combustible and non-combustible construction and requires:

- floor assemblies to be constructed as fire separations with a minimum 45 minute fire resistance rating;
- mezzanines to have a minimum 45 minute fire resistance rating;
- supporting structures to have a minimum 45 minute fire resistance rating.

Conceptual Design

The City Zoning Bylaw provides for minimum suite sizes. The City's Service Manager for Social Housing may establish suite sizes and amenity requirements based on other housing in the City. The default suite sizes provided in Canada-Ontario Affordable Housing Program are listed in the table below.

Suite Sizes	City Zoning Bylaw Minimum Suite Size		Canada-Ontario Affordable Housing Program	
	sq.ft.	sq.m	sq.ft.	sq.m
Bachelor	398	37.0	450	41.8
One Bedroom	506	47.0	650	60.4
Two Bedroom	614	57.0	850	79.0

Sizes of suites shown in the following Conceptual Design Drawings comply with the Zoning Bylaw minimums and, in some cases, exceed the above maximum sizes. This is due to limitations imposed by the existing floor plate configuration, structural elements and interior circulation system.

On the three main floor levels in the existing building, the Conceptual Design provides for a total of 19 1-bedroom suites plus one 2-bedroom suite.

There is opportunity during future design development to refine the sizes and quantities of suites. The Conceptual Design Drawings included with this report are intended to provide an indication of potential building layout and to demonstrate the feasibility of accommodating a reasonable number of suites.

It appears that the normal, expected range of amenity spaces such as common room, and laundry can also be readily accommodated. There may be a shortage of space to provide adequate ensuite storage or remote storage lockers for each tenant within the building.

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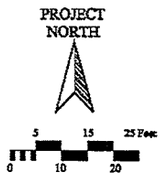
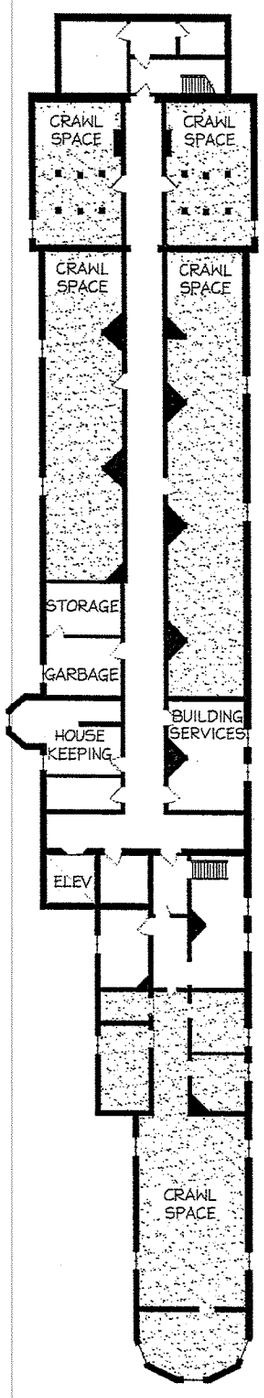
Nature of Proposed Building Modifications
In simplified terms, renovating the building will involve:

- abatement of hazardous building materials;
- repair of masonry walls;
- repointing of exterior masonry;
- replacement of rusting steel lintels at door and window openings with galvanized steel or stainless steel units;
- restoration/repair of existing windows or installation of replacement units;
- removal and replacement of existing slate shingle and asphalt shingle roofing systems with new asphalt shingles over full roofing underlayment;
- removal of a significant amount of interior finishes and partitions;
- insulating of attic and exterior walls, construction of new partitions and installation of all new interior finishes;
- provision of barrier-free access into the building via exterior 1:12 ramp and new porch structure;
- replacement of elevator equipment in existing hoistway;
- new mechanical heating, ventilating and air conditioning systems;
- new water distribution, sanitary and storm plumbing systems;
- modifications to existing fire sprinkler system;
- new electrical service and lighting and distribution system; and
- new connection devices for telephone, data and cable TV.

Conceptual Design Drawing

Basement Floor Plan





Colborne Building
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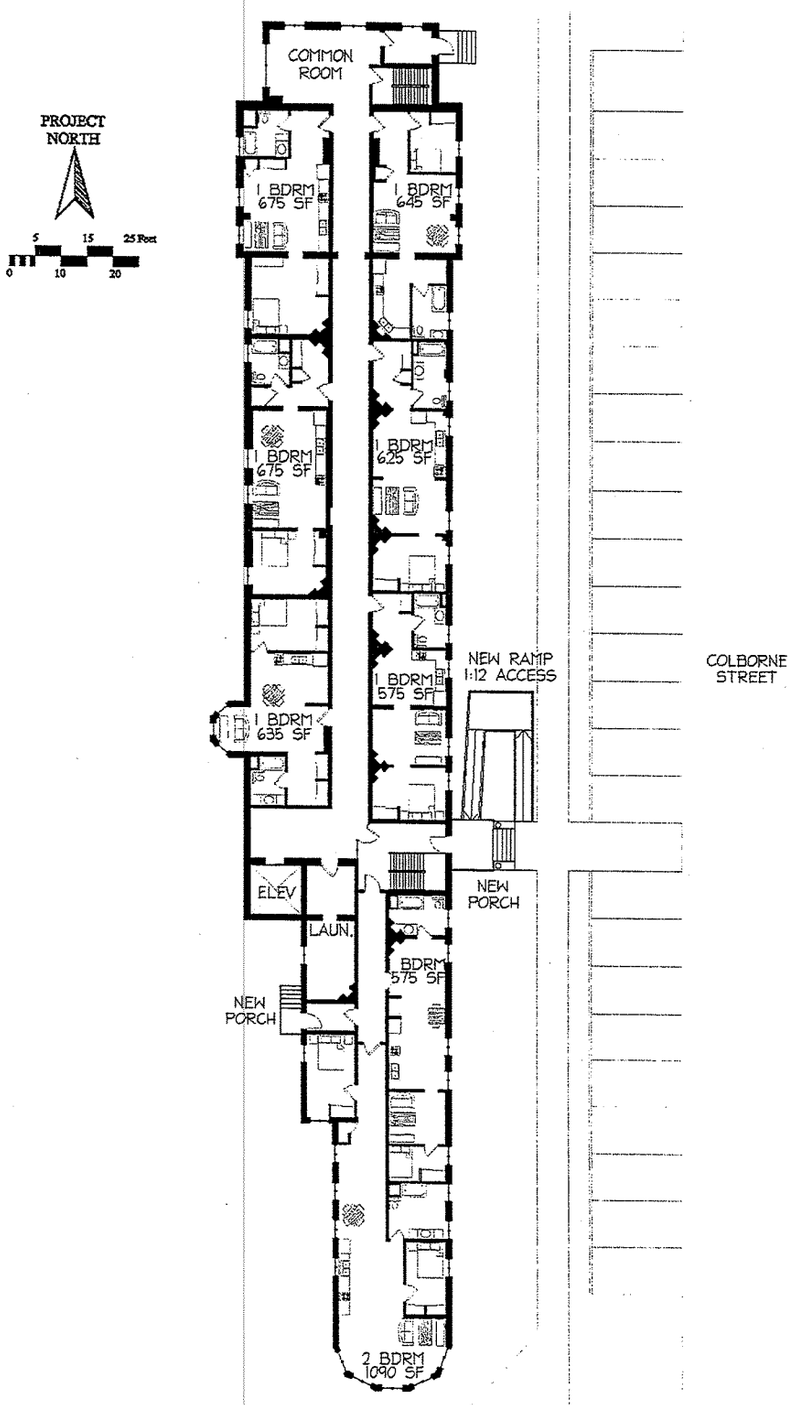
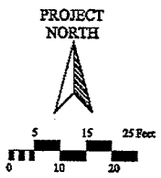
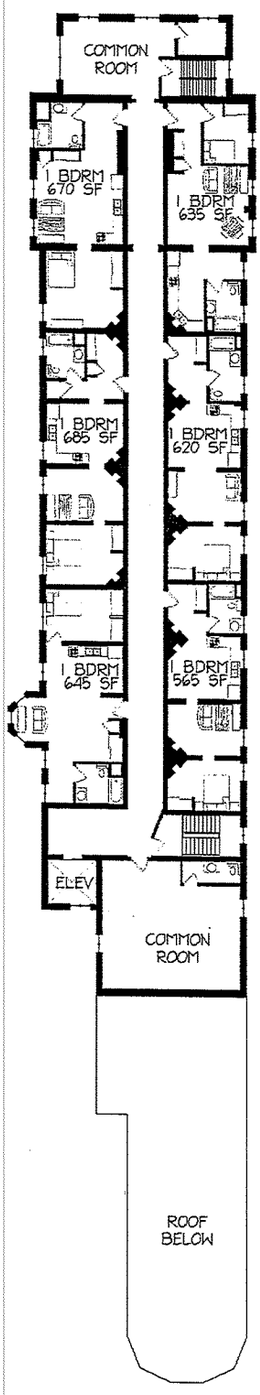
First Floor Plan



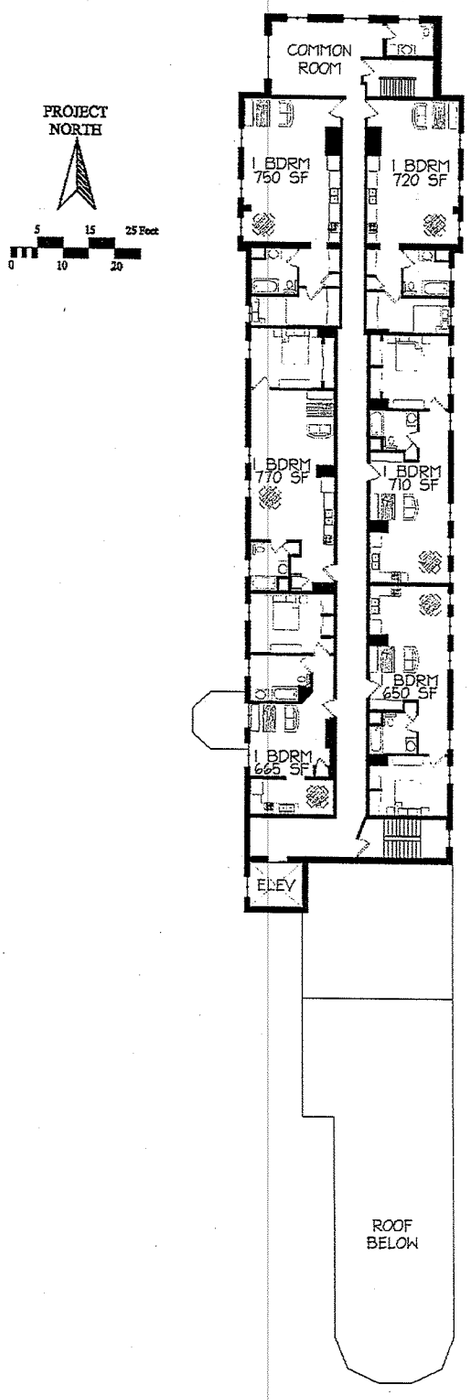
Conceptual Design Drawing

Second Floor Plan





Third Floor Plan



Probable Construction Costs

Statement of Probable Construction Costs	
General Demolition, Removals & Disposal	$325,000
Asbestos Abatement *	$151,000
Other Hazardous Building Materials Abatement	$80,000
Masonry Restoration & Metal Cornice (including scaffold access)	$1,005,000
Windows & Doors	$400,000
Roofing *	$125,000
Modifications for Barrier-Free Entry & Ramp	$75,000
Interior Renovations	$2,625,000
Elevator	$150,000
New In-house Boilers *	$150,000
Fire Sprinkler System Modifications	$65,000
Water & Sewer Upgrades	$50,000
New Electrical Service & Utility Charges	$100,000
Appliances	$30,000
Subtotal	$5,331,000
Contractor General Conditions, Overhead & Profit	$800,000
Permits and Fees	$133,000
Contingency	$800,000
Professional Design and Administration Fees	$958,000
Total (HST extra)	$8,022,000

* Cost items overlap proposed Mothballing activities. Costs incurred during mothballing of building can be deducted from above estimate.

Not included in costs:
- land acquisition
- site development
- soft costs such as legal, surveying, marketing and debt servicing
- furniture and furnishings
- demolition and removals of adjoining and neighbouring structures
- project funding from senior levels of government

Estimate for asbestos abatement is taken from report prepared by AECOM Canada Ltd., dated 14-May-2010. An additional allowance figure has been provided for abatement of other hazardous building materials which may be found at the site. The recommended average cost of $140,000 has been increased by 7.5% to account for general increases in construction cost since the estimate was originally prepared.

A 15% design and construction contingency is carried in the budget to reflect the preliminary nature of the estimate. The contingency would normally be reduced and funds reallocated as the scope of work and details are refined during design phase and during preparation of construction documents.

On a per suite cost basis, converting the existing building would represent a cost of approximately $401,100 each. It is our understanding that City supported projects involving adaptive reuse of existing buildings at 390 Princess Avenue cost approximately $148,000/suite and at 590 Grosvenor Street cost approximately $207,000/suite. The estimated cost to convert The Colborne Building is at least double these previous City projects.

By comparison, our firm is currently constructing a new 31 suite affordable housing project in Clinton. The cost of the project is $4.6M including for site development and site services, but excluding land acquisition cost and HST. That represents a cost of $148,000 per suite.

As can be interpreted from the cost items presented on the preceding page, the vast majority of costs are not driven by the fact that the building is considered to be of heritage value. The relatively high construction cost has more to do with the fact that (1) the building was purpose made for hospital use and conversion to most other uses requires significant interior renovations and modifications to building services, (2) the size and form of the building involves a large amount of walls area relative to floor area, (3) provision of residential units requires expensive spaces such as washrooms and kitchens, and (4) the need to address the expectations of building occupants in today's marketplace.

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 fourth quarter 2011 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.

Interim Building Maintenance (Mothballing)

This section focuses on de-activating (mothballing) the building for a period of time should renovations regarding adaptive reuse be deferred.

Stabilizing of the structure, controlling or exterminating pests and vermin and to protect the building enclosure against moisture penetration must be accomplished as the first step. The next steps involve:

- securing the building to reduce vandalism and unauthorized entry;
- provision of adequate interior ventilation to prevent decay and deterioration, especially during summer season;
- modifying building services such as electrical and mechanical systems appropriately; and
- implementing a maintenance and monitoring plan.

Structural stabilization should be minimal for this building based on the structural assessment.

Elimination or reduction of interior heating may result in more snow accumulation on the flat roof. Regular monitoring of roofs is required during winter. Excessive amounts of accumulated snow may have to be removed manually to reduce roof loads.

Grading around the building should be reviewed to ensure surface runoff flows away from the foundation wall.

Pests and vermin control will require sealing of building penetrations, which are considered entry points, and installation of traps and baits at building exterior and interior. A pest control contractor is well suited to provide this service with regular scheduled attendance at the site.

The slate shingle roofing at north end of building and asphalt shingle roofing at intermediate and low roofs at south end of building should be removed and replaced to avoid consequential interior damage. Aluminum rain gutters should also be replaced at low roof and temporary repairs made at built-in gutters at high roof where there are existing leaks. Downpipes with broken seams should be replaced. Roofs should be inspected at the time of mothballing the building and at least twice a year with any identified repairs executed immediately.

Interior doors, except for fire-rated doors at stairways, elevator, dumbwaiter and boiler room, should be propped open to allow for free movement of air. Fire-rated doors should remain closed to reduce spreading of fire.

There are at least 5 exterior doors that are accessible from grade level and over 151 window openings on the four façades. Each of the exterior doors must be secured from unauthorized entry and windows at basement and first storey, and perhaps second storey, should be protected to prevent breakage and forced entry.

Protective covers at windows should be designed to deflect wind, rain and snow, and yet allow for ventilation to interiors. Covers that still permit light penetration are preferred as natural light is of great benefit when conducting ongoing inspections and maintenance operations. Fastening of protective covers must be done to avoid damage to existing masonry walls and wood windows, if they are to be retained.

With the building enclosure made weathertight and secure, it is essential to provide adequate ventilation throughout the building. Without sufficient air changes, humidity levels may rise to levels that encourage mould, rot and insect infestation. Ventilation can be provided by natural or mechanical means. The minimal number of air changes, normally recommended for mothballing a building, are two to four during summer and one to two during winter.

All damaged interior building materials, redundant furnishings, equipment and furniture should be removed from the building. This eliminates potential fuel for fire and will facilitate monitoring activities and eliminate sources of organic food, nesting for vermin and mould. Components of existing buildings that have previously been removed, and ones that require removal for mothballing, should remain stored in the building.

Emergency egress facilities are required for persons conducting periodic inspections or working inside the building. It is recommended that existing doors with glazing panel be retrofitted with plywood closer panels over glazing or the doors replaced with new reinforced hollow metal doors. With the exception of designated entry doors with locks, all other exterior doors should have no exterior hardware such as pulls, knobs/levers or keyholes.

A fire and security detection/monitoring system should be installed. Smoke detectors and rate-of-rise detectors should be strategically placed throughout the building's interior. An intrusion alarm system could consist of motion detectors in corridors at floor levels having grade level access. Low temperature detection devices should be utilized and system equipped with automatic dialer for off-site monitoring. The monitoring system could also incorporate devices to report on humidity and temperature conditions inside the building.

Unless removing all interior finishes, it is recommended that a minimal amount of heating be maintained in the building. Doing so will not only prevent wall masonry from completely freezing, but it will reduce damaging condensation (mould) that will develop during warmer temperatures in spring seasons.

LHSC has indicated that central steam heating system will be discontinued to this buildings in the near future. Provision of heat would therefore require installation of a new steam boiler system to service this building. It is recommended that two natural gas-fired steam boiler be installed in a fire-rated mechanical room in the basement. The boilers could be convertible to hot water at a later date to better service any adaptive reuse. In the meantime, the new heating plant would be run to provide minimal heating during mothballing.

Water lines, including fire standpipe system, could be drained to avoid potential freezing and leaks. This will have the negative affect of reducing firefighting abilities from inside the building. Shutting down the water service will require discussions with the Fire Department.

Sewer gases can be explosive. Therefore, either sanitary sewer traps must be filled with glycol or the sewer line to street cut off and capped. Glycol filling of traps will require regular inspection and maintenance.

A basic electrical service with some lighting and convenience outlets will be required to provide lighting for safety reasons and for monitoring and maintenance activities. Electrical power will also be required for the fire and security alarm system and heating system. London Hydro and London Health Sciences are currently making changes to electrical services around the hospital site and re-feeding various buildings from different locations. It is somewhat unclear at this time how this will impact the subject building. Therefore, it is assumed that a new, residential size 200 amp service may be required for the de-activation period.

While reasonable efforts can be made to stabilize the building and to slow the deterioration of materials, natural disasters, storms, undetected leaks and unwanted intrusion can still occur. A regular schedule is therefore required for surveillance, maintenance and monitoring activities. The more frequent the site visits, the sooner that water leaks or break-ins will be noticed and the better the air change. Monitoring of the condition of identified hazardous building materials is an important issue should these materials (i.e. paint coatings, asbestos insulation, etc.) deteriorate and become a present health and safety concern. Regular visits and ongoing maintenance will also let the community know that the building is being cared for and it has not been abandoned. It is recommended that site visits, involving a brief walk through the entire building, be conducted every three days or at minimum once per week. Fire and police services should be advised of the vacant status of the building.

According to the budget list below, it is reasonable to anticipate that a budget of $609,000 is required to mothball the building. In addition, a monthly budget of approximately $1,075 is required for monitoring, regular walk-throughs and pest/vermin control.

Colborne Building
London Hospital, South Street Campus

Budget for Mothballing Building	
Localized masonry repairs, zoom-boom access	$20,000
Urgent roofing replacement and rain gutter repairs	$50,000
Disconnect & cap unneeded building services	$10,000
Temporary electrical service, lighting & distribution	$12,000
New independent boiler system	$150,000
Install basic fire alarm & intrusion alarm systems	$7,500
Remove interior doors (except fire rated doors)	$5,000
Remove unnecessary interior furnishings and materials	$20,000
Install protective covers at doors & windows: labour	$25,000
material	$32,000
zoom-boom equipment rental	$7,500
Mechanical ventilation system	$5,000
Allowance for urgent haz-mat abatement	$35,000
Subtotal	$379,000
Contractor General Conditions, Overhead & Profit	$57,000
Permits and Fees	$9,000
Contingency	$76,000
Professional Design and Administration Fees	$88,000
Total (HST extra)	$609,000

Budget for Monthly Mothballing Costs	
Roof inspections (every 3 months)	$100
Security walk throughs, exterior & interior (twice weekly)	$750
Monitoring of fire and intrusion alarm systems (24/7)	$125
Ongoing pests and vermin control	$100
Total Monthly Budget (HST extra)	$1,075

- - - End of Report - - -

Appendix

Attached document was commissioned as part of this Report:

Structural Engineer's preliminary assessment, prepared by Pow Peterman Consulting Engineers, dated 17-Oct-2011.

Attached documents commissioned outside of this Report or are provided form record/reference purposes:

Asbestos Building Materials Survey, Building No. 67 - Colborne Building, South Street Hospital Campus, London, submitted to London Health Sciences Centre and prepared by Golder Associates Ltd., dated 26-Aug-2008.