A CONSERVATION PLAN

CHAMPLAIN OIL COMPANY SERVICE STATION

70 RICHMOND ROAD OTTAWA, ONTARIO

SUBMITTED TO: TRINITY DEVELOPMENT GROUP INC.

PREPARED BY: JOHN STEWART, COMMONWEALTH HISTORIC RESOURCE MANAGEMENT

FINAL April 30, 2022

Commonwealth Historic Resource Management offers service related to conservation, planning, research, design, and interpretation for historical and cultural resources. A key focus of the practice is assessing the impact of development on heritage resources. The firm was incorporated in 1984.

John J. Stewart, B.L.A., O.A.L.A., C.S.L.A., CAHP, a principal of Commonwealth is a specialist in the planning and design of cultural resources, building conservation, and commercial area revitalization. A graduate of the University of Guelph, he received additional training at Cornell University (USA) and Oxford University (UK) and holds a diploma in the Conservation of Monuments from Parks Canada, where he worked as Head, Restoration Services Landscape Section. Before Commonwealth's formation, Stewart served for four years as the first director of Heritage Canada's Main Street Program.

Stewart is a founding member of the Canadian Association of Heritage Professionals. He has served as the Canadian representative of the Historic Landscapes and Gardens Committee of ICOMOS and the International Federation of Landscape Architects. Stewart is a panel member with the Ottawa Urban Design Review Panel and a board member of Algonquin College Heritage Carpentry Program.

John J. Stewart
Principal

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1.0 INTRODUCTION

This Conservation Plan is a requirement of the City of Ottawa. It is a part of the planning submission in support of all three required applications (Zoning Bylaw Amendment, Official Plan Amendment and Heritage Permit). The Conservation Plan and the Cultural Heritage Impact Assessment are companion documents and should be read together. The purchase of the adjoining property at 376 Island Park Drive responded to the City's concerns that the development was over-built and triggered a revised design. Both the CHIS and the Conservation Plan have been revised. This Conservation Plan replaces the January 2022 submission, which was a combined submission of the CHIS V3.

A detailed step by step plan for moving the station is outlined in Addendum A of this report. The report was prepared by Cleland Jardine Engineers Ltd. and includes the methodology and budget prepared by CDS House Movers Ltd. The temporary storage of the Station will be across the street at the gas station on the northwest corner. A lease has been negotiated for the duration. The process describing the move remains the same.

The following documents are referenced in the preparation of this report:

- A CHIS accompanies the Conservation Plan evaluating the impact of the development proposal in a manner that is consistent with the City of Ottawa Official Plan Section 4.6.1. Policy 9;
- Standards and Guidelines for the Conservation of Historic Places in Canada. 2010;
- BHSC Designation Report, 70 Richmond Rd., August 13, 2015, File Number: ACS2015-PAI-PGM-0050;
- 70 Richmond Road - Heritage Building Relocation Feasibility Study Cleland Jardine Engineering Ltd. January 2022. Appendix A;
- Historical Building - Champlain Oil Company Service Station Complete building including garage bay, Scope of Work and Pricing quote CDS Building Movers revised January 18, 2022. Appendix A;
- Designated Substance Survey 70 Richmond Road Ottawa, Ontario. Paterson Group Engineers December 7, 2021, Appendix B;
- Relocation Feasibility, John G. Cooke Consulting Engineer Appendix C;
- As-found recording and supporting photo record;
- Integration and layout of the service station as part of the ground floor retail Hobin Architecture March 2022.
- A collection of catalogues and histories describing the invention of the overhead garage doors dating from 1930.

This Conservation Plan follows the content outline recommended by the City of Ottawa and documents the extensive dialogue between the City and the client team over the course of four years.

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1.1 Background and Condition

The Champlain Oil Company Service Station has been vacant for a number of years with no maintenance undertaken on the structure. Based on the assessment from both John G. Cooke Consulting Engineers and Cleland Jardine Engineering Limited, the building is in poor to fair condition.

The Service Station is a 100m2, one storey structure constructed in 1937 (Patterson Group EA 70 Richmond Road Title Search Deed NP45576 Registered Feb 16, 1937, Champlain Oil Company). The structure is made-up of three parts - a cottage retail, administration office (transition), and a two-bay service area. The foundation consists of cast in place perimeter concrete walls with a chamfered stepped base approximately 12". It is assumed that the foundation extends down approximately 5' below grade and is supported on perimeter footings. The floor construction is concrete slab on grade. A small portion of the floor in the administration area has a wood flooring with a shallow open pit below. The service garage floor is 1' lower than the rest of the building. The interior of the cottage has been completely gutted, exposing the wall and roof structure. A load bearing wall was removed under the western chimney and a built-up wood beam was installed at ceiling level to support the concrete block gable and chimney. The roof over the cottage section has a standing seam metal cladding with chimneys at the gable ends. It consists of rough sawn 2" x 9" horizontal ceiling rafters at 20" c/c supporting sloped rafters above. In the cottage area and the roof trusses appear to be in good condition.

Figure 1:View of the Service Station with the 3 sections cottage, transition, and service bays.

The roof structure, over the administration section and service bay, consists of a built-up Montreal style standing seam Mansard profile. The framing consists of rough sawn 2" x 10" joists at 24" c/c supported on a steel beam running down the middle of the double bay. The metal roofing in the transitional area has failed and there is significant water infiltration. Cooke's report suggests that significant portions of the roof structure are deteriorating.

The service bay area is an open space framed by two exterior block walls, the interior brick wall and the north (front) wall with a single block pier and two large garage door openings. The interior cinder block loadbearing wall separating the transitional area from the service bay is in poor condition, with a large fracture across the doorway opening at the back of the building, and a variety of cracks in the wall at the front. The flooring in this space appears to be a concrete slab on grade. The exterior masonry walls are in fair to poor condition with localized vertical cracking noted in several locations. Based on a few

limited areas, where holes in the masonry were noted, the masonry does not appear to be grouted nor reinforced. The Service Station will require stabilization in preparation for the move.

Figure 2: Former Champlain service station, 55 Saint-Viateur Street West Montreal is a mirror image of the Service Station at 70 Richmond Road. Source: [photo: Justin Bur 2017]

1.2 Approach

The purpose of the Plan is to lay out the procedures to successfully relocate the heritage designated Champlain Oil Company Service Station at 70 Richmond Road and to assure its conservation and rehabilitation as part of the ground floor retail. This report updates and elaborates on the information previously submitted.

The properties making up the development site are located at the intersection of Island Park Drive and Richmond Road within Richmond Road/Westboro neighbourhood in the Kitchissippi ward. The properties include a single storey, cottage form Service Station constructed in 1937 that will be moved and a single-family residence at 376 Island Park Drive that will be demolished. The Service Station, designated under Part IV of the Ontario Heritage Act, will be moved from its original location at the rear of the property and placed parallel to Richmond Road in front of the proposed midrise apartment building.

The Service Station will be linked and integrated into the ground floor facade of the proposed mid-rise and will become part of the ground floor retail space. The concept involves shifting the Service Station to a location across the street and storing it there during construction and then, moving it back across the street to the front of the property where it will be placed on a new foundation on the parking slab

and there undergo rehabilitation. Issues with the structural stability of the building, were addressed by Cleland Jardine Engineers who determined the practicality of moving the building as a single structure. Their recommendation is to retain the Station in its entirety, move it as a single structure and set it on a new foundation where necessary restoration will be undertaken. The initial plan for leasing the neighbouring property and storing the entire building during construction did not work out. It will be moved across Richmond Road and stored. A detailed step by step plan for moving the station as recommended by Cleland Jardine is outlined in Addendum A of this report.

1.3 Standards and Guidelines of the Conservation of Historic Properties in Canada

Both the CHIS and the Conservation Plan have been assessed against the Standards and Guidelines. The standards and guidelines identify three primary conservation treatments, two of which are applicable:
Preservation involves protecting, maintaining, and stabilizing the existing form, material and integrity of a historic place or individual component, while protecting its heritage value. Consider Preservation as the primary treatment when: (a) Materials, features and spaces of the historic place are intact and convey the historic significance, without extensive repair or replacement; (b) Continuation or new use does not require extensive alterations or additions.
Rehabilitation involves the sensitive adaptation of a historic place or individual component for a continuing or compatible contemporary use, while protecting its heritage value. Consider Rehabilitation as the primary treatment when: (a) Repair or replacement of deteriorated features is necessary; (b) Alterations or additions to the historic place are planned for a new or continued use.

The primary conservation treatment for the Service Station is REHABILITATION where alterations and additions are planned for a new use of the house-form commercial section, the adjoining office area, and the two-bay section.

The following applicable guidelines appear in *italic* with a discussion of how the conservation approach:

General Standards for Preservation, Rehabilitation and Restoration
Standard 1. Conserve the heritage value of a historic place. Do not remove, replace, or substantially alter its intact or repairable character defining elements. Do not move a part of a historic place if its current location is a character-defining element.
Conservation Approach: The location of the building at the south-west corner of the lot is a character-defining feature of its original use as a Service Station with parking and access lanes taking up most of the lot that fronts onto the two access roads. The building is being relocated to the north-east corner of the lot to be a prominent feature of the proposed development. Policies in the Official Plan Section 4.6.1 Heritage Buildings and Areas, specifically 4.6.1.4 (a) states "*Where relocation of a structure designated under the Ontario Heritage Act is proposed, the City will require that the cultural heritage impact statement demonstrates that relocation is the only way to conserve the resource. The City may consider the option provided that: [Amendment #76, August 04, 2010] [Amendment #96, February 22, 2012]*

(a) The building is retained on site, but moved to another part of the property for integration into the new development"

Conservation Approach: The proposal being put forward involves moving the building in its entirety. This plan requires two moving activities that will be separated by short-term storage off-site.
The proposal envisions relocating the Service Station to a location just off the property to allow for excavation and construction of the below-grade parking structure. The service station will be severed from its existing foundation, hoisted, and rolled to the laneway until the parking structure is completed when it will be rolled across the structure and placed on a new foundation.
Potential risk: Details of the methods for bracing, preparing the masonry, severing the foundation are described and should minimize risk. Lifting and moving a structure of this scale is a relatively common process. CDS Building Movers are experienced contractors and recognized experts.

The Service Station is in poor condition with noted deterioration, which poses a risk when it has been severed from its foundation and is subjected to changes in loading. Potential damage may occur during transportation such as cracked masonry joints. The procedure calls for construction in-place of a steel frame structure using beams needled through the wall at periodic intervals.

Mitigation Measures

- The main negative impact to the heritage fabric will be the introduction of bracing and the beams used to support the block walls. In order to mitigate risk of cracking, masonry conservation and grouting will stabilize the concrete blocks and allow the walls to resist changing loads. The grouting will be undertaken prior to severing the concrete foundation walls allowing the building to be lifted and transported as a unit.
- To ensure the outer walls are restrained, cross bracing will be introduced to brace the walls before the move and left in place until the building is returned to its permanent location.
- As part of the mitigation, a survey of the structure is recommended following the move to the temporary storage location to ensure that any damage to the masonry is noted and if necessary, repairs undertaken.
- Prior to moving the Service Station, doors, windows, and all removable character defining attributes will be documented, labeled, crated, and stored for restoration and future reinstallation.

Standard 2. Conserve changes to a historic place that, over time, have become character-defining elements in their own right.
Conservation Approach: Preservation and rehabilitation
The exterior of the building retains its original form, detailing, and materials from its construction date in 1937. Major alterations are noted to the service bays and the interior of the entire building. At some point the interior was totally gutted with interior finishes removed and the wall between the house-form commercial section and the adjoining office area demolished. The plaster on the strapped interior walls contain asbestos.

Standard 3. Conserve heritage value by adopting an approach calling for minimal intervention.
Conservation Approach: Rehabilitation
The proposed relocation of the building within the lot is a major intervention; however, given the limitations of the site, the most practical means by which to conserve the building is to relocate it to the

north-east corner of the site in a prominent location fronting on to Richmond Road. The Service Station will be aligned in the same east-west configuration.

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

Conservation Approach: Rehabilitation

The proposed relocation of the building to the north-east corner of the site does create a false sense of the development of the property; however, the retention of the three functional components – the house-form commercial section, the adjoining office area, and the two- bay garage section, identifies its original use as a Service Station while introducing a new distinguishable use.

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

Conservation Approach: Adaptive Reuse

Although the building will be relocated, the character-defining features, as identified by the Statement of Cultural Heritage Value will be conserved. The functional layout of the building and the scale of the building makes it suited as retail space and as a secondary entry to the proposed mid-rise. Its integration will be more fully addressed as part of the development plan phase of the project.

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

Conservation Approach: Preservation

The Conservation Plan addresses the condition of the character defining elements, and any elements that are too deteriorated to repair will be noted. The Plan addresses the management of the building throughout the move, its condition and conservation. The entire building will be recorded and a detailed condition report, along with a stabilization and preparation for moving report will be prepared including risk analysis and costs.

The Statement of Heritage Character Bylaw 2019 includes a list of heritage attributes.

Heritage Attributes

Key attributes that embody the cultural heritage value of 70 Richmond Road as an example of a cottage-style, pre-Second World War Service Station include:

1. *irregular plan, comprised of three parts; the house-form commercial section, the adjoining office area, and the two-bay service section;*
2. *rounded-arch doorway with wooden round arched door with round window;*
3. *four rectangular windows with transoms and wood awnings with standing seam metal clad shed roofs with brackets;*
4. *two slender round headed windows with semi-circular transoms and three-light fixed sash on the east façade;*
5. *two garage bays service bays;*
6. *windows on the south and west elevations that consist of fixed three light lower sash with two and three light transom sash;*

7. *twin chimneys;*
8. *variety of roof types, including a gable roof, curved roof, and a mansard roof with standing seam metal roofing;*
9. *decorative wood and metal eaves;*
10. *engaged columns projecting above the roof line in the west section of the building;*
11. *the formed concrete plinth that the building is set on; and*
12. *its location on Richmond Road.*

Additional Standards Relating to Rehabilitation

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

Conservation Approach: Preservation and rehabilitation
All the Heritage Attributes listed above are addressed as part of the Conservation Plan.

1.4 Interventions to Specific Attributes.

Interventions required that are physically and visually compatible to preserve character-defining elements as part of the conservation plan:

Standing Seam Metal Roofs Conservation Approach – preservation and rehabilitation as required.
(CDF) *A variety of roof types, including a gable roof, curved roof, and a mansard roof clad in a standing seam metal roofing;*
The standing seam metal roof membrane is an important character defining feature and will be preserved to the extent that it is feasible. The flashings in the valleys of the roof and around chimneys and at junctions between roof forms have failed as is evident by the stained wood sheathing as noted in John Cooke's review. The standing seam metal roof will be rehabilitated. The distinctive standing seam metal roofs on the awnings above windows and doors will be preserved as they are in good condition. Remedial work prior to the move includes patching of the existing roof to prevent further damage.

Portions of the roof membrane and decking will have to be replaced due to the deteriorated condition of the roof deck. The roof structure, in addition to requiring repairs, will also be subjected to higher snow loads from being at the base of the new mid-rise structure. It is recommended to reinforce the roof structure for this higher snow load at the same time as the repairs, since many of the solutions will address both.

Figure 3: images of the Roof

Exterior Stucco Finishes, Chimneys, Buttresses, Windowsills Conservation Approach – Preservation. (CDF) - *twin chimneys; decorative eaves; engaged columns in west section of the building;*

The exterior perimeter walls as well as the interior wall between the service bay and the administration area consist of 200mm load bearing cinder masonry block walls with a stucco finish on the exterior and lath and plaster applied to wood strapping on the interior. An infill brick is used to frame out around windows and doors and forms the windowsills. he two chimneys and the four buttresses that project above the roof line in the garage will be retained as part of the exterior stucco finish and moved with the building . Analysis of the stucco indicates that the exterior stucco does not contain asbestos. (see Appendix B)

Figure 4: Annotated view of the Service Station highlighting the identified attributes. Source: Commonwealth

The House-form, Interior Floor Plan and Finishes *Conservation approach – Preservation and Adaptive Reuse*
(CDF) identifies the house-form consisting of commercial section, the adjoining office area, and the service bays.
The three sections of the house form are character-defining features and will be stabilized before being moved as a unit to a storage area and then to the front of the site where restoration will take place. The floor treatment, and underside of the roof, the interior east wall and portions of the west and rear walls will define the Service Station in relation to the retail. The plan being considered is to develop the service bays as a seating area with the ability to open the garage doors, the central section will serve as the sales and product display area and the former office will provide additional seating.

As part of the building's interpretation, the original volume of the interior will be retained. Interventions to accommodate new uses and to provide pass through and universal access are illustrated in Figure XX.

The entire building as shown on the floor plan will be moved. The reconfiguration and integration of the west and south walls as well as the interior dividing walls is shown in Figure XX.

The interior walls will be strapped and insulated with spray foam to improve the energy efficiency of the building and ensure the long-term conservation of the cinder block walls assuming that the areas will be air conditioned. A separate A/C unit will be installed in the Service Station.

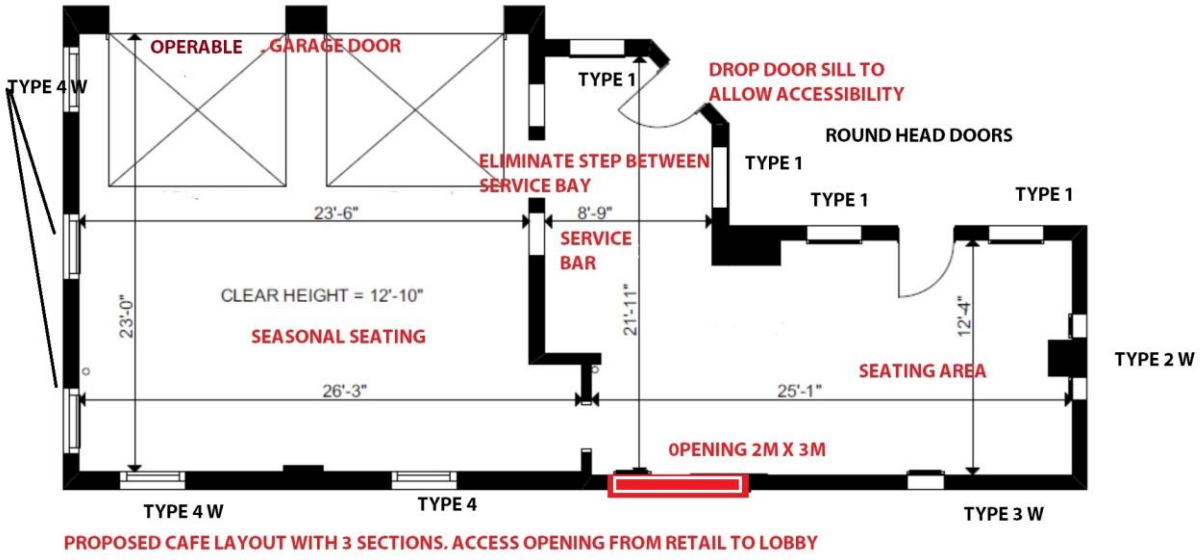
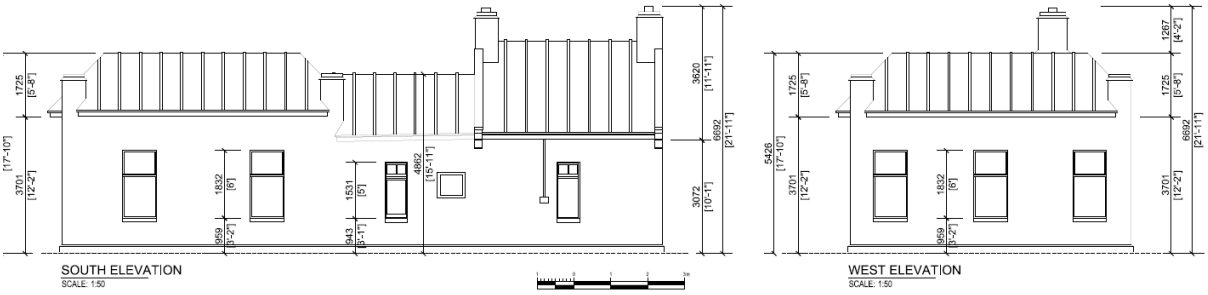


Figure 5: Plan of the garage with notes on the proposed layout with an accessible entrance shown in red. Source: Commonwealth

Figure 6: Interior views illustrating the condition, with the interior stripped down to the block walls.



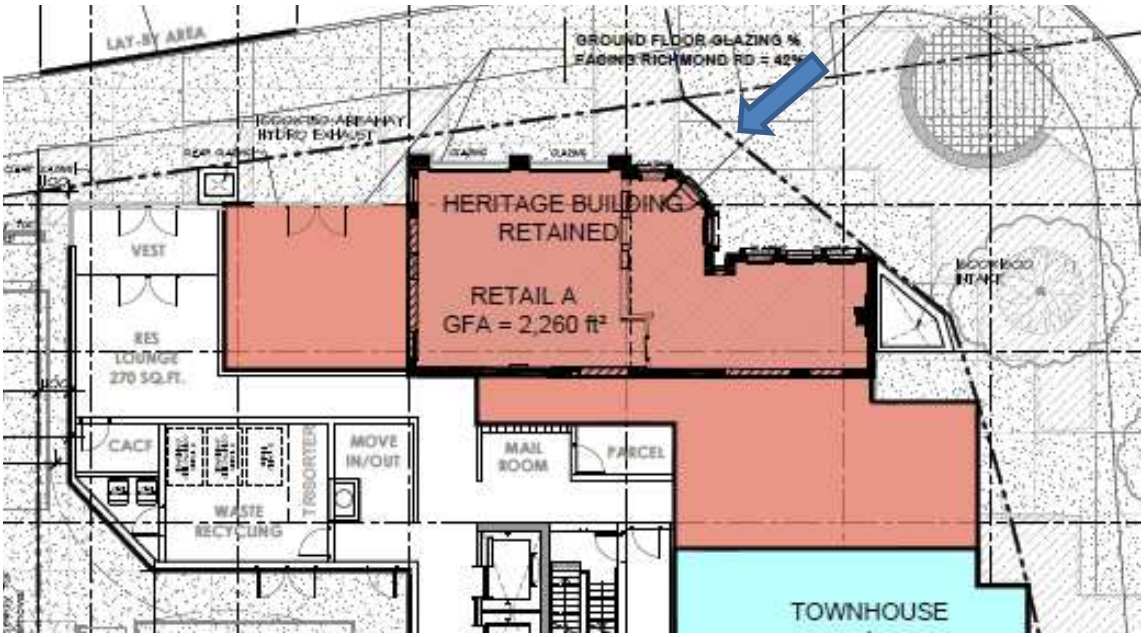


Figure 7: Context plan illustrating the heritage building incorporated into Retail A (pink) with a GFA 2,2600 sf. The hatched lines delineate the portion of the walls to be removed and suggests that the two spaces will be united. The south and west walls will be retained with the introduction of doors to link to the mid-rise. As-found plans have been completed. The property lines are delineated with dashed lines and are noted with an arrow.

Figure 8: conceptual illustrations from the lobby with the interior of the Service Station. In the upper view the opening with the word 'coffee' above is the location of the large access opening. Hobin Architecture 2022.

Windows and Doors Conservation Approach – preservation, rehabilitation, and restoration.
(CDF) – *rounded-arch doorway with wooden round arched door with round window;*

The typical wood window assembly consists of wood frames set flush within the masonry openings. There are four window configurations or types.

Window Type	Conservation Treatment
Type 1 - Four windows, two in the office and two in the service areas on the east and north elevations. The window frames are set flush with the block walls and consist of a fixed lower sash with a three-light configuration with a fixed transom above with a four-light configuration. Metal hood awning is set above each of the windows	A combination of preservation, and rehabilitation. The window assemblies are in good condition overall, one of which retains its original three light fixed lower sash and four light transom sash that will be preserved. New single glazed three light fixed wood sash replicating the original form and detailing will be inserted where the original sash have been altered. New single glazed fixed transom sash with a four light configuration will be inserted where the sash has been altered.
Type 2 - the two east windows in the office consisting of a fixed lower sash with three lights and a fixed semi-circular transom sash, with wood linings covering the exterior block reveals;	Preservation The window assemblies are in good condition and will be preserved.
Type 3 – three windows on the south elevation in the office and service areas. The windows consist of a fixed lower sash with a three-light configuration with a fixed upper sash with a two-light configuration;	A combination of preservation and rehabilitation. The window frames are in good condition. The lower fixed sash have been altered with the removal of the muntins dividing the window into three lights. One of the original two light fixed transoms is in situ.
Type 4 - five windows on the south and west elevations in the garage bays consisting of a fixed lower sash with a three-light configuration with a fixed transom sash with a one light configuration.	A combination of preservation and rehabilitation. All of the windows front onto interior areas.

Type 1 Window with transom

Type 2 Window

Type 3 Window with transomom

Type 4 Window in service bay

Entry Doors

The distinctive entrance door to the office will be retained and preserved, as will the awnings above the windows and doors. The round-headed door will be repaired as necessary and used as a model for the reconstruction of the second door, which had been altered at some time.

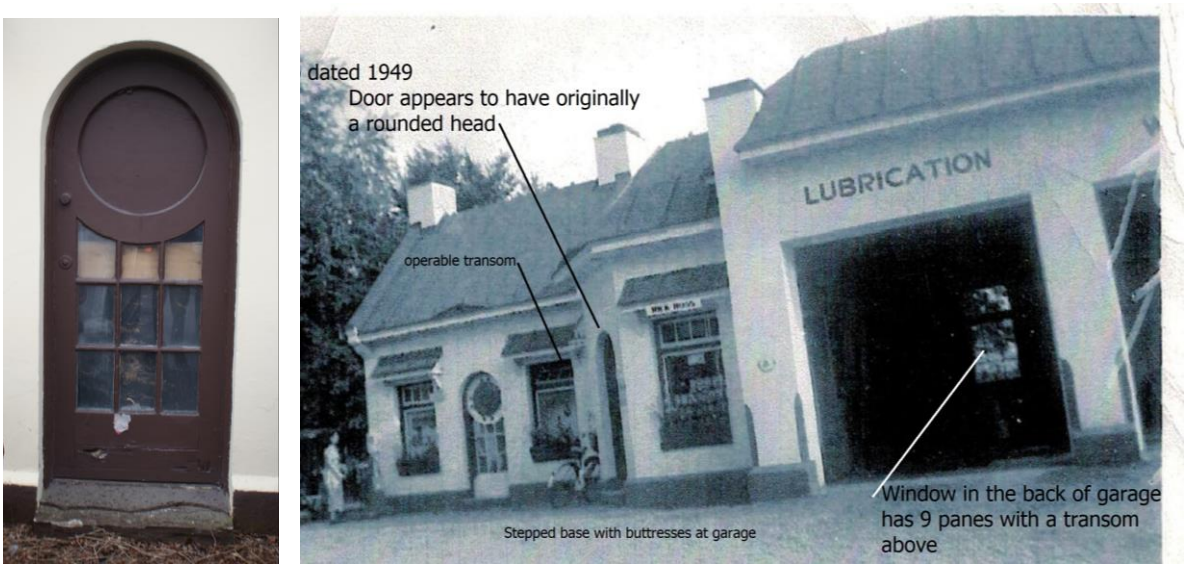


Figure 9 : Circa 1949 – 50. The historic view of the Service Station provides reference information supporting the conservation of the round headed doors at both entrances. Other features include the stepped foundation with chamfered treatment at the base of the service bay entrances. Over time, the scale of the stepped foundation has been reduced as grade was raised with the addition of asphalt. Source: Ottawa Archives, John Newcomb Collection.

Garage door

The garage doors of the two-bay section will be replaced with operable sectional overhead doors with glazing panels for the proposed retail use. As illustrated below the rails will wood with a defined profile. Overhead garage doors were first invented by C. G. Johnson who founded the Overhead Door Corporation in 1921. Mass production began in 1924 at a plant in Hartford City, Indiana. Overhead sectional garage doors were typically constructed of wood through the 1960s.

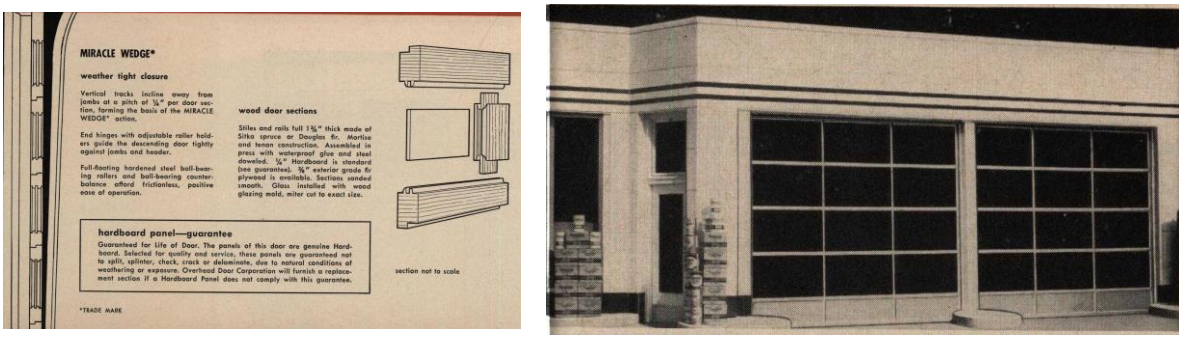


Figure 10: Illustrations from the Overhead Garage Door Corporation catalogue

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

Conservation Approach: The development proposal is to construct a 9-storey midrise on the lot and set the Champlain Oil Company Service Station at a prominent location at the north-east corner of the site set proud of the new building. To achieve any degree of subordination it is important that the Service Station holds a defining location and can be interpreted as a distinct feature separate from the overall tower. The plan positions the station on the north-east property line, which provides the prominence. To give a subordinate role to the new building the Service Station will be placed in such a manner to offer a three-dimensional view of the eastern portion by setting it proud of the Richmond Road elevation of the new building. The same strategy will be used for the two-bay section, setting the new building wall back from the face of the garage by 2.25 metres and having it visually appear to be a separate building.

Figure 11: Views looking west and east. In the bird's eye view looking east, the entrance façade is set back exposing the first window. The view looking west gives the Service Station a prominent expression and distinct transition from the mid-rise. Source: Hobin Architecture 2022.

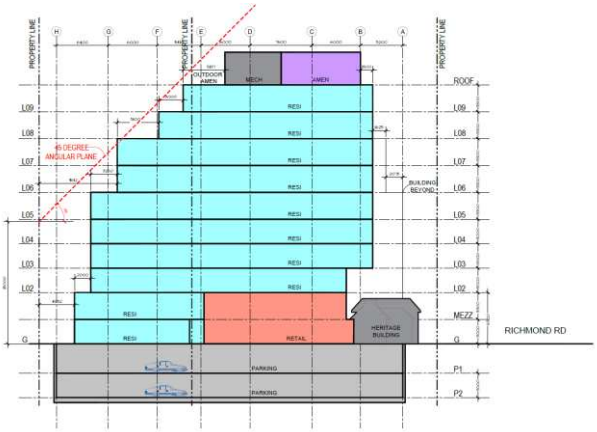


Figure 12: The cross section through the entire complex illustrates the position of the Service Station and its relationship to the midrise. Source: Hobin 2022.

Figure13: This view highlights in red the first of the three windows along the west side of the Service Station. The proposed midrise building has been set back and allows one of the side windows to be interpreted from the exterior and the others will be incorporated into eh lobby entrance. Source: City of Ottawa.

The challenge is to make the new 9-storey development physically and visually compatible with the 1-storey Service Station. Because of the differences in scale, it is considered key to its visual compatibility that the materiality, and colour of the base of the midrise act as a backdrop to the Service Station without overwhelming it.

Over the course of the design process, the client considered several options that addressed visual compatibility and connecting the heritage building to the new building through clear and related datum lines, which were reviewed by the city. These various iterations demonstrate the analysis that has gone into finding a compatible approach to meet Guideline 11 of PC Standards and Guidelines. Some of the revisions include the removal of the large vertical stone column replacing it with a more neutral finish as shown on the revised plans; reducing the projection of the glazed bay over the service garage and removing it from the first three floors, setting the service bays proud of the midrise; establishing the height of the entrance canopy to reference the garage; and stepping the south elevation to offer a more compatible relationship with the residential neighbourhood along Island Park.

Guidelines for Buildings
4.3.1 Exterior Form
General Guidelines for Rehabilitation
Additions or Alterations to the Exterior Form

12. Selecting a new use that suits the existing building form.

Conservation Approach: The proposed retail use suits the existing Service Station building form. The change in grade between the service area and the garage will have to be modified to address accessibility requirements. The opportunity to have the garage doors operable will be positive for potential tenants.

13. Selecting the location for a new addition that ensures that the heritage value of the place is maintained.

Conservation Approach: The most effective way to conserve the heritage value of the building is to move it to a prominent location at the front of the proposed development. Such a move assures that its visibility is maintained and placing it forward on the site suggests that the new build is subservient.

1.4 Procedure/Timeline

The following provides an outline to sequencing the work:

3.1 Sequence of Work

The following provides an outline sequence of the work plan:

Abatement of Regulated Materials.

1. No asbestos or other significant designated substance is present in the exterior stucco but is identified in the interior plaster finishes and will require mitigating measures.

Previous Removals Fit-up and Finishes

2. Photo document the previous interventions of both heritage and non-heritage interior interventions consisting of partition, ceiling, and wall finishes, including the interior hollow core doors, with their associated hardware and fixtures.

Part 1 Enabling Work

3. Localized repointing and grouting of the masonry.
4. Removal of plaster finishes on the interior ceiling and walls.
5. Documentation of doors, window. These elements will be documented, with sashes labelled, crated, and stored for restoration and future reinstallation.
6. Recording, removal and store the existing round headed door for restoration and future reinstallation.

Part 2 Preparation for Lifting

Procedures for Preparation for lifting have been developed by Cleland Jardine with support from CDS Building Movers.

7. Perform any masonry repairs required as part of the preparations for moving (e.g., stabilizing, and grouting block wall as part of pinning, localized temporary openings carefully removing blocks, record, store, and reinstall; crack repairs; limited dismantling at the foundation using concrete wall saws and rebuild around fractured areas).
8. Board up and secure entrances and openings.
9. Ensure that the replacement parapet/top of the walls and chimneys are flashed and weathertight.
10. The introduction of temporary structural bracing to stabilize the Station before its move.
11. Construction of temporary roadbed.

Part 3 Lifting and Moving

Undertake the necessary steps for securing, lifting, and loading the building for moving off its existing foundations. The plan is to move it as one unit laterally to the west where it will be stored. The move will take place within the site, across a level surface, and will require the removal of two trees, curbing, and light standards. A methodology for the building's stabilization, relocation procedures, storage of the building and means of protection while the mid-rise is being built is described in the Cleland Jardine in collaboration with CDS Building Movers. The full report is in Appendix A.

12. Once the building is relocated to its temporary location carry out an inspection to identify any damage.
13. Protection of relocated Station while off site.
14. Engage a masonry specialist and perform additional investigations and a more detailed review of the stucco to determine areas of deterioration, lost elements, and best method for grouting prior to the move.
15. Engage heritage specialists to retore the windows and cottage doors.

Part 4 New Structural Support

The service station will be set on a new foundation, on top of a concrete slab, above the newly constructed parking garage. The phasing of the move will be coordinated with the construction of the below grade parking structure and will require moving the Service Station from its temporary location.

16. Finalize design of structural slab as part of the parking roof.
17. Excavation and construction of permanent parking garage structure.
18. Moving the Service Station from temporary storage to its final position.
19. Setting the Station on the permanent concrete slab including the stepped plinth.
20. Removal of temporary lifting steel supports.

Part 5 Restoration and Rehabilitation Work

Procedures for Pre-move inspection, documenting the as-found condition and preparing a plan for conservation of character defining attributes have been set out in the conservation plan. An assessment will be completed once the Service Station is in its final location, including annotated, side-by-side images from pre-move survey, to identify any pre-existing and/or new conditions requiring intervention.

21. Reinstallation of the restored window sashes.
22. Assessment to inform masonry conservation scope.
23. Restoration of masonry walls that had temporary openings for transfer beam and needles.
24. Restoration and upgrading (if necessary) of existing wood roof structure and standing seam metal roof.
25. Conservation (if possible) of existing metal awnings and soffit.
26. Restoration and installation of new slate roofing.
27. Installation of restored (or new) metal eaves and soffit.
28. Installation of restored round headed door including modified masonry.
29. Preservation and Repairs, cleaning of metal elements, and window/door hardware.
30. Restoration of all masonry and reparging, as necessary.
31. Preparation of as-built record for future reference has been commissioned and will be made available as part of the ongoing conservation work.

Part 6 Interventions and Adaptive Reuse

Complete interior work. A program for the retail space has not been fully developed. As part of the building's interpretation, the original volume of the interior will be retained. The aim is for the relocated building to accommodate retail uses and if possible, retain the three distinct spaces available to the public, which will require code compliance

32. Interventions to accommodate new uses and to provide pass through and universal access will require dropping the door sill at openings and modifying the floor level of the service bays to provide barrier free access.
33. Construction of new opening in the east masonry wall
34. Installation of independent M&E system.
35. Fit-up for commercial operation
36. Installation of interpretive Lighting.
37. Introduce appropriate signage and interpretive panels that Incorporating an interpretive plaque describing the history of the Station, its relationship to the Trudeaus and the Champlain Oil Company and the NCC scenic driveways.

1.5 Development Phase a Conservation and Rehabilitation Plan

The following work has not been fully resolved and will need to be considered as part of the development phase. This is a small building with most of the interior finishes removed. As stated earlier in the report this is a hybrid approach including preservation and rehabilitation. The detailed conservation plan will establish the approach used in the rehabilitation of the structure and will include:

Conceptual site and floor plans for the retail space;

Detailed plans, elevation, sections, and detail drawings outlining the proposed layout for the retail space area including integration of heritage features, conservation measures and rehabilitation plan;

Assessing code compliance and outline specifications for all proposed work;
Repairs and conservation of windows and doors being incorporated;

Interventions required that are physically and visually compatible to preserve character-defining elements include:

- The round headed window assemblies on the east elevation will be retained and preserved as-is. One window with the original three light fixed sash and four-light transom on the north elevation will be preserved as is. The fixed lower sash and fixed transoms in the remaining three windows on the north elevation will be rehabilitated with insulated glass units that match the form of the existing units – with a fixed three light lower sash with a four-light transom.
- The window sash and the doors will be removed, and the openings boarded up prior to the move. Rehabilitation can take place while the midrise is under construction.
- Conservation work on the distinctive round headed entrance doors to the cottage, as well as the awnings above the windows and doors.
- The two garage bay doors will be replaced with sectional overhead garage doors typical of the period, constructed of wood, with glazed panels.
- The distinctive standing seam metal roof will be retained and where necessary replaced with a similar material.

1.6 Impact and mitigation

Building:

The Service Station is in poor condition with noted deterioration, which poses a risk when it is subjected to changes in loading. This plan requires two moving activities that will be separated by short-term storage just off-site. Potential damage may occur during transportation such as cracked masonry joints. The procedure calls for construction in-place of a steel frame structure using beams needled through the wall at periodic intervals.

Moving:

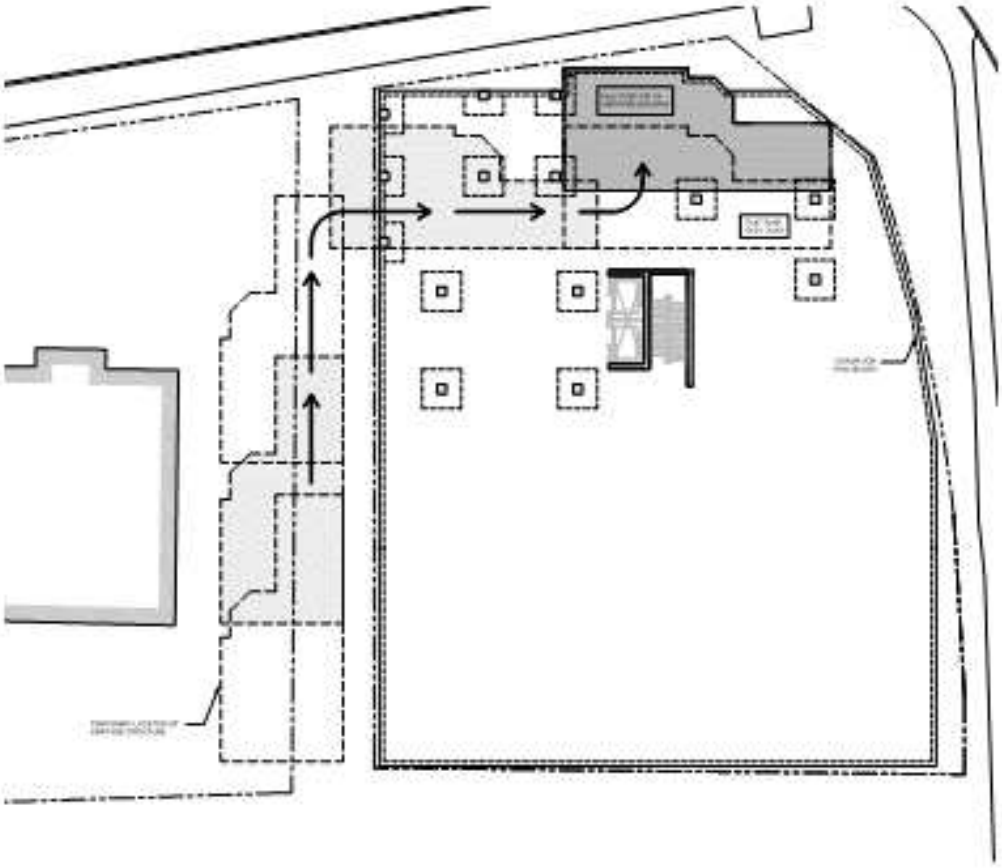
A methodology for moving the building has been clearly laid out by Cleland Jardine Engineering Ltd. including shop drawings showing the placement of temporary supports, pining and reinforcements.

Mitigation Strategy

In order to mitigate risk of cracking, masonry conservation and grouting will stabilize the concrete blocks and allow the walls to resist changing loads. The grouting will be undertaken prior to severing the concrete foundation walls allowing the building to be lifted and transported as a unit.

- To ensure the outer walls are restrained, cross bracing will be introduced to brace the walls before the move and left in place until the building is returned to its permanent location.
- As part of the mitigation, a survey of the structure is recommended following the move to the temporary storage location to ensure that any damage to the masonry is noted and if necessary, repairs undertaken.
- Prior to moving the Service Station, doors, windows, and all removable character defining attributes will be documented, labeled, crated, and stored for restoration and future reinstallation.

- Moving the building introduces an increased potential for loss or damage, particularly the features of the building that will be reconstructed. A secure place to store the building materials i.e., windows, etc. when the building is at its temporary location.
- Prior to rolling the building across the concrete decking to its final location, temporary shoring of the new deck slab using heavy duty construction jacks will be required



Views and Visual Context with the Street

Views looking west from the intersection are convincing. The relocated Service Station is free standing as a foreground feature in front of the mid-rise. Views from the east from Richmond Road offer only part of the building exposed beyond the midrise. Aerial views looking down at the corner present a well composed landscape

Mitigation and Alternatives

With views looking west the Service Station is independent from the midrise with a prominent position on the corner. Introducing a much more restrained palette of materials and colours for the apartment building, stepping back, and raising the glazed feature above the service bays and setting back the main entrance to allow the service bays to sit proud of the main building when viewed from the west have all contributed a positive impact on the interpretation of the heritage building.

An additional alternative that could be explored with the City and the NCC includes a scheme with the building set on a foundation that encroaches slightly onto public property to give it more presence and better separation from the mid-rise. Because of the former round-a-bout, this intersection is a wider than normal City right-of -way that would have no impact on the public realm and would allow breathing room and an opportunity to have the west façade set out further off the façade of the new midrise building.

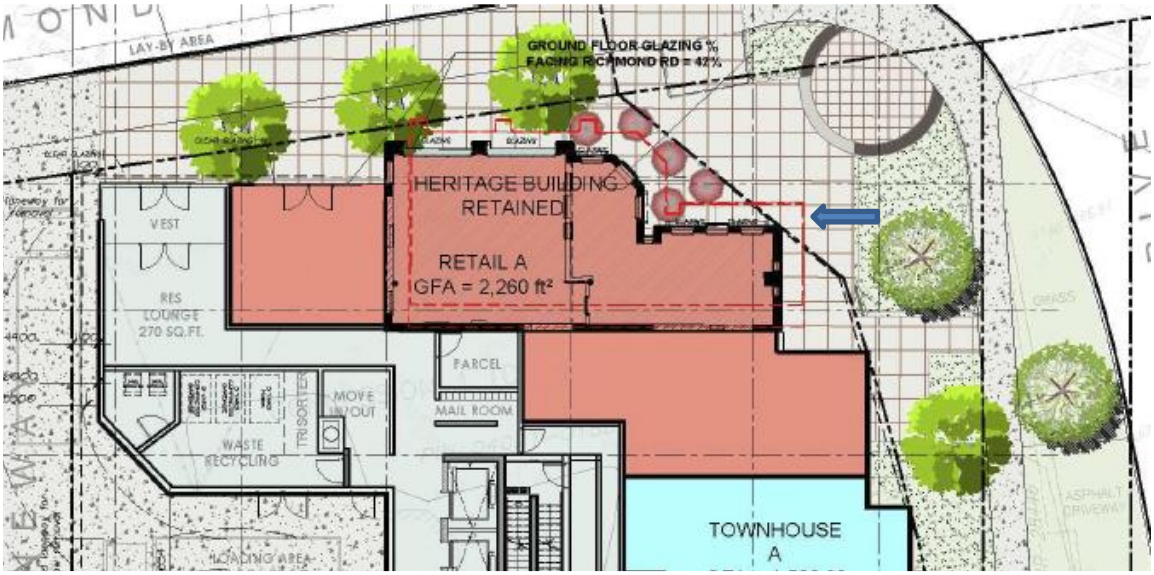


Figure 14: The floor plan illustrates the shift to the east by 1m as a red line indicates it places the corner of the building onto city property. The shift north does not require any encroachment. Source: Hobin Architects 2022.

Option 2 Potential Encroachment option The building slides 1m north and 1m East and as a result projects beyond property line to the east. resulting in more space between the existing heritage building and new mid-rise building. (This option requires the client to enter into a permanent encroachment agreement with the city which may not be possible at this point given the re-zoning application is submitted).

APPENDIX A: BUILDING RELOCATION FEASIBILITY

January 20th, 2022
CJEL Reference No. 21-2412

70 RICHMOND ROAD
HERITAGE BUILDING RELOCATION
FEASIBILITY STUDY

Prepared For:

TRINITY DEVELOPMENT GROUP INC.
77 Bloor Street West, Suite 1601
Toronto, Ontario
M5S 1M2

Prepared By:

CLELAND JARDINE ENGINEERING LTD.
580 Terry Fox Drive
Suite 200
Kanata, Ontario
K2L 4B9

Table of Contents

Attachments:

- **Cleland Jardine Engineering Drawings S100, S101 & S102**
- **CDS Movers Quotation**

1.0 INTRODUCTION

Cleland Jardine Engineering Ltd. (CJE) was retained to review the condition of the existing heritage building at 70 Richmond Road and assess the feasibility of relocating the building into the new proposed development. Specifically, the review included:

- Review of available documentation.
- On site review of building to assess existing construction and conditions.
- Review of adjoining property for suitability of temporary storage of building.
- Review of proposed development concept for permanent relocation of building.
- Coordination of requirements with project team.

2.0 EXISTING HERITAGE BUILDING CONSTRUCTION

The existing heritage building, constructed circa 1930's, consists of a 100m^2 one storey structure. Part of the structure consists of a two-bay car service space and the other narrower part, an administration area. The foundation consists of cast in place perimeter concrete walls. It is assumed that the foundation extends down approximately 5' below grade and is supported on perimeter footings. The floor construction consists of a concrete slab on grade. A small portion of the floor in the administration area has a wood flooring with a shallow open pit below. The exterior perimeter walls as well as the interior wall between the service bay and the administration area consist of 200mm load bearing concrete masonry block walls. The roof structure, over the service bay, consists of a built-up Montreal style wood construction creating the Mansard profile. The framing consists of rough sawn 2" x 10" joists at 24" c/c supported on a steel beam running down the middle of the double bay.

The roof over the administration area consists of rough sawn 2" x 9" horizontal ceiling rafters at 20" c/c supporting sloped rafters above.

The masonry walls were in overall fair to poor condition with localized vertical cracking noted in several locations. Based on a few limited areas, where holes in the masonry were noted, the masonry does not appear to be grouted nor reinforced.

Exposed Masonry Wall Administration Area

Masonry Wall Behind Plaster Lath - Service Bay

The load bearing masonry wall, between the service bay and administration area, is in poor condition with several cracks and major displacement (40mm) at the back portion.

Interior wall with major crack/displacement at door openings

The roof framing has been subject to water infiltration and modification/patching over the years but remains in fair and sound condition.

Roof framing administration area

3.0 TEMPORARY BUILDING RELOCATION

The proposed development will consist of a nine-storey mixed use structure on a two level below grade parking garage. In order to carry out the required excavation and construct the underground garage, the Heritage building will be temporarily relocated onto the adjoining property (see figure #1).

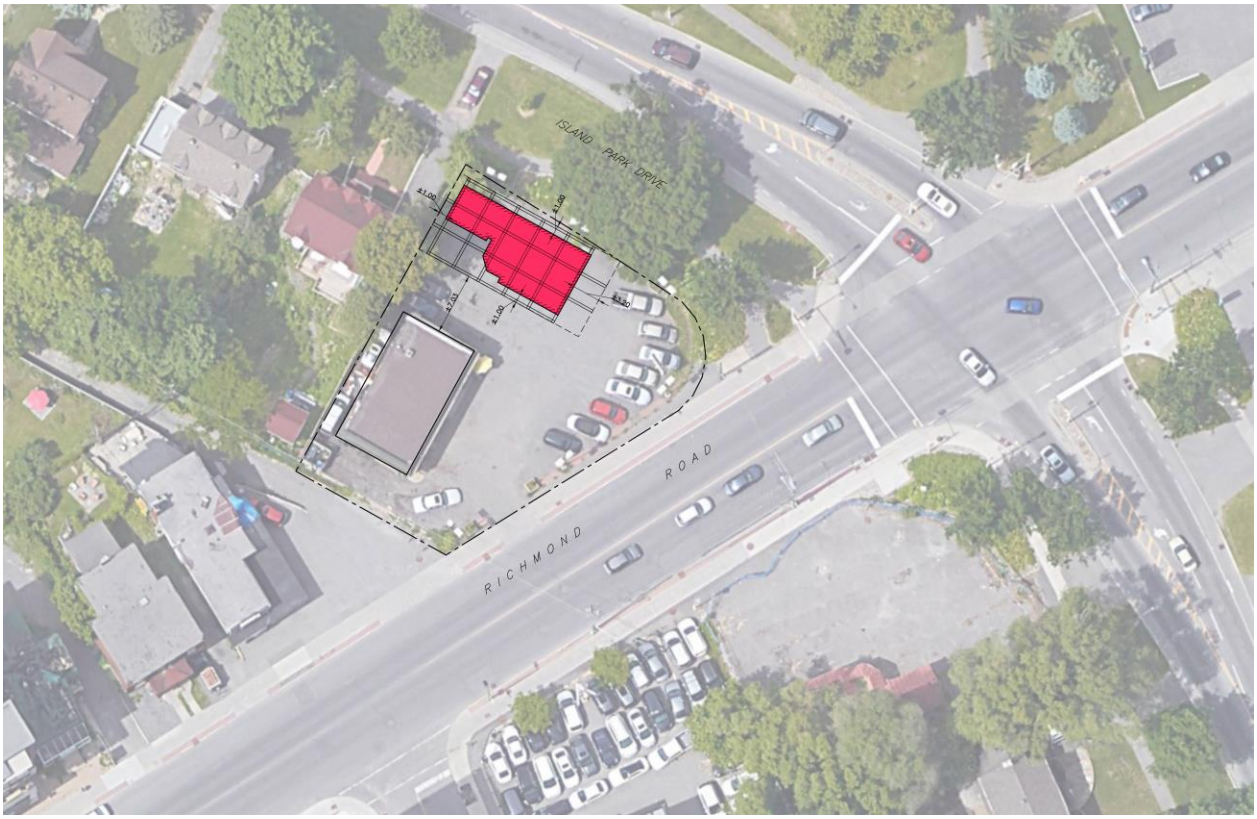


Figure #1: Temporary building storage location for the Service Station has ben negotiated and will be stored directly across the road.

The building will remain in the temporary stored location (Figure 1) while the site is excavated, and the new concrete foundation and underground structure are constructed up to grade level. The building will then be relocated on top of the new reinforced concrete ground floor slab at its new location (see figure #2). Once the heritage building is in its new location, the concrete work above grade can continue while protecting the heritage structure.

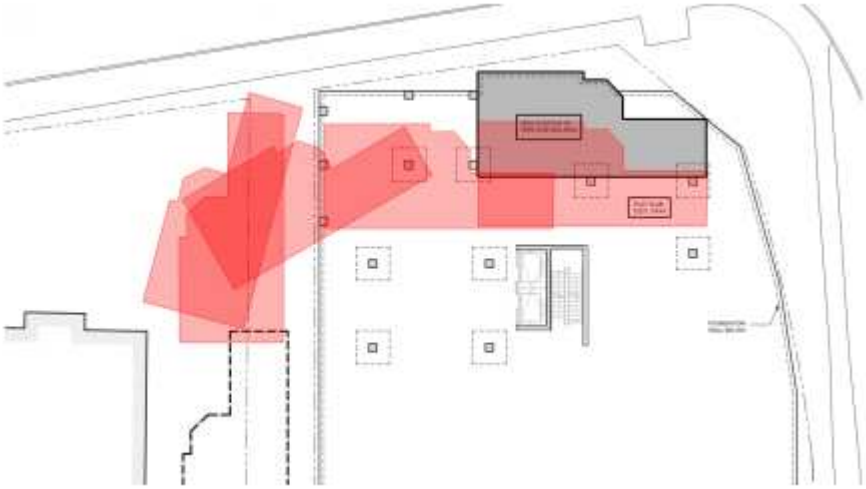


Figure #2 (building relocated on structure at new permanent location)

4.0 DETAILED PROCEDURES FOR THE MOVE

For the moves, the building will be lifted onto a temporary steel structure and rolled into both its temporary and permanent locations. The following provides detailed steps on how this will be achieved.

Stage One

The first step will involve preparing the building for the move and includes:

- Survey and recording of existing condition.
- Disconnecting of all utilities and services.
- Removal of all doors and windows for refurbishment and future reuse.
- Abatement and removal of all interior lath and plaster which contains asbestos.
- Localized removal of existing masonry along exterior walls at temporary needle beam support openings.

Stage Two

The next step will be to construct in place a steel frame structure, with in the building, to be used in lifting and transporting the structure (see figure #3).

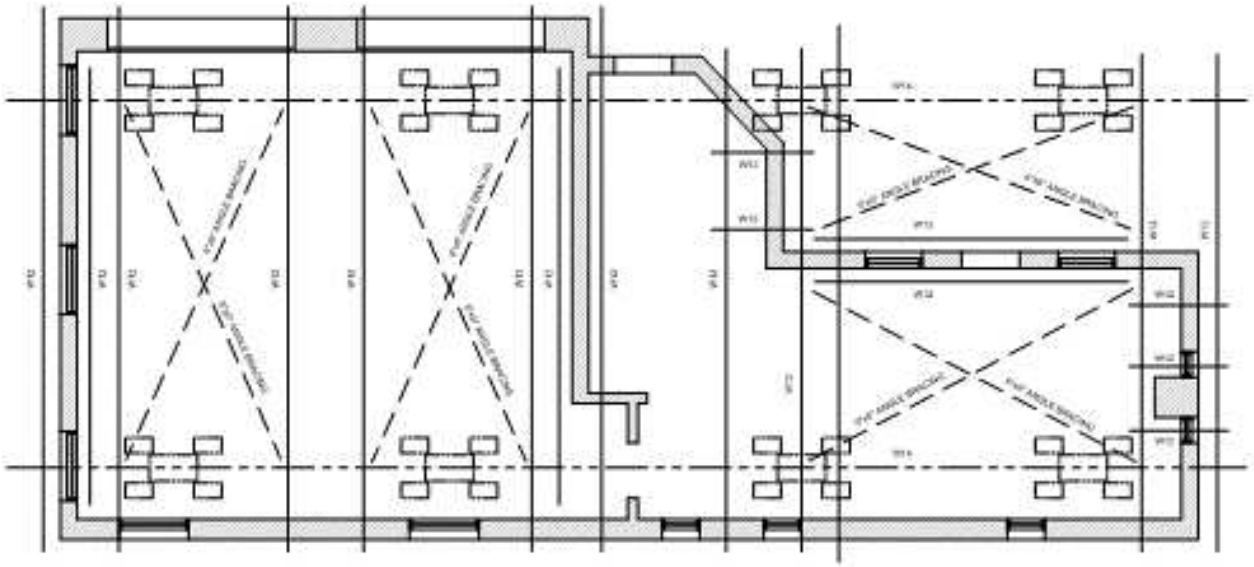


Figure #3 (structural steel support framing)

Localized temporary openings through the masonry will be required to install the main support and needle beams.

Once the main steel structure is in place, secondary bolting, grouting, shimming, and bracing will be installed to stabilize and safely transfer the building support onto the steel structure (see figures #4 and #5)

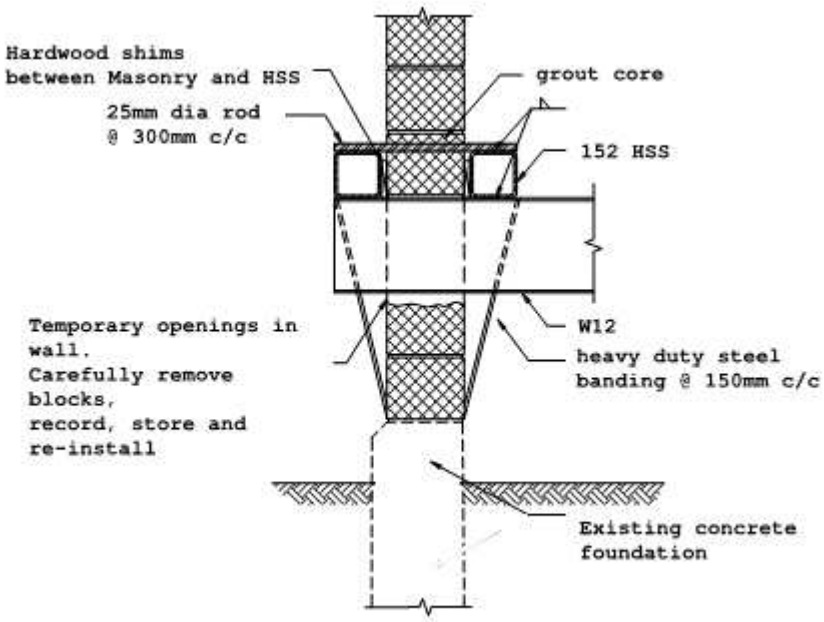


Figure #4

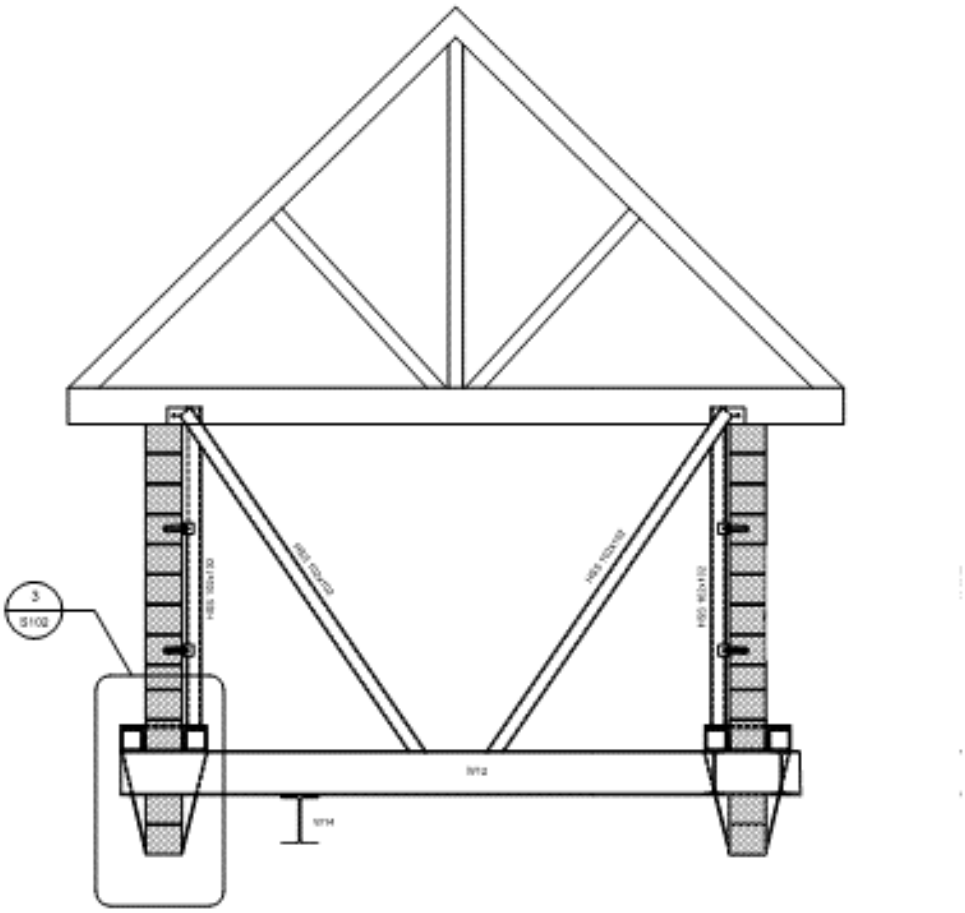


Figure #5

Stage Three

Once the temporary steel support structure and stabilizing measures are in place, synchronized hydraulic jacks will be installed below the main support beams and used to slightly prestress the structure and remove the load from the foundation. The prestressing will be applied slowly while monitoring the structure.

After the stress is off the foundation, the masonry wall will be separated from the concrete foundation using concrete wall saws. Once separated from the foundation, the synchronized jacks will be used to lift the structure approximately 1200mm to permit the installation of pneumatic wheel dollies below the main support beams.

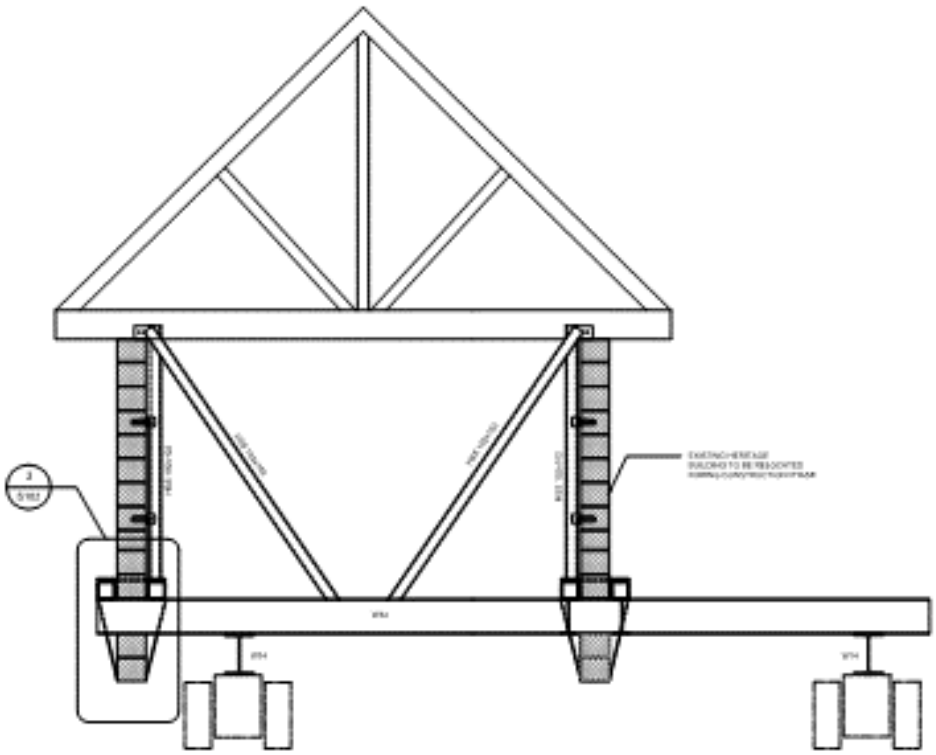


Figure #6

Stage Four

All soft and uneven surfaces along the path of travel will be levelled using compacted granular fill. This includes filling in the lower floor area in the service bay. Steel plates will also be used to distribute the loads

The building will then be slowly moved to its temporary location using large truck tractors to pull and navigate the support frame. Temporary lifting of the frame and wheel re-alignment will be required to navigate the 90° turn.

The pneumatic wheel dollies are equipped with self-adjusting hydraulic jacks so that even support of the steel structure is maintained at all times.

Stage Five

Once the building is in its temporary storage location, it will be lifted off the pneumatic dollies and rested on temporary wood cribbing. The main support frame and all bracing will remain in place.

The cribbing will be set on rubber matting to minimize vibrations from the adjacent excavation.

All door and window openings will be boarded up to prevent trespassing and vandalism.

A survey of the structure will be carried out once it arrives at the temporary storage location to ensure that any damage is addressed and cannot accelerate any deterioration.

Stage Six

Following construction of the new concrete structure to grade level, the building will be jacked from the temporary cribbing and back onto the pneumatic dollies ready for the move.

The new ground floor concrete slab is essentially level with the existing grade so minimal backfill and ramping will be required.

Prior to rolling the building into its new final location, temporary shoring of the new concrete slab using heavy duty construction jacks, will be required.

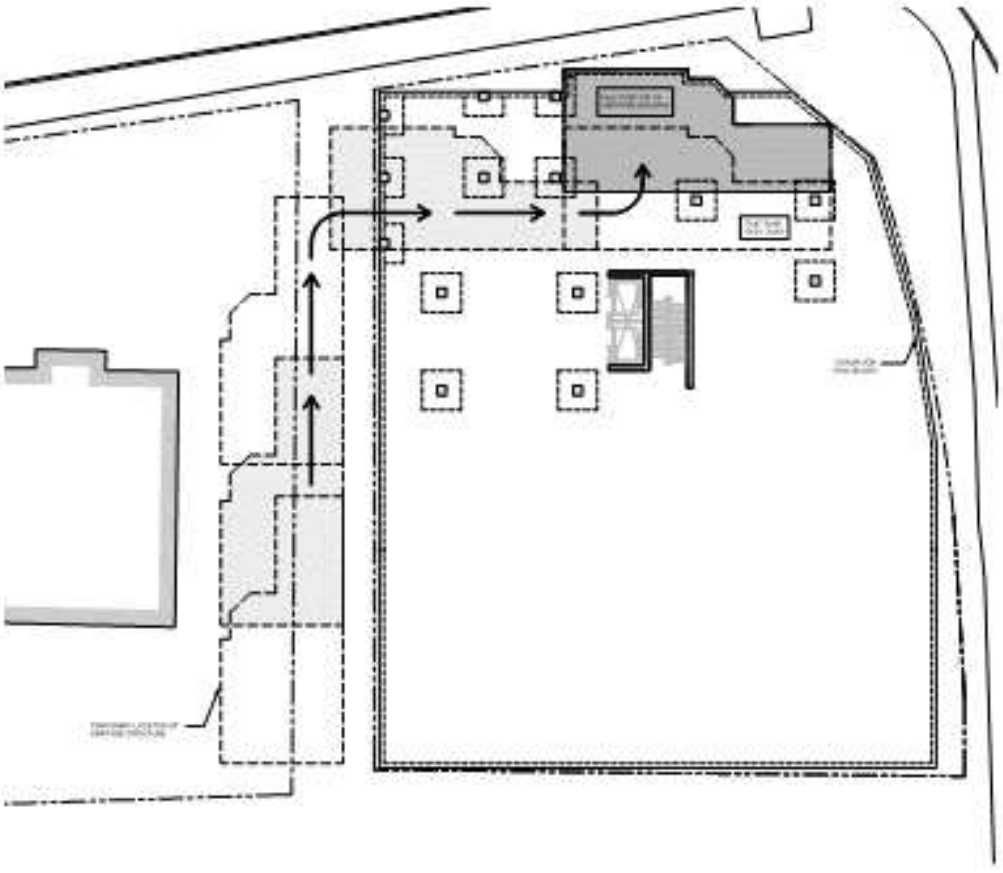


Figure #7 (travel on new concrete slab)

The structure will be moved along the building, navigating around column dowels and obstruction to roughly its final location. The structure will then be lifted, and the wheels rotated 90 degrees before it is rolled North to its final location.

Mechanical column dowel couples will be required where full length column dowels interface with the building travel.

Stage Seven

Once the heritage building is in its final location, new concrete curbs on the structural slab will be constructed to receive and support the existing masonry walls. The building will then be lowered onto the concrete curb.

Stage Eight

Once the building is supported and anchored to the new structure, all bracing, and the support frame will be dismantled and removed. The temporary masonry openings will be reinstated, and steel needle rods cut flush to the face of masonry.

Stage Nine

Once the building is in its final location, the concrete formwork and construction will continue with the above grade portion of the new structure.

5.0 FEASIBILITY OF MOVING

The procedures were developed with the assistance of CDS building movers, who have substantial experience with these types of moves. They provided an estimated cost of $602K to carry out the work. A copy of their quote is attached. Not included in their quote are:

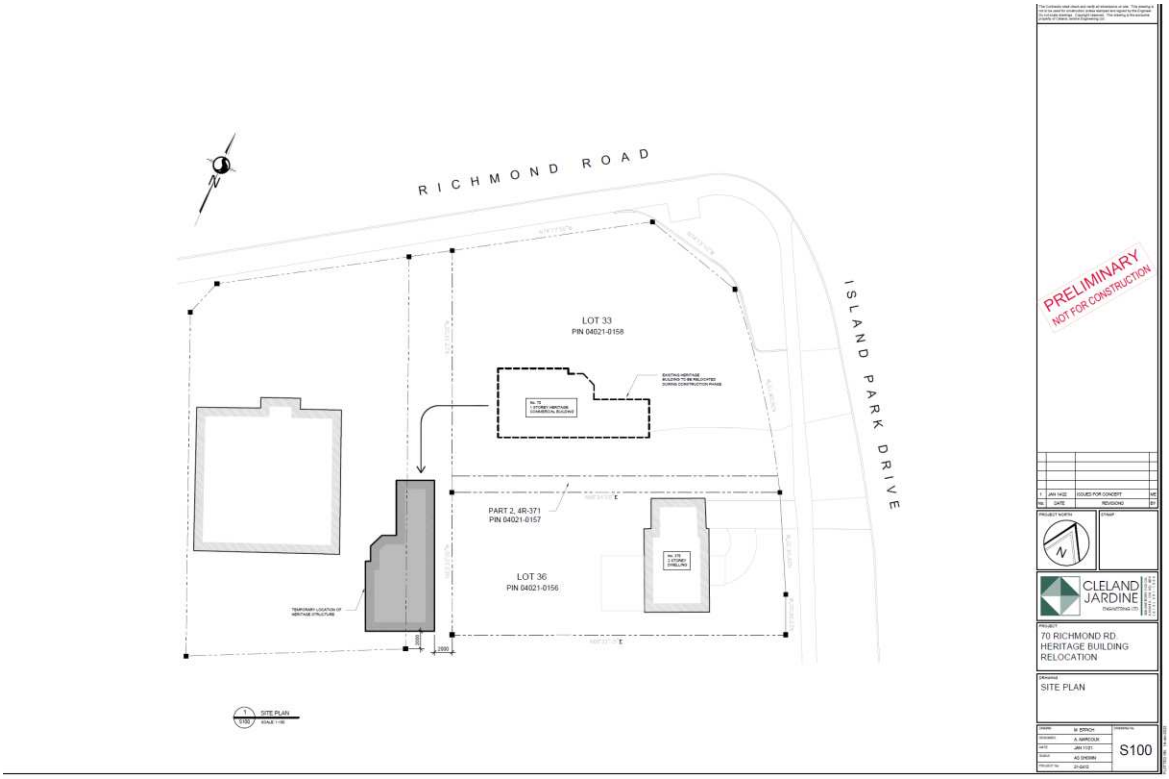
- Detailed recording of building.
- Disconnecting of existing utilities.
- Asbestos abatement
- Removal of doors and windows.
- Temporary masonry openings and reinstatement.
- Excavation and backfill
- Breaking/removal of existing foundation in path of travel.
- Repairs of existing masonry
- Shoring of new slab in path of travel
- New concrete curb support and anchoring of heritage building
- Insurance and engineering
- Given the condition of the structure, localized distress and movement of the existing cracks is possible. Allowance should be made for localized repairs following the move.

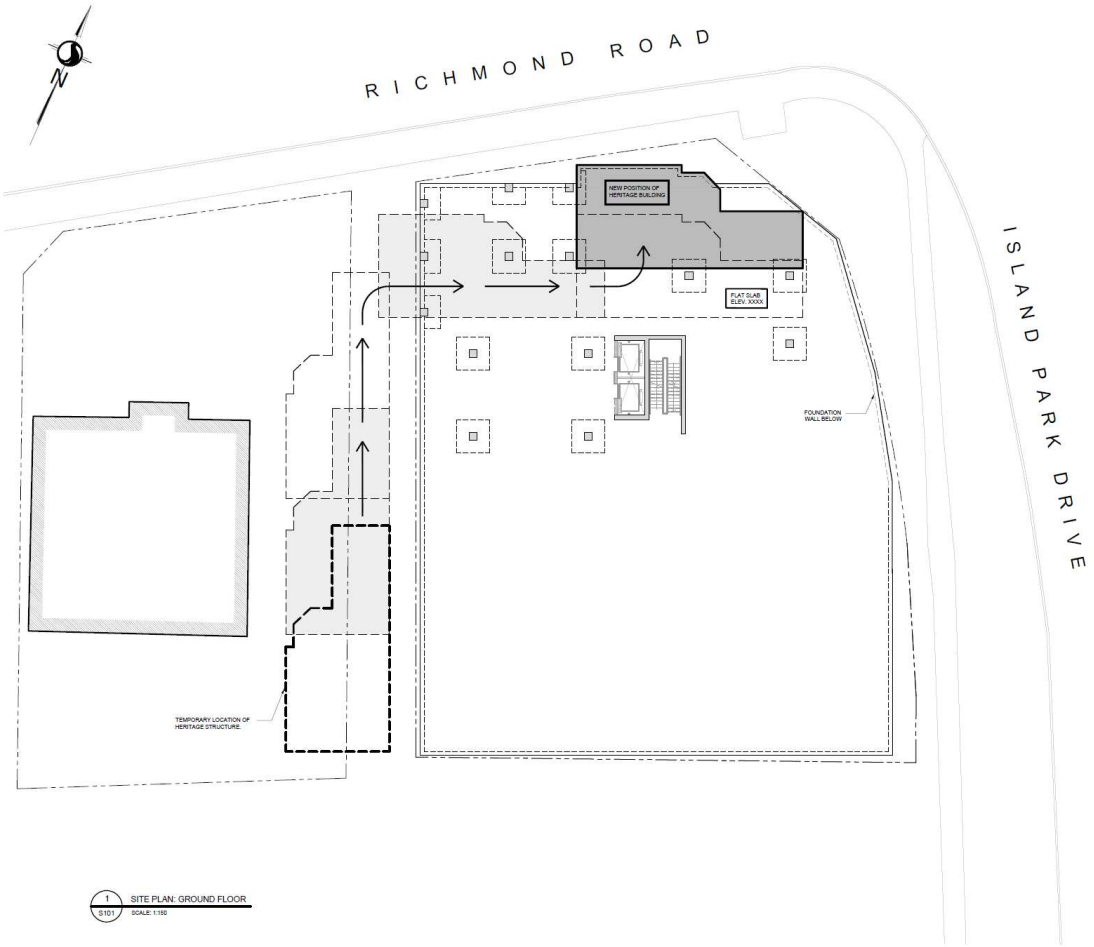
Based on the experience and expertise of the moving company, the fact that the building can be retained on site during storage and the relative short distance required to relocate the Service Station it could reasonably be assumed that the risk of damaging the building is low.

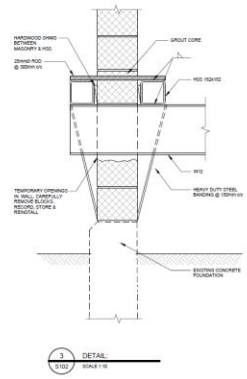
Report Prepared by:

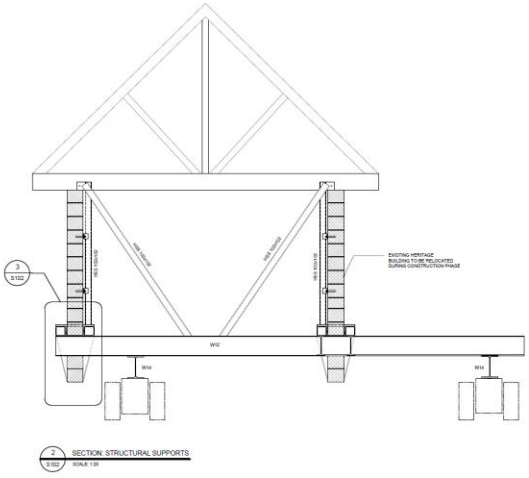
CLELAND JARDINE ENGINEERING LTD.

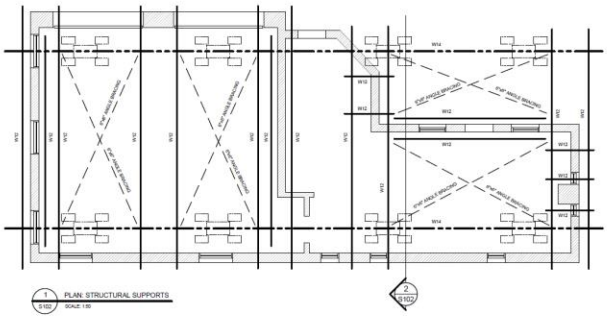
André Marcoux, P.Eng.
Principal/Director – Building Science Department




RICHMOND ROAD
ISLAND PARK DRIVE
NEW POSITION OF HERITAGE BUILDING
FLAT SLAB ELEV. XXXX
FOUNDATION WALL BELOW
TEMPORARY LOCATION OF HERITAGE STRUCTURE
1
S101
SITE PLAN: GROUND FLOOR
SCALE: 1:150


GROUT CORE
W12
HEAVY DUTY STEEL BANDING @ 150mm c/c
EXISTING CONCRETE FOUNDATION
3 S102 DETAIL:


EXISTING HERITAGE BUILDING TO BE RELOCATED DURING CONSTRUCTION PHASE
W10
W14
2 S102 SECTION: STRUCTURAL SUPPORTS


W14
W12
W10
1 S102 PLAN: STRUCTURAL SUPPORTS
2 S102

BUILDING MOVERS

*This quote is subject to adjustments once further details of the job are determined

Date:	November 20, 2020 *Revised on January 18, 2022*	**File No.** 21004 V.4
Contract Between:	2088099 Ontario Inc. operating as CDS Building Movers (Herein referred to as CDS) 8 Sweetnam Drive, Stittsville, ON K2S 1G2 RBQ #8347-2985-01	
	AND	
Client:	Trinity Development Group Inc. 77 Bloor Street West – Suite 1601 Toronto ON M5S 1M2	
Building Description:	Historical Building - Champlain Oil Company Service Station Complete building including garage bay	
Building's Present Location:	70 Richmond Rd. Ottawa ON	

The following quote including scope of work and pricing are contingent upon the following requirements:

- New construction should be built after the historical building is relocated to its new permanent location
- A minimum of one (1) meter of working perimeter around the historical building must be maintained for CDS equipment.
- Client is to build up the building's base/foundation up once building is positioned into place by CDS (as stated in *Stage 4*)
- Stage 3, 4 & 5 pricing is to be inflation adjusted based Ottawa cost of living index +1.5%/year

Terms and Conditions:

- Equipment rental past 12 months of initial lift $4,000.00 /per month + inflation adjustment.
- "Ground floor slab" of building must be no higher than 6inches of sidewalk grade elevation. Elevation greater than 6inches will be subject to change order.
- Allow for sufficient space for protruding beams of (+/- 7ft) at front end of load once arrived at 72 Richmond Rd.
- If any of the load steel is required to be cut to remove steel and/or to position building.
- Disclaimer: some minor cracking of walls (especially near mortar seams) may occur during lift/move process. Minor cracks are to be addressed by client.
- All designated substances to be removed prior to work commencement
- Client will allow CDS Building Movers feature branded signage on the building.
- All costs derived from third party invoices (see *Third-Party Costs* under *Compensation* section) are to be paid by client as they occur.
- CDS can assist in the acquisition of insurance coverage, however the insurance cost is to be passed onto client. Official cost will require special assessment by insurance provider, as available at the time of the work.

Stage 1: **Preparation & Raise (approx. 40-day duration)**

- Design of lifting plan for the relocation of the heritage building in its entirety, including garage bays
  - Engineer certification supplied by CDS, cost to be determined upon final agreement of scope of work
- Bracing of chimney stacks
- Bracing of walls based on typical drawing offered by Cleland Jardine Engineering.
  - Bracing specifics and pricing are subject to change following final engineer specifications.
- Bracing of chimneys.
- Minor excavation of the ground surrounding building to gain access to concrete block wall at footing level.
  - Removal, handling, and disposal of excavated materials will be responsibility of the client.
- Installation of structural steel, supplied by CDS
- Boarding of windows surrounding CDS's supporting steel
- Installation of steel banding to support exterior walls
- Raising of building approximately 4ft
- Set building onto dollies ready for relocation
- Supply, install, compact granular material to allow for relocation over garage service pit

Stage 2: **"On-site" Relocation of Building to Temporary Position (approx. 5-to-7-day duration)**

- Relocation of building onto adjacent lot located at 72 Richmond Rd. (On-site Only, no on-street movement)
  - Trees and other obstructions between 70 Richmond Rd. and 72 Richmond Rd. to be removed by Client. Tree stumps to be cut at or below grade.
- Set building onto temporary support structures
  - Set onto vibration absorbent base to limit potential damages caused by construction of building at 70 Richmond Rd. (selected vibration absorbent base materials TBD by Engineer).
- Periodic inspection of building throughout period between Stage 2 and Stage 3 to be done in tandem with CDS representative/Trinity and/or selected third party. Any required adjustments to be invoiced via change order to this contract.

_____
Client initials

Stage 3: On-site Relocation of Building to Permanent Position (approx. 5-to-7-day duration)

- Client to complete engineered slab on grade for which to receive the building. Slab should allow for +/- 6inches build-up to garage elevation.
- Reloading of building on dollies for relocation
- Relocate building to its final location at the corner of Richmond Rd. & Island Park Dr.

Stage 4: Setting of Building to Final Elevation (approx. 2-day duration)

- CDS to set building to final elevation and location, as per client specs.
- Client to construct supporting walls (pour concrete footings/knee wall, as required by engineer) to meet, and support the building where it stands, bridging gap between slab on grade and final elevation of the building.

Stage 5: Final Setting of Building and Removal of Material (approx. 5-day duration)

- Final setting of building onto new base
- Removal of supporting steel and bracing
    - The following third-party costs may be applicable based on-site accessibility (see *Third-Party Costs* under *Compensation* section):
        - Encroachment permits likely needed for removal of steel via crane/boom truck
        - Police traffic management
        - Crane / boom truck

Client initials

Client's Responsibilities:

- All major excavation & removal of excavated materials to be preformed by client or other contractor, including thawing ground and snow removal if necessary.
- Prepare building and site prior to commencement of work by CDS; remove all debris/materials within building or work area.
- Remove & re install windows.
- Create openings for CDS steel support beams. Remove/re-installation of cinderblocks, as required by lifting plan. All masonry work and parging repairs are responsibility of client.
- Sample testing of structural integrity of original cinderblocks & mortar.
- Re-adjustment/re-sealing of roof. Minor movement may occur during relocation.
- Chimney flue re-certification required. Condition of chimney flue is not responsibility of CDS.
- Ensure that building design does not obstruct movement of the building to its final location.
- Ensure that the "ground floor slab" of the new construction is no higher than 6inches higher than sidewalk height.
- Notify CDS new concrete slab is ready to accept building, allowing for proper curing time for structural support.
- Shoring of new slab to allow for CDS to roll building in place (if underground parking is located underneath building's new location).
- Ensure all services & utilities are disconnected. Electrical and mechanical is full responsibility of client.
- Provide written permission from owner of neighbouring lot allowing CDS to set building temporarily.
- Prepare adjacent parking lot; remove lights & cut concrete flush with asphalt to allow CDS to maneuver with building.
- Ensure that no obstructions (vehicles, machinery or other) are present on neighbouring parking lot at 72 Richmond on relocation days.
- Ensure that no overhead obstacles (electrical wires, trees or other) will obstruct the building's movement on moving days. Client is responsible to have obstacles moved if required.
- Securing of premises throughout the length of the project. Includes security fencing, security guard costs, etc.
- Provide on-site toilets.
- Provide flag persons if/as required.
- Provide at least 6 months notice to CDS before project commencement.
- Provide on-site staging area for CDS's vehicles, equipment, materials, supplies or other.

_____
Client initials

5

Compensation:

CDS Professional Services (Subject to Applicable Taxes)	
Stages 1 & 2: Lift and "On-Site" Relocation (2022 Expected Timeline)	$ 474,000.00
Stages 3, 4 & 5: Relocation and Setting at New Site (2024 Expected Timeline)	$ 128,000.00
Engineering Costs: Lifting Plan & Bracing	TBD

Third Party Costs: ***Estimated**

**Final costs to be adjusted in accordance with an "invoice amount + 20% administration fee" model*

- City of Ottawa Encroachment Permit $ 4,000.00
- City of Ottawa Police Traffic Control Invoice +20%
- Crane Services for Removal of CDS' Equipment *(Stage 5)* Invoice +20%

Payment Terms: To be discussed

Client initials

6

Termination of Contract

If the Client is not ready to proceed with the job on the agreed date or within sixty (60) days of the signing of this contract, the Client will forfeit the full deposit to CDS Building Movers as liquidated damages and CDS Building Movers shall no longer be under any obligation to perform this contract.

Media Release

The client authorizes CDS to use images (pictures / video) of the building for promotional purposes

_____
Initial

In Witness Whereof, the parties' hereto have caused this Contract to be executed by their duly authorized representatives, effective as of the day and year of the signing of this Contract.

CLIENT	CDS BUILDING MOVERS
_____ Signature	_____ Signature
_____ Name	_____ Name
_____ Date	_____ Date

i. Owner or approved contractor signified acceptance of this estimate by signing and returning to CDS Building Movers.
ii. The document will be validated by CDS and signed by authorized personnel within 48 hours of receipt
iii. Minor corrections – if required – will be attended to by CDS. An executed copy will be returned to client.

CDS Building Movers 8 Sweetnam Drive, Stittsville, ON K2S 1G2 613-836-1215 1-800-267-5516

_____
Client initials

CDS Building Movers Terms and Conditions

No terms, conditions, deletions, modifications, or other understandings, oral or written, in any way purporting to vary these terms and conditions, whether contained in purchaser's forms or elsewhere, shall be binding upon CDS Building Movers unless approved in writing and signed by CDS Building Movers (herein referred to as CDS).

1. VALIDITY
   1.1. Validity Period: This quote or contract price is valid for 21 days, cancelled in the event of causes beyond the control of CDS occur.

   1.2. This quote or contract may be canceled and/or delayed due to the following:
   a) Delays occasioned by strikes
   b) Acts of God, force majeure
   c) Failure or delay in the obtention of the necessary permissions by government authorities or utility authorities
   d) Weather events causing suspension of operations

   1.3. Any claims must be submitted via email (or writing) withing 48 hours of work completion, otherwise shall have deemed to have satisfactorily fulfilled its obligations under the terms of the contract.

2. PAYMENT TERMS
   2.1. Payment schedule (unless otherwise stated on the quote)
   - 35% of contract due when contract is signed
   - 55% of contract due on day of lift
   - 10% of contract due on day of lowering

   2.2. Client agrees to pay each invoice when due. In the event client defaults on their obligation to pay each invoice when due. In the event of nonpayment:
   - CDS shall have the option to withhold any further services until client's account is fully paid.
   - CDS may, at its discretion, assess interest at the rate of 2% per month.
   - CDS is entitled to place a lien pursuant to the provision of the Construction Lien Act of Ontario or the Province to which the structure is located.
   - Client agrees to pay reasonable legal fees sustained by CDS in pursuit of payment.
   - If client cancels project for any reason, client forfeits initial payment.

   2.3. Clients paying by credit card permits CDS to keep information on file until the contract is closed.

3. DISCLAMERS
   3.1. CDS will not be responsible for the following damages:
   a) Damages to thermal seals in windowpanes
   b) Damage to fireplaces(s), chimney(s), wood stove(s), or furnace(s), of flue
   c) Cracks or damages caused by normal building disturbance during the moving or raising operations
   d) Damage caused by trees or other objects in the path of the moving operation such as damage to eavestroughs, soffit and or facia caused by overhanging branches.
   e) Damage or cracks to any hard surfaces including granite, terrazzo, ceramic, and concrete
   f) Other damages to the structure related to the client not meeting contractual obligations
   g) Damages caused by water infiltration in instances where roof is required to be cut/removed to allow the building to be relocated
   h) Damages or cracks to drywall occurring during relocation
   i) Damages to or loss of internal contents/personal belonging of client remaining within structure

   3.2. *Upon receipt of clients two (2) weeks notice, CDS will schedule lower at earliest time possible

CDS Building Movers 8 Sweetnam Drive, Stittsville, ON K2S 1G2 613-836-1215 1-800-267-5516

Client initials

4. INSURANCE
   a) CDS recommends client notify their personal property insurer of project
   b) The coverage applies from the time of the lifting, lowering, and raising of the insured property and continues until such property is placed at the designated point of destination

5. CDS SCOPE EXCLUSIONS

5.1. Permits, fees, drawings, and reports:
   a) The client is responsible for obtaining and paying for all permits, fees, drawings, environmental reports, sign-light crews, etc. (unless otherwise stated in contract). The client is to have all required permits in his possession prior to CDS' arrival at site.
   b) Where an engineer has created drawings for the client, the engineer is required to sign off on drawings within 48 hours of completed work.
   c) If client chooses to not provide drawings, a surcharge may apply if CDS needs to return

5.2. Client' Responsibilities:
   a) Provide suitable access to the building or structure and to the location to which the building is to be moved. Contact CDS for specific requirements
   b) Obtention of written permission from neighbours where access requires use of lands owned by others.
   c) Obtention of permits and other documentation required for the project
   d) Verify/validate structural integrity of building before moving.
   e) Removal of debris including environmentally hazardous material(s).
   f) Clearly indicate location of septic field and tank using pickets, flags and/paint (if applicable)
   g) Clearly indicate building's new location using pickets, flags and/paint (if applicable)
   h) Provide clear base specifications
   i) Co-ordinate construction of the new foundation with CDS personnel as to where openings in foundation should be to accommodate house-moving apparatus.
   j) Removal and disposal of brick (if applicable)
   k) Clean-up and restoration of site and landscape
   l) Snow removal (if applicable)
   m) Ensure that no water is present in basement or excavated area
   n) Client and/or contractor is to be present during alignment of building on foundation.
   o) Provide a minimum of two (2) weeks' notice regarding date for return to site for CDS to complete work* (see *Disclaimer 3.2*)
   p) Disconnection and reconnection of utilities including water, sewer, hydro, gas, etc.
   q) Excavation and backfilling as required
   r) Removal of surrounding decks, patios, stairs, etc.
   s) Site security; fencing of site perimeter
   t) Anchoring of building to new foundation
   u) Installation of structural beams and/or shoring posts unless otherwise stated (see *Additional Charges 6.5*)
   v) Obtain a WETT inspection (applicable to Chimneys only)
   w) If contact requires a roll, ensure basement is sufficiently backfilled with clean and semi compacted fill to allow for safe maneuver of CDS equipment
   x) Structural reattachment of roof in event roof is removed for relocation purposes.

6. ADDITIONAL CHARGES:
   - 6.1. Raising of building above height described in contract will be subject to an additional charge of 135$/pier/foot to a maximum total height of 11feet. Cost to raise above 11ft total height to be negotiated with client.
   - 6.2. Surcharge for rental of blocking, pads, and steel: after 30 days $97 per day standard; $345 per day for commercial contracts
   - 6.3. Delays in operations directly attributable to client, including but not limited to failure to do preparatory work, failure to obtain the municipal permits etc. are subject to a $700/day surcharge
   - 6.4. Return to site for the relocation of an existing/installed pier, steel beams or other support(s) is subject to an additional charge of $700/hour on a shop to shop, 4-hour minimum basis.
   - 6.5. Installation of beams and or shoring posts supplied by client subject to additional charge of $600/hr; 2 hours minimum,
   - 6.6. Clients request to reschedule relocation projects where time sensitive permits are required are subject to additional fee of $275.
   - 6.7. A time and materials surcharge will be applied by CDS Building Movers handling rock/bedrock.

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_____
Client initials

Your Peace of Mind is Our Policy.

Commercial Insurance Brokers
Since 1918

CERTIFICATE OF INSURANCE

ISSUED AT THE REQUEST OF:

To whom it may concern

This is to certify that the policies of insurance shown below are at this date in force as described notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate may be issued or may pertain:

Named Insured: CDS Building Movers o/b 2088099 Ont. Inc

Mailing Address: 8 Sweetnam Drive,
Stittsville, ON K2S 1G2

Remarks: Commercial General Liability includes; Premises and Operations hazards, Products & Completed Operations, Personal Injury Liability and Contractual Liability.

Reference: This certificate is issued with respect to the operations of the insured.
- **Building Movers**

Descriptive Schedule

Company	Policy Number	Expiry	Coverage
Aviva Insurance Company	81794368	July 31, 2022	Commercial General Liability $1,000,000 per occurrence
			Non-Owned Automobile Liability $1,000,000 per occurrence
			Commercial Umbrella Liability $4,000,000 per occurrence/aggregate

This certificate does not change, or extend, any policy coverage and is subject to the statements, limitations, exclusions, and conditions in the policy described. Limits of coverage shown may have reduced by paid claims. This certificate is issued as a matter of information only and confers no rights on the certificate holder and imposes no liability on the insurer. In the event of cancellation in the insurance, we will endeavour to provide 15 days notice, but shall not be liable for failure to provide such notice.

BINKS INSURANCE BROKERS LIMITED

Kris Bangs, CIP
Kris Bangs, CIP
Commercial Department

Date: July 29, 2021

Binks Insurance Brokers Limited
100 – 881 Lady Ellen Place, Ottawa, ON K1Z 5L3 T:613 226-1350 F: 613 226-7029 **www.binks.ca**

CDS Building Movers 8 Sweetnam Drive, Stittsville, ON K2S 1G2 613-836-1215 1-800-267-5516

Client initials

APPENDIX B DESIGNATED SUBSTANCE SURVEY

patersongroup

Consulting Engineers

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Geotechnical Engineering
Environmental Engineering
Hydrogeology
Geological Engineering
Materials Testing
Building Science

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January 21, 2021
File: PE5515-LET.01R

Trinity Development Group Inc.
359 Kent Street - Suite 400
Ottawa, Ontario
K2P 0R6

Attention: **Mr. Michael Bottigoni**

Subject: **Designated Substance Survey**
70 Richmond Road
Ottawa, Ontario

Dear Sir,

Further to your request and authorization, Paterson Group (Paterson) conducted a Designated Substance Survey (DSS) at the property addressed 70 Richmond Road, in the City of Ottawa, Ontario. This letter report summarizes our findings and results of the DSS.

1.0 BACKGROUND

The subject property is situated on the southwest corner of the Richmond Road and Island Park Drive intersection in Ottawa, Ontario. The subject property is occupied by a single storey commercial building with an attached two bay automotive service garage. It is our understanding that the building has been recognized as a heritage building and will be undergoing some interior demolition prior being relocated to another location.

The purpose of this investigation was to identify any potential designated substances within the above-mentioned structure prior to any demolition activities.

2.0 SITE INSPECTION AND OBSERVATIONS

A Paterson Group representative conducted a site visit on November 30, 2021, and a follow up site visit on January 14, 2022. During the course of the site visit, a visual inspection for materials containing the following designated substances: acrylonitrile, arsenic, asbestos, benzene, coke oven emissions, ethylene oxide, isocyanates, lead, mercury, silica, vinyl chloride, and the following substances: ozone depleting substances (ODSs) and polychlorinated biphenyls (PCBs) was carried out.

2.1 Acrylonitrile

Acrylonitrile is prescribed as a designated substance under Ontario Regulation (O.Reg.) 490/09 of the Occupational Health and Safety Act. It is a volatile, flammable liquid that is used to make many chemicals such as plastics, rubber and synthetic fibres. Acrylonitrile may be present in stable form in surface coatings (eg. paints), building material adhesives and plastics. Common adhesives observed in the subject building include applications for vinyl floor tiles and mouldings. The above noted products are not considered to pose a concern provided they are not subjected to extreme heat, such as a torch. Exposure to acrylonitrile is unlikely and not suspected within the building.

2.2 Arsenic

Arsenic is prescribed as a designated substance under O.Reg. 490/09 of the Occupational Health and Safety Act. Arsenic has many industrial uses such as hardening of copper and lead alloys and in older lead-based paints. Similar to acrylonitrile, arsenic may also be present in stable form in building material adhesives and some metal alloys. Based on the limited quantity of potentially arsenic containing materials within the subject building, it is not expected that the arsenic concentration in the air will exceed its maximum allowable Time Weighted Average Exposure Value (TWAEV).

2.3 Asbestos

Asbestos is prescribed as a designated substance under O.Reg. 490/09 of the Occupational Health and Safety Act. Asbestos-containing materials (ACMs) are defined under O. Reg. 278/05 of the Occupational Health and Safety Act as having a concentration of 0.5% or more by dry weight of fibrous asbestos (i.e. chrysotile, amosite, crocidolite and/or other amphiboles). Asbestos was commonly used in residential and commercial construction between 1930 and 1980.

A total of eleven bulk samples of potentially asbestos containing materials were obtained from the interior of the subject building during the sampling event on November 30, 2021, while six samples were obtained from the exterior of the subject building during the sampling event on January 14, 2022. All samples were submitted to Paracel Laboratories in Ottawa, Ontario for analysis. The potential asbestos containing materials were analyzed to determine the presence, type and content of asbestos, as shown below.

Table 1 details all samples collected from the subject building. The laboratory certificates of analysis are appended to this letter.

Table 1 – Summary of Asbestos Testing
70 Richmond Road

Sample No.	Description	Location	Fibrous Asbestos Content	Other Materials
November 30, 2021				
DWJC1	Drywall joint compound	Garage bay	Not analyzed (insufficient compound in sample)	
DWJC2		Garage bay	None	100% Non-Fibers
DWJC3		Garage bay	None	100% Non-Fibers
PRG1	Parging cement	Office area	**<MDL**	100% Non-Fibers
PRG2		Office area	**1% Chrysotile**	99% Non-Fibers
PRG3		Garage bay	**1% Chrysotile**	99% Non-Fibers
PRG4		Garage bay	**1% Chrysotile**	99% Non-Fibers
PRG5		Garage bay	**1% Chrysotile**	99% Non-Fibers
VFT1	Vinyl Floor tiles Blue (30 cm x 30 cm)	Office area	None	100% Non-Fibers
VFT2		Office area	None	100% Non-Fibers
VFT3		Office area	None	100% Non-Fibers
January 21, 2021				
EXT-PRG1	Parging cement	Eastern façade	None	100% Non-Fibers
EXT-PRG2		Northern façade	None	100% Non-Fibers
EXT-PRG3.1		Western facade	None	100% Non-Fibers
EXT-PRG3.2		Western facade	None	100% Non-Fibers
EXT-PRG4		Southern facade	None	100% Non-Fibers
EXT-PRG5		Southern facade	None	100% Non-Fibers

Notes: **Bold** – Asbestos containing material as defined under O.Reg. 278/05 as having a concentration of 0.5% or more by dry weight fibrous asbestos.
MDL - Method detection limit

Drywall Joint Compound

Drywall joint compound was observed on the garage bay ceiling of the subject building. A total of three samples of the drywall joint compound were collected and submitted for analysis. It should be noted that minimal quantities of joint compound were present in one of the samples (DWJC1). As a result, this sample was not analyzed due to the lack of compound present in the sample. No asbestos was identified in the samples analyzed. Based on the test results, the drywall joint compound is not considered to be an asbestos containing material.

Interior Cement Parging

Cement parging was observed on the walls throughout the subject building. A total of five samples of the cement parging were collected and submitted for analysis. Four samples were found to contain **1% Chrysotile asbestos. Based on the analytical test results, the cement parging throughout the walls of the subject building is considered to be an asbestos containing material.**

Vinyl Floor Tile

Vinyl floor tiles were observed within the office area of the subject building. A total of three samples of the vinyl floor tiles were collected and submitted for analysis via positive stop. No asbestos was identified in the samples analyzed. Based on the test results, the vinyl floor tiles located in the office area of the subject building are not considered to be an asbestos containing material.

Exterior Facade Cement Parging

A cement parging layer on the exterior block walls was also observed on the facade of the subject building. A total of six samples of the cement parging were collected and submitted for analysis. No asbestos was identified in the samples analyzed. Based on the analytical test results, the cement parging layer on the exterior façade of the subject building is not considered to be an asbestos containing material.

Insulation

No potentially asbestos containing insulation material was identified during the inspection. A visual inspection of ceiling and wall cavities did not identify any insulation material throughout the subject building. If any insulation materials are encountered in the wall or ceiling cavities of the subject building that have not been identified in this report, we request that we be notified. In the event that suspected asbestos containing materials are discovered, all work is to cease until samples are collected and analysed. Alternatively, the suspected building materials can be treated as asbestos containing and be removed in accordance with O.Reg. 273/05.

2.4 Benzene

Benzene is prescribed as a designated substance under O.Reg 490/09 of the Occupational Health and Safety Act. Benzene is used in the manufacturing of many products including plastics, rubbers, resins and synthetic fibres. It is also used as a solvent in printing and paints as well as in petroleum products such as gasoline and diesel. Benzene may be present in older paints, sealants and roofing materials, some of which may be present in the subject building.

Benzene is not considered to be a concern, since it typically vaporizes rapidly from most products shortly after manufacturing or application, however, the above noted materials should not be subjected to extreme heat without proper worker respiratory protection.

2.5 Coke Oven Emissions

Coke oven emissions are prescribed as a designated substance under O.Reg. 490/09 of the Occupational Health and Safety Act. Coke Oven emissions are not typically found outside the metal extraction industry. No sources of coke oven emissions are suspected or were observed with respect to the subject building.

2.6 Ethylene Oxide

Ethylene oxide is prescribed as a designated substance under Ontario Regulation 490/09 of the Occupational Health and Safety Act. Ethylene oxide is used in large volumes as a chemical intermediate in the manufacturing of many industrial products including textiles, detergents, foam, antifreeze, solvents and adhesives. Based on the limited quantity of potentially ethylene oxide containing materials within the subject building, ethylene oxide is not considered to pose a concern.

2.7 Isocyanates

Isocyanates are prescribed as a designated substance under O.Reg. 490/09 of the Occupational Health and Safety Act. Isocyanates are the raw materials from which all polyurethane products are made. They are used widely in the manufacturing of foams, plastics, adhesives, synthetic fibres and coatings such as paints and varnishes, some of which are present in the subject building.

Over time, isocyanates will volatize out of these materials but will only be present in trace amounts and are not expected to reach hazardous air concentrations. As a result, isocyanates are not considered to pose a concern.

2.8 Lead

Lead is prescribed as a designated substance under O.Reg. 490/09 of the Occupational Health and Safety Act. For the purposes of this report, the commonly used value of 90 ppm [Surface Coatings Material Regulation (SOR/2005-109) – October 2010] will serve as the lead-containing definable limit. Lead concentrations will be categorized into three (3) classes, lead-based (greater than 5000 ppm), lead-containing (between 90 ppm and 5000 ppm) and non-lead containing (less than 90 ppm).

Lead may be present in older paints, plastics, lead caulking in bell joints for cast iron piping systems, lead solder in copper piping systems, electrical equipment and ceramics. Painted surfaces on the interior and exterior of the subject buildings were observed. Five paint samples were obtained from the subject building during the November 30, 2021 sampling event. All samples were submitted to Paracel Laboratories in Ottawa, Ontario for lead content analysis. Table 2 summarizes the lead results for samples collected from the 70 Richmond Road. The laboratory certificate of analysis is appended to this letter.

Table 2 – Summary of Lead Testing
70 Richmond Road
November 30, 2021

Sample	Location Description	Colour	Lead-Containing Definable Limit (µg/g)	Lead Content (µg/g)
PT1	Exterior wall	Beige	90	**494**
PT2	Interior wall	White/ beige	90	**1030**
PT3	Interior garage bay wall	Grey	90	**10800**
PT4	Roof	Red	90	**22100**
PT5	Window sill and doors	Brown	90	**1490**

Based on the test results, three paint samples obtained from 70 Richmond Road were found to be lead containing paints while two paint samples were found to lead-based paints.

2.9 Mercury

Mercury is prescribed as a designated substance under O.Reg 490/09 of the Occupational Health and Safety Act. Mercury may be present in thermostats (which were not observed in the subject building), barometers and hydrometers along with other laboratory measuring devices. It may also be present in older lead-based paints (which were identified) and many types of lights including fluorescent tubes.

Any mercury containing equipment must be disposed of according to Ontario Regulation 347 as amended by O. Reg. 558, if it is being decommissioned.

2.10 Vinyl Chloride

Vinyl chloride is prescribed as a designated substance under O.Reg. 490/09 of the Occupational Health and Safety Act. Vinyl chloride is the parent compound of polyvinyl chloride (PVC) which is used in many consumer and industrial plastic products. It is also used extensively in the glass, rubber and paper industries. Vinyl chloride may be present, in stable form, in pipes, plastics, vinyl's and interior finishes such as paints and varnishes throughout the subject building.

The health hazard associated with vinyl chloride comes primarily from the inhalation of fumes. In most applications vinyl chloride is considered to be stable as long as it is not subjected to extreme heat. As a result, vinyl chloride is not expected to be a concern as long as materials are not subjected to extreme heat.

2.11 Silica

Silica is prescribed as a designated substance under O.Reg. 490/09 of the Occupational Health and Safety Act. Silica or silicon dioxide is the basic component of sand, quartz and granite rock. Silica is expected to be present in concrete and cement parging. Typical procedures including wetting materials prior to, and during, any demolition activities are required to control dust.

2.12 Ozone Depleting Substances (ODSs)

No potentially ODS containing equipment was observed during the site visit.

2.13 Polychlorinated Biphenyls (PCBs)

No potential sources of PCBs were observed during the site visit.

3.0 SURVEY SUMMARY AND RECOMMENDATIONS

Based on our survey, one building material analysed was determined to be asbestos containing, three paints sampled were found to be lead containing and two paints samples were found to be lead-based. The possible presence of limited quantities of acrylonitrile, arsenic, benzene, ethylene oxide, isocyanates, lead and silica in the aforementioned building materials do not pose a concern, provided precautionary measures are followed during future proposed renovation works.

Asbestos

Based on the observations made during the site inspection, combined with the analytical test results, the following ACMs were identified in the subject building:

- **Cement parging; located on all interior walls throughout the subject building.**

All ACMs must be removed from the subject building prior to being disturbed by any planned renovation or demolition activities. If any insulation materials are encountered in the wall or ceiling cavities that have not been identified in this report, we request that we be notified to allow for the testing of this material. In the event that other suspected asbestos containing materials are discovered, all work is to cease until samples can be collected and analysed. Alternatively, these materials can be treated as asbestos containing and be disposed/managed of accordingly.

The removal, disturbance, or encapsulation of the identified ACMs throughout the subject building must be done in accordance with the procedures outlined in O. Reg. 278/05, and conducted by a contractor specialized in this type of work. A full copy of O. Reg. 278/05, made under the Occupational Health and Safety Act, can be found at http://www.elaws.gov.on.ca/html/regs/english/elaws_regs_050278_e.htm.

Lead

Lead may be present in the solder used in the copper plumbing system. This does not pose a concern to construction workers, provided it is not heated or pulverized. Based on the analytical test results, three lead containing paints and two lead-based paints were identified throughout the subject building. Appropriate procedures for working with lead on construction sites should be developed and implemented during any renovations/demolition or maintenance activities. Further information on precautionary measures can be obtained from the document entitles, *"Guideline - Lead on Construction Projects"*, prepared by the Occupation health and Safety Branch of the Ontario Ministry of Labour and dated April 2011.

Silica

Silica is expected to be present in various building materials, including concrete and cement parging. When potential silica containing materials (as identified in this report) are to be disturbed, precautions should be taken to minimize dust creation (wetting surfaces) and protect workers, such as providing appropriate dust masks. Further information can be obtained from the document entitled "Guideline – Silica on Construction Projects" (April 2011), prepared by the Occupational Health and Safety Branch of the Ontario Ministry of Labour.

4.0 STATEMENT OF LIMITATIONS

A designated substance survey was completed at 70 Richmond Road, located in the City of Ottawa, Ontario. The results of the survey are based on our visual observations made at the time of the site visit in conjunction with our analytical test results. Should any conditions be encountered at the subject site that differ from our findings, we request that we be notified immediately in order to allow for a reassessment.

This report was prepared for the sole use of Trinity Development Group Inc. Permission and notification from Trinity Development Group Inc. and this firm will be required to release this report to any other party.

We trust that this submission will satisfy your present requirements. If you have any questions regarding this report, please contact our office.

Paterson Group Inc.

Mark St Pierre, B.Eng.

Eric Leveque, B.A.

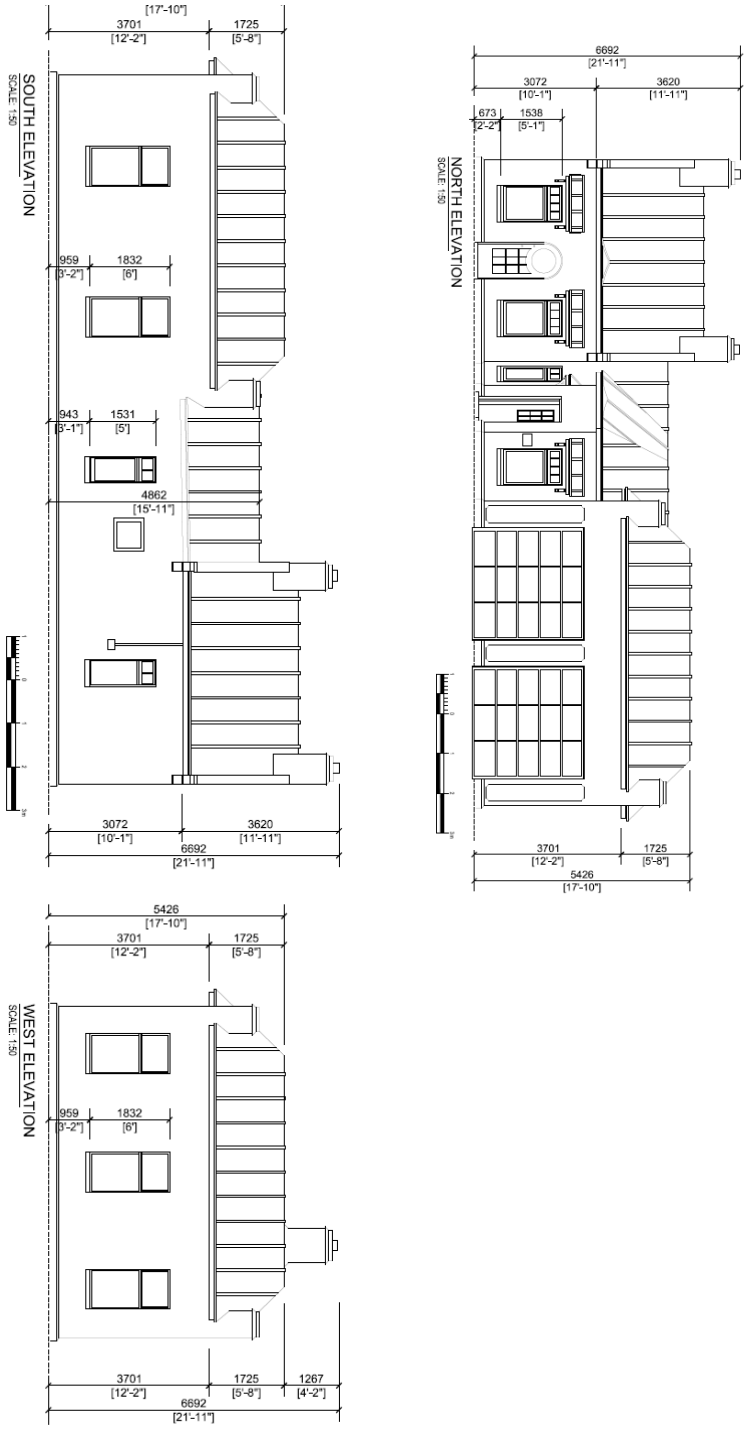
Report Distribution:

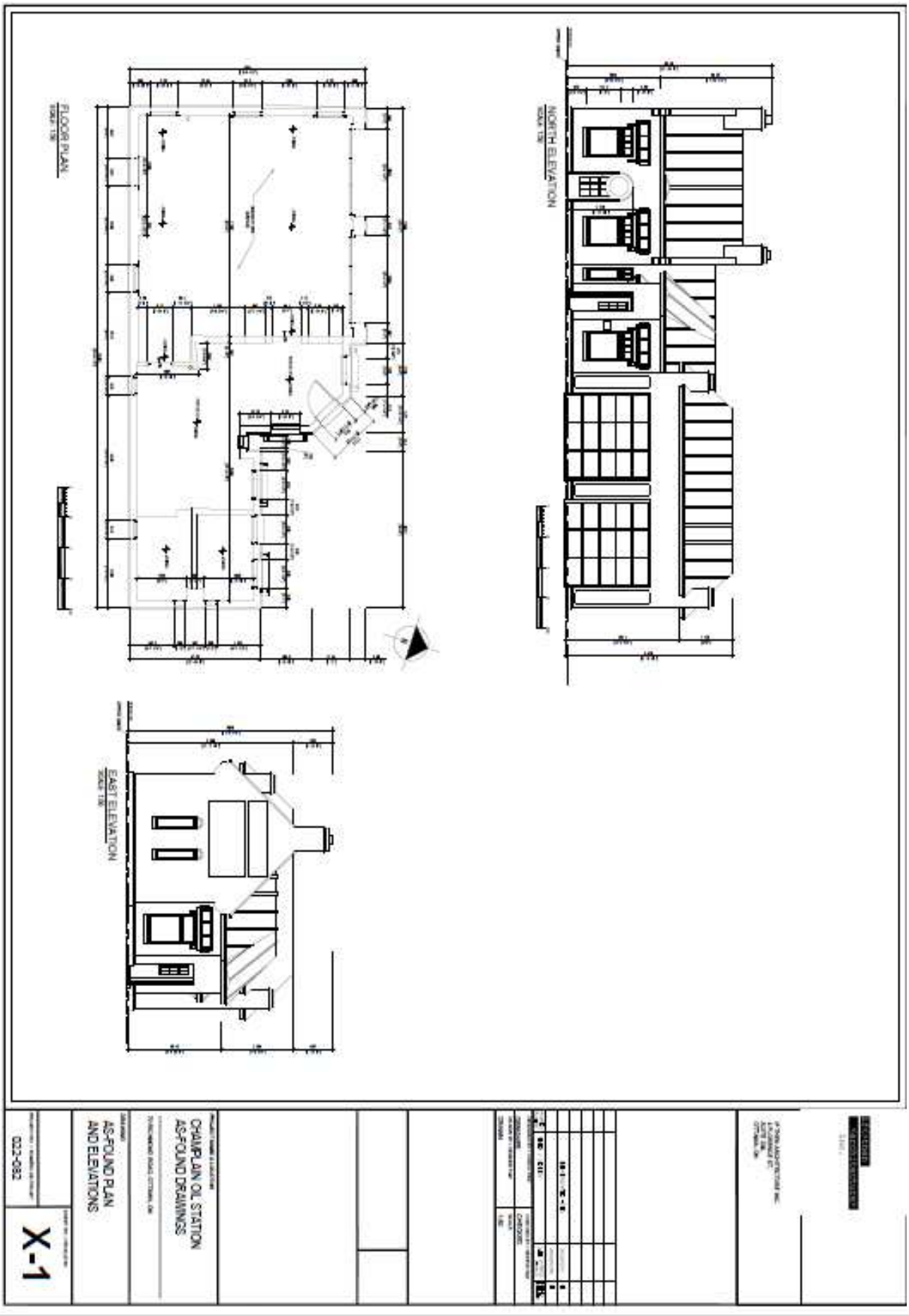
- ❑ Trinity Development Group Inc.
- ❑ Paterson Group Inc.

Attachments:

- ❑ Laboratory Certificates of Analysis

APPENDIX C: BUILDING AS-FOUND DRAWINGS AND PHOTOGRAPHS




FLOOR PLAN
NORTH ELEVATION
EAST ELEVATION
CHAMPLAIN OIL STATION
AS-FOUND DRAWINGS
AS-FOUND PLAN
AND ELEVATIONS
X-1

APPENDIX D: STRUCTURAL ASSESSMENT (JACL)

JOHN G. COOKE & ASSOCIATES LTD. CONSULTING ENGINEERS

John G. Cooke, P.Eng., RSW President
Grazyna A. Materna, M. Eng., P.Eng Vice President
John D. Barton, C.E.T. Vice President
Mary Cooke, C.Tech., CSP Partner
Lisa Nicol, P.Eng. Partner
Marty Lockman, P.Eng., ing. Partner
Jonathan Dee, P. Eng., ing. (Hamilton) Associate
Chris Vopni, P.Eng. Associate

Devtrin (Island Park) Inc.
77 Bloor Street West, Suite 1601
Toronto, ON M5S 1M2

September 8, 2020

Project No. 21004

Attn: Aaron Cameron
acameron@trinity-group.com

Re: 70 Richmond Road
Relocation Feasibility

Dear Mr. Cameron,

John G. Cooke & Associates visited the garage at 70 Richmond Rd. September 1st to assess any structural concerns with relocating the heritage building.

The building, constructed ca. 1934, is generally concrete block and brick exterior walls covered in stucco, with poured concrete foundations and wood truss roof framing with metal roofing. The depth of the concrete foundation walls is unknown. It was conveyed by the heritage consultant that the building has been empty for at least 20 years, at which time work began to convert it into a coffee shop but only minor work aside from removals of finishes was complete.

In general there are three main spaces; the cottage, the transitional area and the service bays, see Photo 1. The transitional area and garage are divided by an interior loadbearing brick wall. The separation of these spaces is visible by the differing roof structures from the exterior.

Photo 1: Overview of building [JCAL 2020]

The interior of the cottage has been completely gutted, exposing the wall and roof structure. At an unknown time in the past, a load bearing wall was removed under the western chimney and a built-up wood beam was installed at ceiling level to support the concrete block gable and chimney. There was no water damage visible in the cottage area and the roof trusses appear to be in good condition. There is a crawlspace under the flooring for utilities, this space was not accessible for review.

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(613) 226-8718

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HAMILTON, ON
57-B John St. S, Suite 2, L8N 2B9
(289) 288-3638

The transitional area is highlighted by the many roof orientations and valleys. The metal roofing in this area has failed and there is significant water infiltration. It was not raining at the time of the visit, yet many of the wooden members were visibly wet. It is likely that significant portions of the roof structure are rotten and are actively deteriorating. The interior brick loadbearing wall separating the transitional area from the garage is also significantly deteriorated, with a large fracture across the doorway opening at the back of the building, and a variety of cracks in the wall at the front. The flooring in this space appears to be a concrete slab on grade.

The service bay area is an open space framed by two exterior block walls, the interior brick wall and the north (front) wall with a single block pier and two large garage door openings. The ceiling finishes were still in place so the roof structure was unable to be reviewed. However, based on the water damage to the ceiling finishes and algae/mould growing on the ground below, it is likely that there is significant water damage to the wood roof members. The ground in the garage is dirt infill. Note that the ground in the garage and around the property is likely contaminated from the historical garage use.

The following investigations are recommended prior to finalizing a concept for moving the structure:

- Complete three investigative test pits in each of the defined spaces to confirm footing depth;
- Remove the ceiling from the garage to review the roof structure and its condition.

Based on our initial review, the following work is expected to stabilize the structure prior to relocating:

- Rebuild the interior loadbearing brick wall;
- Repair deteriorated roof structure;
- Infill or brace the service bay door openings;

The roof structure, in addition to requiring repairs, will also be subjected to higher snow loads from being at the base of the new mid-rise structure. It is recommended to reinforce the roof structure for this higher snow load at the same time as the repairs, since many of the solutions will address both problems. However, it is possible that the existing roof over the service bay area is so severely deteriorated and under-designed for the higher snow loads that a complete new structure is required. In this case, the most effective approach may be to only move the repaired/upgraded cottage and transitional areas and dismantle/rebuild the service bays.

It is our opinion that the building can withstand relocation, in whole or in part, following the work summarized above and any additional strengthening or reinforcing that is informed by more in-depth investigations.

With the available information, it is our opinion that a hybrid solution is the most effective structural approach. This would involve moving the Cottage and Transition areas of the building while dismantling and rebuilding the Service Bay area to match the existing shape using comparable modern construction materials. This approach strives to eliminate complications with moving the eccentric lateral resisting system that is created by the two large openings and a single pier at the north facing elevation. This option offers the additional benefit to create a more manageable temporary building footprint that can be more readily accommodated during the new building construction phase.

Please don't hesitate to contact the undersigned should you have any questions or require clarifications.

Sincerely,
JOHN G. COOKE & ASSOCIATES LTD.

Chris Vopni, P.Eng. CAHP

Jamie Marrs, B. Eng.