

mcCallumSather

# 10 Duke Street, Kitchener



Heritage Permit Application  
Presentation to Heritage Kitchener  
May 7, 2024





# PRESENTERS

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Heritage & Research Specialist

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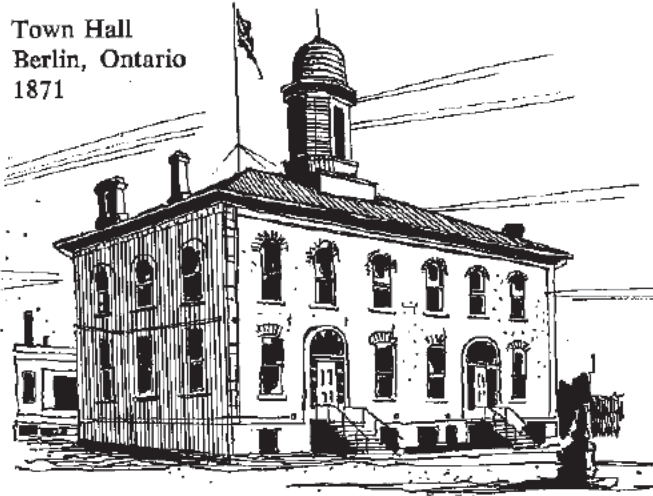
Jonathan Dee, John G. Cooke & Associates Ltd.  
Consultant Engineers

P.Eng., ing., CAHP  
Principal

# Brief Historical Overview

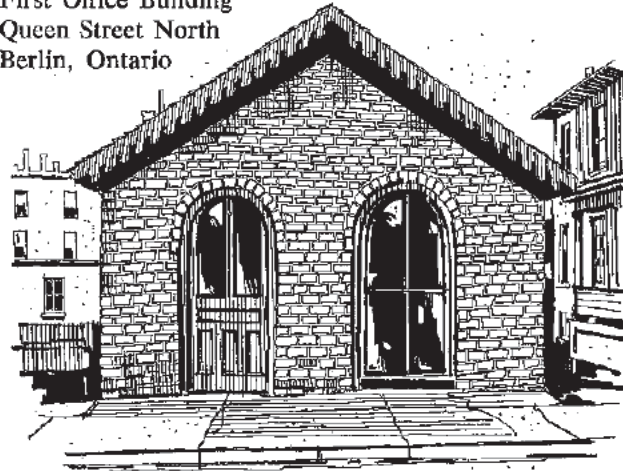
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Town Hall  
Berlin, Ontario  
1871



1871

First Office Building  
Queen Street North  
Berlin, Ontario



1871

c.1880

Second Office Building  
King Street East  
Berlin, Ontario



1890

Third Office Building  
King and Ontario Streets  
Berlin, Ontario



1915

Fourth Office Building  
20 Queen Street North  
Berlin - Kitchener



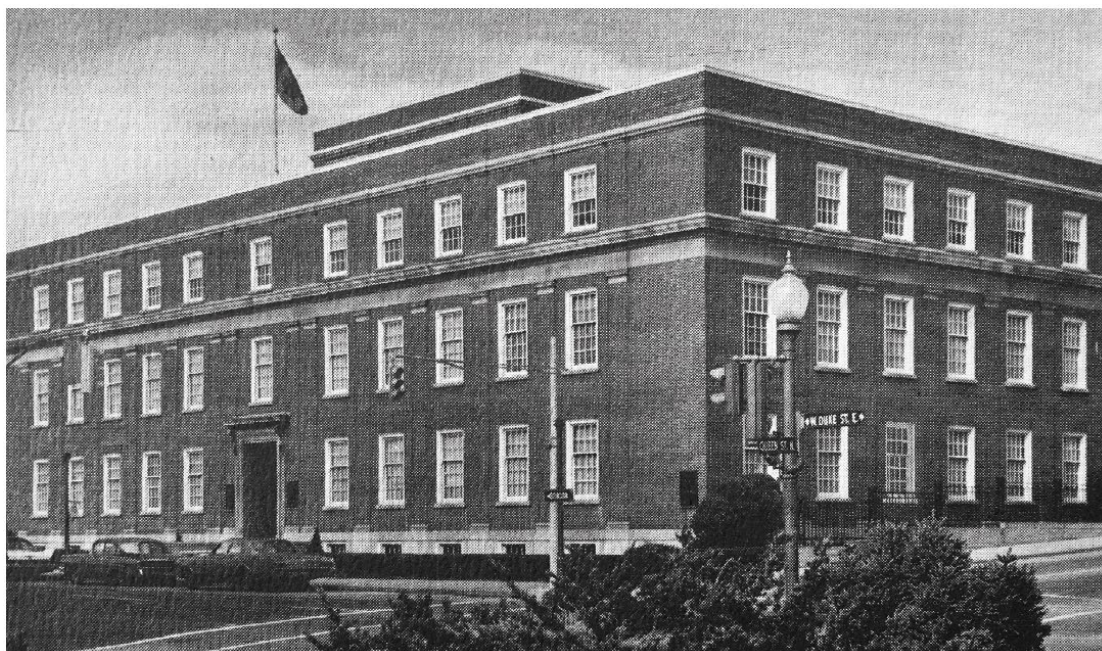
1949



Fifth Office Building, 10 Duke Street West, Kitchener

GROWTH OF THE ECONOMICAL MUTUAL INSURANCE COMPANY<sup>1</sup>

1979



2021





## EXTERIOR ATTRIBUTES

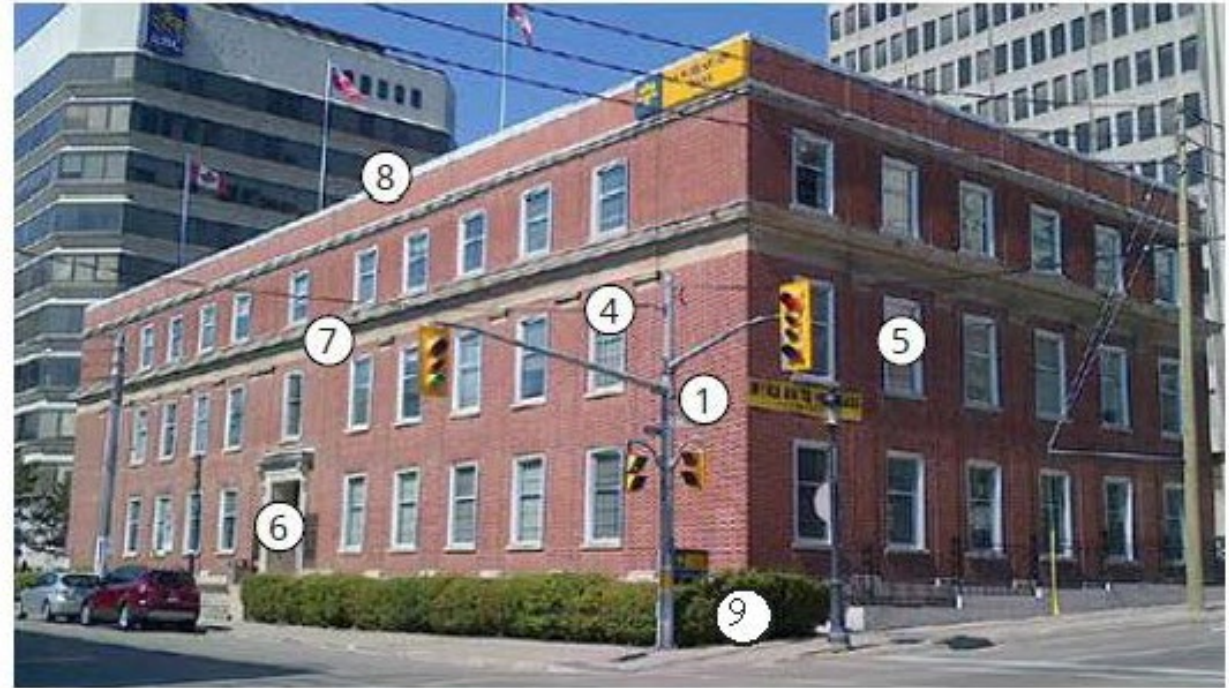
1. Red Flemish brick;
2. Rectangular plan;
3. 11 bays along Duke Street and 6 bays along Queen Street;
4. Segmentally flat windows openings with brick voussoirs;
5. 8/12 windows with limestone sills;
6. Main entrance door with door surround, transom and entablature;
7. The limestone band between 2nd and 3d floors;
8. The parapet along the roofline.

## INTERIOR ATTRIBUTES

10. Brass elements: Stair railings, newel post caps and wall grilles;
11. Roman Travertine tile in vestibule entrance and lobby.

## CONTEXTUAL/LANDMARK ELEMENTS

9. Prominent location at the intersection of Duke Street West and Queen Street North;
  - Balanced front and side façades;
  - The massing of the building fronting onto both Duke Street West and Queen Street North.







South (Duke Street)  
West &  
East (Queen Street  
North)  
Facades  
2023





# Proposed Development



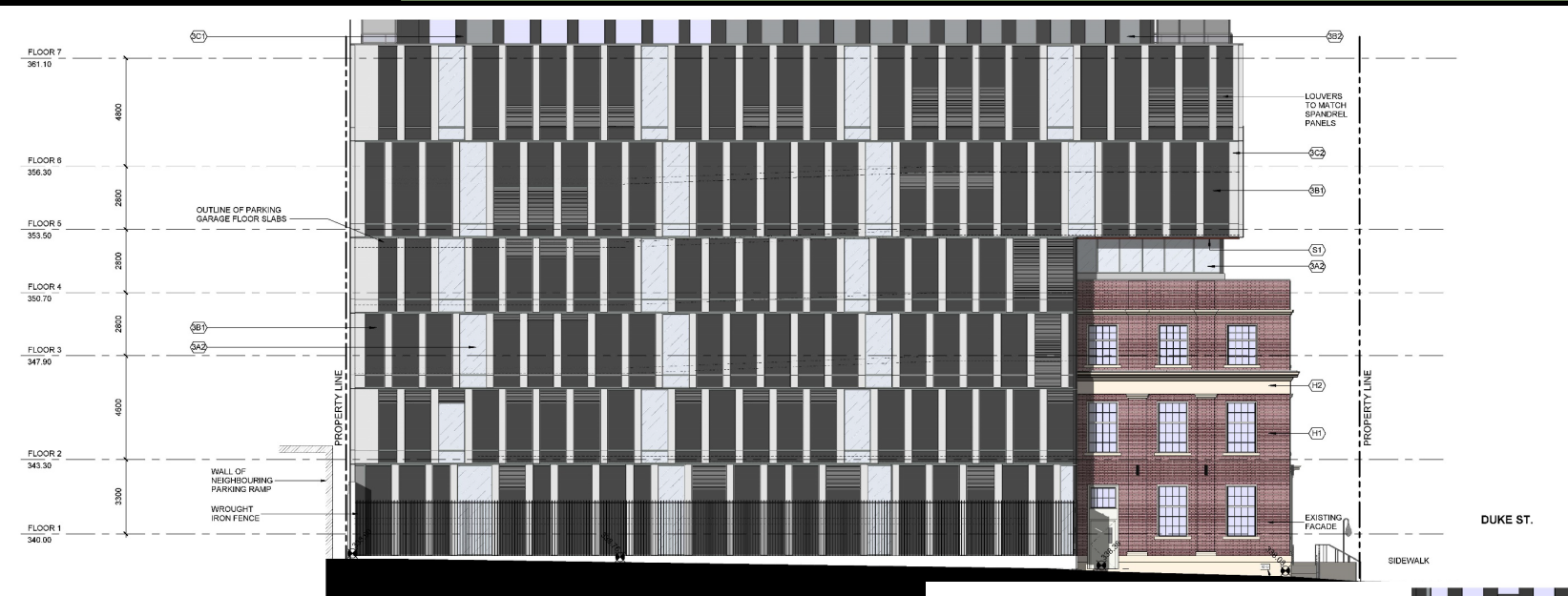
1 SOUTH PODIUM ELEVATION  
SPA317 1:100



PRINCIPAL  
ENTRANCE



# Proposed Development



2 WEST PODIUM ELEVATION  
SPA312 1:100



2 EAST PODIUM ELEVATION  
SPA311 1:100





## Proposed Alterations

The proposed development will retain the complete front (along Duke Street) and side (along Queen Street) facades and three bays of the west facade of the existing heritage property in-situ. In doing so, the three-dimensional legibility of the heritage building in its surrounding context will be retained.



# Existing Conditions - Photos



Exterior Wall Assembly

- Outer wythe of brick red clay brick with two backup wythes of cement brick, and an interior liner of terra cotta and plaster



Slab-Wall Interface

- Concrete slab cast on top of brick core with steel beam pocketed in and bearing as well.
- Steel frame supporting the slab throughout, and the Terra Cotta is bearing on the slab



# Existing Conditions – Photos Cont'd



Interior Column

- Typical throughout building, at each floor, columns are encased with terra cotta and plaster finish

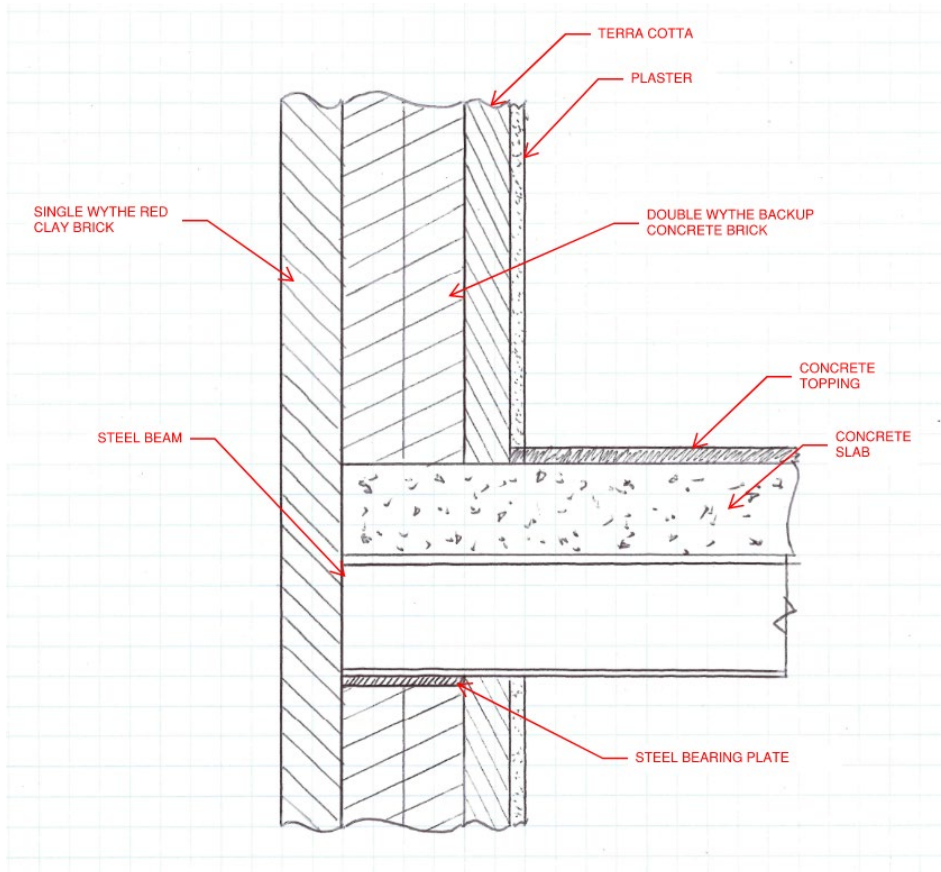


Interior Column Splice

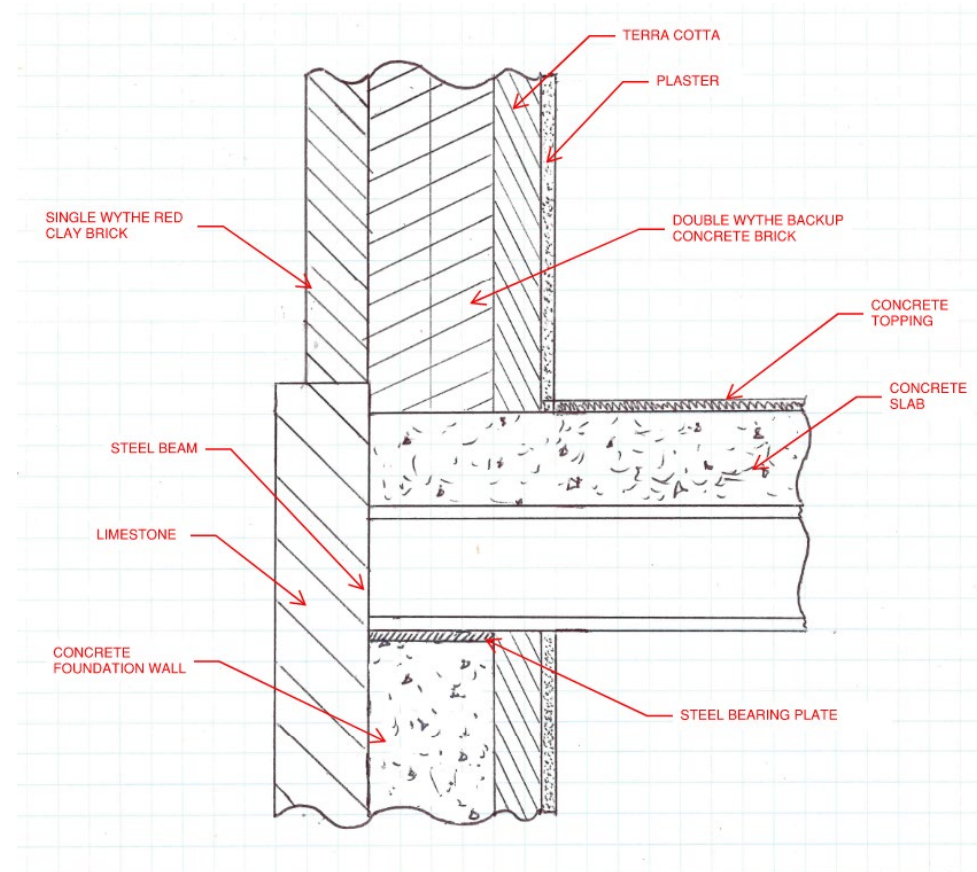
- Splice is located directly above the second floor
- Smaller column section used for the upper floors



# Existing Conditions - Sketches



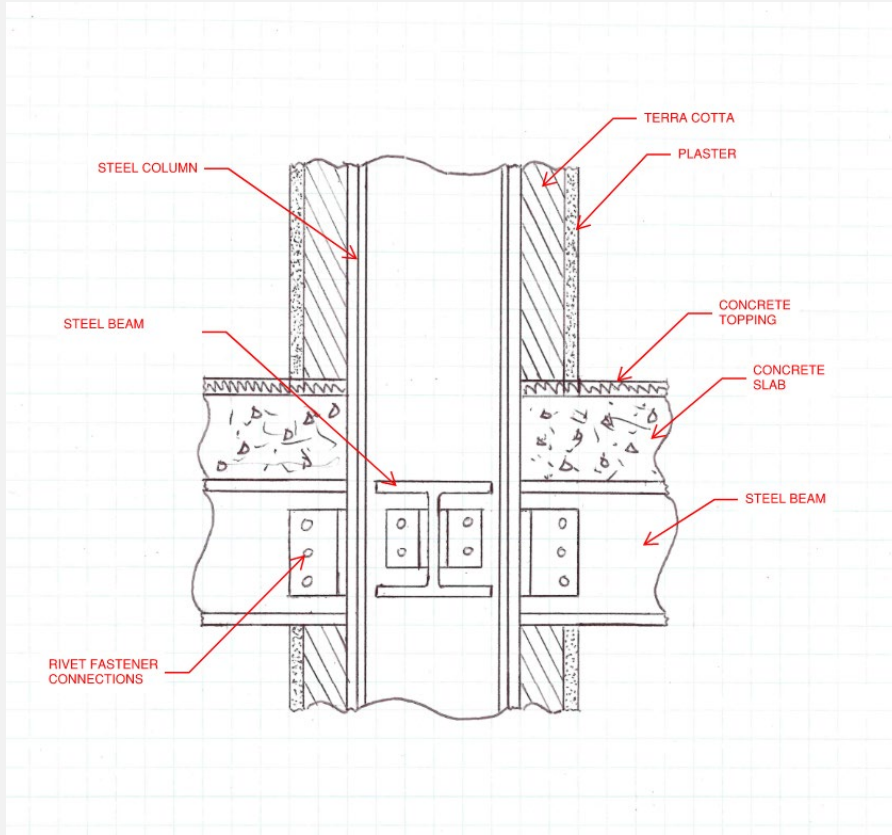
Slab-Wall Connection – Upper Floors



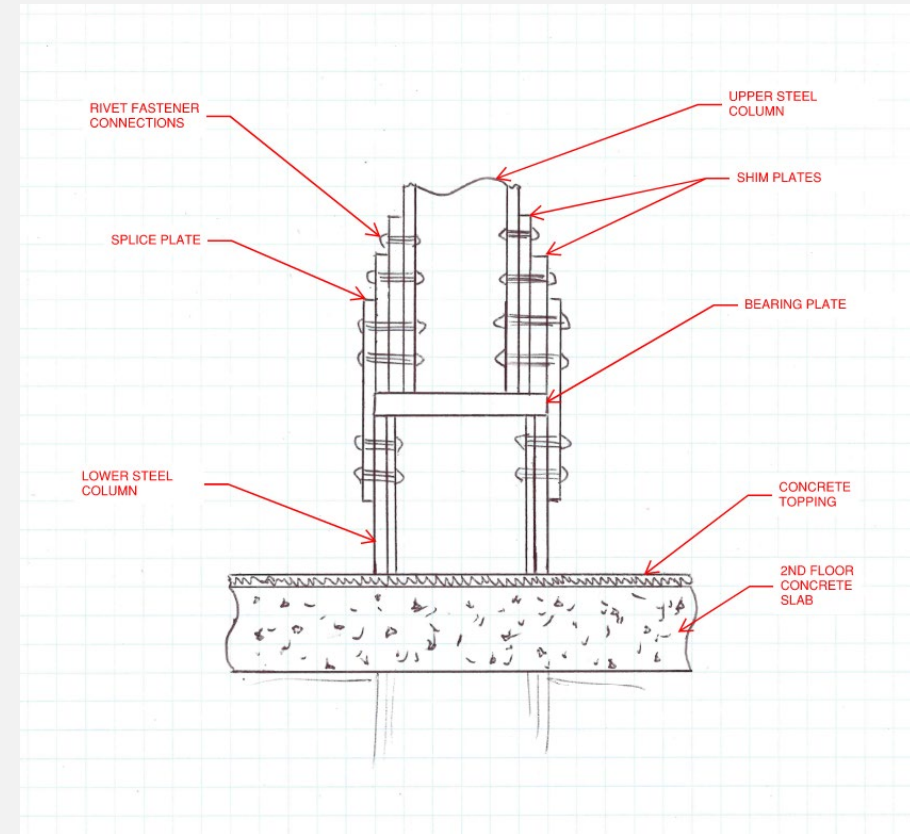
Slab-Wall Connection – Main Floor



# Existing Conditions – Sketches Cont'd



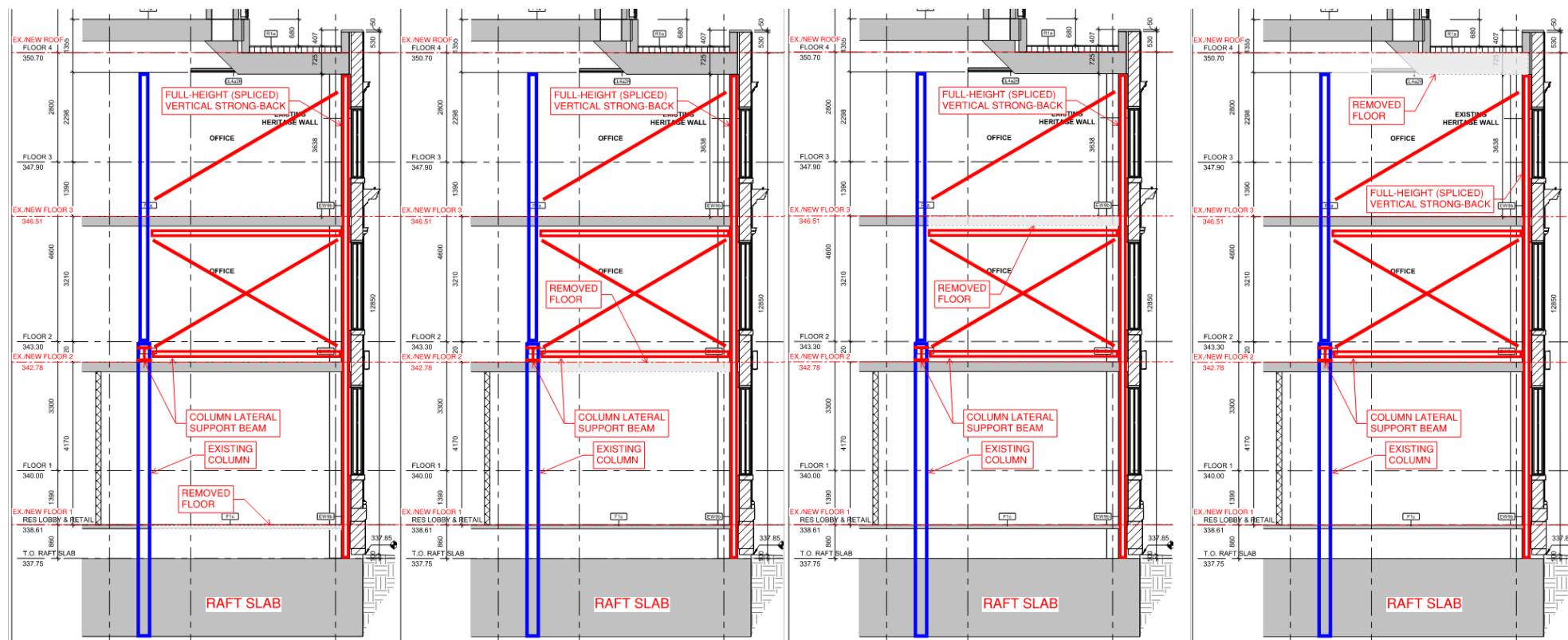
Slab-Column Connection – Typical



Slab-Column Connection – Second Floor



# Retention Sequencing



Main Floor Removal

Second Floor Removal

Third Floor Removal

Roof Removal



# Specifications

General	
1.1	RELATED REQUIREMENTS
.1	Section 02 41 19 – Selective Structure Demolition.
1.2	REFERENCES
.1	Definitions
.1	Bracing: temporary support installed in an excavation or a structure to stabilize against deformations or failure. (Resisting lateral loads).
.2	Dead Shoring or Vertical Shoring: a vertical member with a head plate, sole plate and a means of adjustment for tightening and easing the shore. Used to support dead loads which act vertically downwards.
.3	Heritage Materials: Elements of historic significance or character defining features of a historic place, which document the history of the related building assembly, built feature or constructed element, as defined in the Project Documents.
.4	Shoring: temporary support installed in an excavation or a structure to relieve loads.
.5	Soldier pile: a vertical member which takes the side thrust from horizontal sheeting and which is supported by struts across an excavation. A vertical member used to prevent the movement of formwork; is held in place by struts, bolts, or wires.
.2	Reference Standards
.1	American Society for Testing and Materials (ASTM)
.1	ASTM F1667-18, Specification for Driven Fasteners: Nails, Spikes and Staples.
.2	ASTM F3125/F3125M-21, Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 120 ksi (830 MPa) and 150 ksi (1040 MPa) Minimum Tensile Strength, Inch and Metric Dimensions.
.2	Canadian Standards Association (CSA)
.1	CAN/CSA O86-14, Engineering Design in Wood.
.2	CSA G40.20-13/G40.21-13 (R2018), General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
.3	CSA O151-17, Canadian Softwood Plywood.
.4	CSA S16-14, Design of Steel Structures.
.5	CSA W59-13, Welded Steel Construction (Metal Arc Welding).
.3	Deutsches Institut für Normung E.V. (DIN)
.1	DIN EN 16031, 2012 Edition, September 2012 - Adjustable telescopic aluminum props.
.4	Forest Stewardship Council (FSC)
.5	National Lumber Grades Authority (NLGA)

Part 1	General
1.1	SUMMARY
.1	This Section includes the following:
.1	Demolition and removal of selected portions of exterior building components or structural elements.
.2	Demolition of mechanical and electrical equipment.
.3	Demolition and removal of selected site elements.
.4	Repair procedures for selective demolition operations.
.2	This section does not include the following:
.1	Removal of hazardous materials or asbestos abatement.
.2	Demolition of interior building components and finishes.
.3	Drawings contain details that suggest directions for solving some of the major demolition and removal requirements for this project; Contractor is required to develop these details further by submitting a demolition plan prepared by a professional engineer employed by the Contractor.
1.2	RELATED REQUIREMENTS
.1	Section 02 03 44 – Shoring and Support of Period Structures.
.2	Section 04 03 43.19 – Period Stone Dismantling.
.3	Section 04 03 21.19 – Clay Brick Conservation Treatment.
.4	Section 31 23 33 – Excavation, Trenching and Backfilling.
1.3	REFERENCES
.1	Definitions:
.1	Alternate Disposal: reuse and recycling of materials by designated facility, user or receiving organization which has valid Certificate of Approval to operate. Alternative to landfill disposal.
.2	Deconstruction: systematic dismantling of structure in a manner that achieves safe removal/disposal of hazardous materials and maximum salvage/recycling of materials.
.1	Ultimate objective is to recover potentially valuable resources while diverting from landfill what has traditionally been significant portion of waste system.
.3	Demolish: Detach items from existing construction and legally dispose of them off site, unless indicated to be removed and salvaged or removed and reinstalled.
.4	Demolition: rapid destruction of structure with or without prior removal of hazardous materials.





At McCallumSather, our purpose is clear – the design of a more resilient world through the advancement of sustainable design intelligence. As an integrated team of architects, mechanical engineers and interior designers, we embrace an inclusive approach to design that encourages curiosity and invention. As a result, each project reflects our commitment to design excellence and sustainable design solutions, coupled with a relentless focus on our client's goals. Led by this spirit of innovation, we continuously strive to communicate better, design more efficiently and deliver improved experiences. Our portfolio includes an exciting mix of award-winning work from heritage to new construction, small community initiatives to multi-million-dollar, one-of-a-kind projects.

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