



**A1. HEALTH CANADA BID RECEIVING UNIT
FEDERAL RECORDS CENTRE BUILDING**

Updated Bid Procedure:

Bids must be delivered electronically to the following email address prior to December 8, 2020 at 2PM EST.

Email: diana.seguin@canada.ca

Attention: Diana Seguin

Telephone: 613-324-8081

Solicitation #: 1000225450

Invitation to Tender (ITT)

A2. TITLE

Laboratory Centre for Disease Control (LCDC) Fire Alarm Replacement Project- 100 Eglantine Driveway

A3. SOLICITATION NUMBER

1000225450

A4. SOLICITATION DATE

2020-11-13

A5. AUTHORITY

The Authority for this ITT is:

Diana Seguin
Senior Procurement and Contracting officer
Financial Operations Directorate
Ottawa, Ontario

Telephone: 613-324-8081

Email: diana.seguin@canada.ca

**THIS ITT CONTAINS A SECURITY
REQUIREMENT**

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R2710T (2020-05-28) GENERAL INSTRUCTIONS - CONSTRUCTION SERVICES - BID SECURITY REQUIREMENTS:

The following General Instructions (GI) are included by reference and are available at the following Web Site <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

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**INVITATION TO TENDER
IMPORTANT NOTICE TO BIDDERS**

THIS DOCUMENT CONTAINS A SECURITY REQUIREMENT

For further instructions please consult “Special Instruction to Bidders”, S110, “Security Related Requirements” and “Supplementary Conditions” SC1 “Security Related Requirements, Document Safeguarding Location”.

SUPPORT THE USE OF APPRENTICES

Through Canada’s Economic Action Plan 2013, the Government of Canada proposes to support the employment of apprentices in federal construction and maintenance projects. Refer to S111.

INTEGRITY PROVISIONS - BID

See G11, Integrity Provision-Bid of R2710T of the General Instructions for further information.

– SPECIAL INSTRUCTIONS TO BIDDERS (SI)**SI1. INTEGRITY PROVISIONS – DECLARATION OF CONVICTED OFFENCES**

As applicable, pursuant to GI1 of the Declaration of Convicted Offences, paragraph 10 (copied below) of the General Instructions R2710T, the Bidder must provide with its bid, a completed [Declaration Form](#), to be given further consideration in the procurement process.

Declaration of Convicted Offences

Where a Bidder or its Affiliate is unable to certify that it has not been convicted of any of the offences referenced under the Canadian Offences Resulting in Legal Incapacity, the Canadian Offences and the Foreign Offences subsections, the Bidder must provide with its bid the completed [Declaration Form](#), to be given further consideration in the procurement process

SI2. BID DOCUMENTS**SI2.1 The following are the bid documents:**

- a. Invitation to Tender – Cover Page;
- b. Special Instructions to Bidders;
- c. General Instructions - Construction Services - Bid Security Requirements [R2710T](#) (2020-05-28);
- d. Clauses & Conditions identified in “Contract Documents”;
- e. Drawings and Specifications;
- f. Bid and Acceptance Form and related Appendix(s); and
- g. Any amendment issued prior to solicitation closing

Submission of a bid constitutes acknowledgement that the Bidder has read and agrees to be bound by these documents

SI2.2 General Instructions - Construction Services - Bid Security Requirements R2710T is incorporated by reference and is set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

SI3. ENQUIRIES DURING THE SOLICITATION PERIOD

1. Enquiries regarding this bid must be submitted in writing to the Contracting Officer named on the Invitation to Tender - Page 1 as early as possible within the solicitation period. Except for the approval of alternative materials as described in GI15 of R2710T, enquiries should be received no later than seven (7) calendar days prior to the date set for solicitation closing to allow sufficient time to provide a response. Enquiries received after that time may not result in an answer being provided.
2. To ensure consistency and quality of the information provided to Bidders, the Contracting Officer shall examine the content of the enquiry and shall decide whether or not to issue an amendment.

3. All enquiries and other communications related to this bid sent throughout the solicitation period are to be directed ONLY to the Contracting Officer named on the Invitation to Tender - Page 1. Failure to comply with this requirement may result in the bid being declared non-responsive.

SI4. MANDATORY SITE VISIT

There will be a site visit on November 19, 2020 at 10:00AM. Interested bidders are to meet at the Radiation Protection Bureau (RPB) building at 100, Eglantine Driveway, Ottawa, ON.

The site visit for this project is **MANDATORY**. The representative of the bidder will be required to sign the Site Visit Attendance Sheet at the site visit. Bids submitted by **Bidders who have not signed the attendance sheet will not be accepted.** Interested Bidders are required to register the name of their representative with the Contracting Authority at least 1 day in advance by email at diana.seguin@canada.ca. No questions will be answered during the site showing; all bidders' questions must be submitted to the Contracting Authority by email (diana.seguin@canada.ca) and will be answered by solicitation amendment following the site visit.

Additional restrictions will include:

- *The Bidder's representative must not have travelled internationally in the past 14 days*
- *must not have symptoms of COVID-19*
- *must respect physical distancing measures while on site.*

The following mandatory health and safety protection is to be worn by all visitors:

- *Work boots*
- *hard hat*
- *safety glasses*
- *Face masks due to COVID*

SI5. REVISION OF BID

A bid may be revised by letter or E-mail to the contracting authority in accordance with G110 of R2710T.

SI6. BASIS OF SELECTION

A bid must comply with all requirements of the bid solicitation to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

SI7. INSUFFICIENT FUNDING

In the event that the lowest compliant bid exceeds the amount of funding allocated for the Work, Canada in its sole discretion may

- a. cancel the solicitation; or
- b. obtain additional funding and award the Contract to the Bidder submitting the lowest compliant bid; and/or negotiate a reduction in the bid price and/or scope of work of not more than 15% with the Bidder submitting the lowest compliant bid. Should an agreement satisfactory to Canada not be reached, Canada shall exercise option (a) or (b).

SI8. BID VALIDITY PERIOD

1. Canada reserves the right to seek an extension to the bid validity period prescribed in BA4 of the Bid and Acceptance Form. Upon notification in writing from Canada, Bidders shall have the option to either accept or reject the proposed extension.
2. If the extension referred to in paragraph 1 of SI8 is accepted, in writing, by all those who submitted bids, then Canada shall continue immediately with the evaluation of the bids and its approvals processes.
3. If the extension referred to in paragraph 1 of SI8 is not accepted in writing by all those who submitted bids then Canada shall, at its sole discretion, either
 - a. continue to evaluate the bids of those who have accepted the proposed extension and seek the necessary approvals; or
 - b. cancel the invitation to tender.
4. The provisions expressed herein do not in any manner limit Canada's rights in law or under GI11 of R2710T.

SI9. SECURITY RELATED REQUIREMENTS

1. **At bid closing, the Bidder must hold a valid Security Clearance** as indicated in section SC1 of the Supplementary Conditions. Failure to comply with this requirement will render the Bid non-compliant and no further consideration will be given to the Bid.
2. The Successful Bidder's personnel, as well as any subcontractor and its personnel, who are required to perform any part of the Work pursuant to the subsequent contract must meet the mandatory security requirement as indicated in section SC1 of the Supplementary Conditions. **Individuals who do not have the required level of security will not be allowed on site.** It is the responsibility of the successful bidder to ensure that the security requirements are met throughout the performance of the contract. Canada will not be held liable or accountable for any delays or additional costs associated with the successful bidder's non-compliance with the mandatory security requirement.
3. For additional information on security requirements, bidders should consult the "Security Requirements for PWGSC Bid Solicitations - Instructions for Bidders" on the Standard Procurement Documents Web site [Industrial Security Program](#)

SI10. WEB SITES

The connection to some of the Web sites in the solicitation documents is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Bid Bond (form PWGSC-TPSGC 504)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/504.pdf>

Buy and Sell

<https://www.achatsetventes-buyandsell.gc.ca>

Canadian economic sanctions

<http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

Construction and Consultant Services Contract Administration Forms Real Property Contracting

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>

Contractor Performance Evaluation Report (Form PWGSC-TPSGC 2913)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913.pdf>

Declaration Form

<http://www.tpsgc-pwgsc.gc.ca/ci-if/formulaire-form-eng.html>

PWGSC, Industrial Security Services

<http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>

PWGSC, Code of Conduct and Certifications

<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>

Standard Acquisition Clauses and Conditions (SACC) Manual

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

Treasury Board Appendix L, Acceptable Bonding Companies

<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494§ion=text#appL>

SUPPLEMENTARY CONDITIONS (SC)**SC1. SECURITY RELATED REQUIREMENTS, DOCUMENT SAFEGUARDING**

The following security requirement (SRCL and related clauses) applies and form part of the Contract.

SECURITY REQUIREMENT FOR CANADIAN SUPPLIER:

Reliability:

1. The Contractor personnel requiring access to PROTECTED information, assets or sensitive work site(s) must EACH hold a valid RELIABILITY STATUS, granted or approved by Health Canada or the Canadian Industrial Security Directorate (CISD), Public Services and Procurement Canada (PSPC).
2. The Contractor MUST NOT remove any PROTECTED information or assets from the identified work site(s), and the Contractor must ensure that its personnel are made aware of and comply with this restriction.
3. Subcontracts which contain security requirements are NOT to be awarded without the prior written permission of Health Canada.

SC2. INSURANCE TERMS**MINIMUM INSURANCE REQUIREMENTS:****Contracts with of an estimated value of \$100,000 and more:**

- Commercial General Liability
- Builder's Risk/Installation Floater (generally not required for contracts were there is no work/property to ensure, such as paving, asbestos abatement and dredging).

SC2.1 Insurance Contracts

The Contractor must, at the Contractor's expense, obtain and maintain insurance contracts in accordance with the requirements of the Certificate of Insurance. Coverage must be placed with an Insurer licensed to carry out business in Canada.

Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract. The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection

SC2.2 Period of Insurance

The policies required in the Certificate of Insurance must be in force from the date of contract award and be maintained throughout the duration of the Contract.

The Contractor must be responsible to provide and maintain coverage for Products/Completed Operations hazards on its Commercial General Liability insurance policy, for a period of six (6) years beyond the date of the Certificate of Substantial Performance.

SC2.3 Proof of Insurance

Before commencement of the Work, and no later than thirty (30) days after acceptance of its bid, the Contractor must deposit with Canada a Certificate of Insurance on the form attached herein.

Upon request by Canada, the Contractor must provide originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the Certificate of Insurance.

SC2.4 Insurance Proceeds

In the event of a claim, the Contractor must, without delay, do such things and execute such documents as are necessary to effect payment of the proceeds.

SC2.5 Deductible

The payment of monies up to the deductible amount made in satisfaction of a claim must be borne by the Contractor.

CONTRACT DOCUMENTS (CD)

1. The following are the contract documents:
 - a. Contract Cover Page when signed by Canada;
 - b. Duly completed Bid and Acceptance Form and any Appendices attached thereto;
 - c. Drawings and Specifications;
 - d. SACC Clause [2010C](#) (2020-05-28) General Conditions – Medium Complexity Services
 - e. General Conditions and clauses

| | | | |
|------|--|------------------------|---------------|
| GC1 | General Provisions – Construction Services | R2810D | (2017-11-28); |
| GC2 | Administration of the Contract | R2820D | (2016-01-28); |
| GC3 | Execution and Control of the Work | R2830D | (2019-11-28); |
| GC4 | Protective Measures | R2840D | (2008-05-12); |
| GC5 | Terms of Payment | R2850D | (2019-11-28); |
| GC6 | Delays and Changes in the Work | R2860D | (2019-05-30); |
| GC7 | Default, Suspension or Termination of Contract | R2870D | (2018-06-21); |
| GC8 | Dispute Resolution | R2880D | (2019-11-28); |
| GC9 | Contract Security | R2890D | (2018-06-21); |
| GC10 | Insurance | R2900D | (2008-05-12); |
| | Allowable Costs for Contract Changes Under GC6.4.1 | R2950D | (2015-02-25); |
 - f. General Instructions – Elevator Modernization [R5110T](#) (2020-05-28)

Supplementary Conditions

- a. Any amendment issued or any allowable bid revision received before the date and time set for solicitation closing;
 - b. Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and
 - c. Any amendment or variation of the contract documents that is made in accordance with the General Conditions.
2. The documents identified by title, number and date above are incorporated by reference and are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>
 3. The language of the contract documents is the language of the Bid and Acceptance Form submitted.

BID FORM (BF)

BF1. IDENTIFICATION

**Laboratory Centre for Disease Control (LCDC) Fire Alarm Replacement Project
100 Eglantine Driveway, Ottawa, Ontario**

BF2. BUSINESS NAME AND ADDRESS OF BIDDER

Name: _____

Address: _____

Telephone: _____

PBN: _____

BF3. THE OFFER

The Bidder offers to Canada to perform and complete the Work for the above named project in accordance with the Bid Documents for the **total bid amount indicated in appendix 1**.

BF4. BID VALIDITY PERIOD

The bid shall not be withdrawn for a period of **sixty (60)** days following the date of solicitation closing.

BF5. ACCEPTANCE AND CONTRACT

Upon acceptance of the Contractor's offer by Canada, a binding Contract shall be formed between Canada and the Contractor. The documents forming the Contract shall be the contract documents identified in Contract Documents (CD).

BF6. CONSTRUCTION TIME

The Contractor shall perform and complete all Work as detailed on the Contractor Schedule Form by March 31, 2022.

BF7. BID SECURITY

The Bidder must provide bid security with its bid in accordance with GI8 - Bid Security Requirements of R2710T - General Instructions - Construction Services - Bid Security Requirements.

BF8. SIGNATURE

Name and title of person authorized to sign on behalf of Bidder (Type or print)

Name : _____ Title : _____

Signature : _____ Date : _____

Bidders, ensure you have read ANNEX F – MANDATORY CONDITIONS PRECEDENT TO BID ACCEPTANCE AND CONTRACT AWARD

APPENDIX 1 – COMBINED PRICE FORM (1 PAGE)

1. The prices per unit shall govern in establishing the Total Extended Amount. Any arithmetical errors in this Appendix will be corrected by Canada.
2. Canada may reject the bid if any of the prices submitted do not reasonably reflect the cost of performing the part of the work to which that price applies.

LUMP SUM

The Lump Sum Amount designates Work to which a Lump Sum Arrangement applies.

- (a) Work included in the Lump Sum Amount represents all work not included in the unit price table.

| |
|--|
| LUMP SUM AMOUNT (LSA) Excluding applicable tax(es) |
|--|

UNIT PRICE TABLE

The Unit Price Table designates Work to which a Unit Price Arrangement applies.

- (a) Work included in each item is as described in the referenced specification section.
 (b) The Price per Unit shall not include any amounts for Work that is not included in that unit price Item.

| Item | Specification Reference | Class of Labour, Plant or Material | Unit of Measurement | Estimated Quantity (EQ) | Price per Unit applicable tax(es) extra (PU) | Extended amount (EQ x PU) applicable tax(es) extra |
|------|-------------------------|--|---------------------|-------------------------|--|--|
| | | Provide pricing for 2 years full maintenance contract and warranty including all work required to be carried out under ULC-S536 INCLUDING all work associated with sprinkler/standpipe/fire pump testing required to test the fire alarm zones being monitored. This item is to be “identified” as a separate price on the tender form. “Identified” means the specific amount is identified and included in the lump sum bid amount. . | | | | |
| | | Provide pricing for a “separate” amount to perform all work identified under ULC-S536 INCLUDING all work associated with sprinkler/standpipe/fire pump testing required to test the fire alarm zones being monitored in years 3, 4 and 5 (ie. after expiration of the 2 year warranty included in the tender amount). This item to be listed as a separate price on the tender form. “Separate” amount means an amount that is NOT included in the | | | | |

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|------------------------------------|--|---|--|--|--|--|
| | | lump sum tender. The Owner may engage the vendor for this separate amount outside of this tender. | | | | |
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| | | | | | | |
| TOTAL EXTENDED AMOUNT (TEA) | | | | | | |
| Excluding applicable tax(es) | | | | | | |

| | | | | | | |
|------------------------------------|--|--|--|--|--|--|
| TOTAL BID AMOUNT (LSA +TEA) | | | | | | |
| Excluding applicable tax(es) | | | | | | |

The contacts below will be completed and provided to the winning Bidder only.

CONTRACTING AUTHORITY:

Name : _____

Title : _____

Telephone : ____ - ____ - _____

e-mail : _____

TECHNICAL AUTHORITY:

Name : _____

Title : _____

Telephone : ____ - ____ - _____

e-mail : _____

ANNEX A – STATEMENT OF WORK

Laboratory Centre for Disease Control (LCDC) Fire Alarm Replacement Project 100 Eglantine Driveway

1.0 Scope

1.1 Introduction

To provide all labour, materials and equipment to undertake necessary upgrading to the fire alarm system.

1.2 Objectives of the Requirement

The objective of this requirement is for the successful contractor to provide and supply all tools, equipment, labour, and all materials required to complete the scope of work identified in 3.1 (Tasks, Activities, Deliverables, and/or Milestones).

1.3 Background and Specific Scope of Work

The Laboratory Centre for Disease Control (LCDC) building at 100 Eglantine Driveway in Tunney's Pasture serves Health Canada and is one of their premiere research labs. The LCDC is a three storey (with penthouse) office and laboratory facility. Constructed in 1954, with a floor area of approximately 11,247 m², the building is partially sprinklered (blocks 1, 2, and 3). Blocks 4 and 5 are unsprinklered. This fire alarm system upgrade project is necessitated by the fact that the legacy Simplex 4120 system has approached the end of its life cycle. It was introduced in 1992 and was discontinued from service in 2001. As such due to the age of the system, expansion modification and stability of the system have become problematic or cost prohibitive.

The existing fire alarm system serving the LCDC is manufactured by Simplex (now known as Tyco). The Simplex 4120 addressable system contains two fire alarm control panels (FACPs) networked together, DCLA wiring configuration, with initiating field devices such as smoke, heat, manual stations, flow switches and duct detectors. Signaling is provided via bells throughout the facility with strobes in select areas. Most devices are addressable. The system is a single stage system. All existing detection devices are approximately 20 years old. One control unit is located in Block 3 (Node#1), ground floor level electrical room. The second control unit is located in the corridor in Block 1, Second floor (Node #2). The voice communication system (abandoned and not connected to the fire alarm system) is located in the Operators office on the ground floor, Block 1. Annunciation is being provided via two active graphic displays located at the main entrance (connected to Node #1) and a second unit located at the rear of the building where employees enter (also connected to Node #1). As these annunciators provide a graphical view (map) of the building with hardwired lights for notification, these types of graphic annunciators are inflexible with respect to modifications or changes to the building. Renovations and additions to the building over the past 20 years have not been reflected in the graphic annunciators. As such, if a new zone was to be generated such as a new sprinkler total pack, the graphic annunciators would need to be fully replaced to accommodate such a change.

The majority of detection devices are addressable. In some cases, addressable modules are used to make a conventional field device addressable. It was noted that line isolator modules are provided but their locations are not identified in the test records. A large number of smoke detectors (at least half) are of the ionization type and when replaced, will require specialized disposal as they contain a small amount of radioactive material. Ionization detection devices are no longer used in the industry. It is estimated that the detection devices are at least 20 years old and have far exceeded the manufacturer's recommended life cycle (ie. 10 years). One addressable loop is provided per FACP. Smoke Detectors were noted at the top of elevator shafts (based on test records) and in some service rooms that are not sprinklered. Heat detectors were also observed in unsprinklered service rooms. All required exits were observed to have manual pull stations. The building is provided with a stand-alone Simplex paging system that is not

connected to the Simplex fire alarm system in any way. It is a separate system located in the building operator's office on the opposite side of the room from the fire alarm control unit. There are speakers located throughout the building connected to the Simplex voice system. The entire Simplex voice system has been abandoned and is not used by the building operations staff. It is also not used during emergency evacuations of the building. It could not be determined if the field wiring to the speakers is installed in conduits. All sprinkler flow switches and tamper switches are monitored by the fire alarm system, however it was noted that many of the existing total pack pre-action fire suppression units are provided with control valves on the discharge side of the system that are neither locked in the open position nor electrically supervised by the fire alarm system in contravention of both the National Fire and Building Codes.

3.0 Requirements

3.1 Tasks, Activities, Deliverable and/or Milestones

The detailed scope of work is contained in the attached specifications prepared by KJA Consultants Inc.

3.2 Specifications and Standards

The contractor must ensure all works are performed in accordance with all applicable codes, standards, regulations and manufacturer's recommendations, the Electrical Service Authority of Ontario (ESA) and the Canadian Electrical Code. The contractor must provide an ESA permit.

Materials shall be new and work shall conform to the minimum standards of the Canadian General Standards Board, the Canadian Standards Association, the National Building Code of Canada 2015 (NBC) the National Fire Code 2015 (NFC) and all applicable, federal, provincial and municipal codes, laws and by-laws, and to all standards mentioned herein.

Carry-out work using a Contractor who holds a valid licence issued by the Province in which the work is being contracted.

Taking all necessary steps to protect the workers from harm in accordance with revised statutes of the current Labour Canada and Electrical Safety codes. The Contractor, its employees, all sub-contractors and all site visitors shall have the appropriate personal safety equipment and training prior to performing the work required.

3.3 Technical, Operational and Organizational Environment

Work to be coordinated and scheduled access to the site will be through the Project Manager.

3.4 Method and Source of Payment

The work will be monitored and accepted by the Project Manager.

3.5 Reporting Requirements

All communications and submissions by the Contractor will be coordinated through the Project Manager.

3.6 Project Management Control Procedures

The individual identified in the proposed contract as the Project Manager will oversee the work to ensure it is brought in on time and approvals required internal to Health Canada are addressed in a timely manner.

Change in Scope of Work will require prior approval by the Project Manager prior to beginning any work as a result of change in scope will require the approval and amendment to the contract by the Contract Authority.

4.0 Additional Information

4.1 Canada's Obligations

Health Canada will coordinate site access availability for information gathering and construction. Health Canada will be on site or available during the entirety of this project.

Health Canada may, at any time, verbally suspend the work in the whole or part. If required, within 24 hours of the suspension, the Project Manager shall provide the Contractor with a written notification

indicating the effective date and time of suspension, the intended duration, and reason for the suspension (e.g. non-compliance of Health and Safety regulations and/or encountering unexpected contamination)

4.2 Contractor's Obligations

The Contractor will be responsible for the following:

- .1 Carrying-out services in accordance with approved documents and directions given by the Project Manager.
- .2 Directing all correspondence to the Project Manager and not communicating with the client directly.
- .3 Advising the Project Manager of any changes that may affect the approvals previously given and detailing the extent of and reason for the changes and obtain written approvals before proceeding.
- .4 Ensuring all activities performed provide for the protection of Health Canada and Safety of the facility's occupants, not disturbing the facility's security systems and procedures and not disturbing the operations performed in and around the facility. This includes (but is not limited to) observing and following any Government of Canada and or Health Canada protocols related to the Covid-19 pandemic and the related directional signage at the facility, as well as immediately adhering to any further health and safety direction provided in writing by the Project Authority, which is meant to protect the health and safety of all the facility's occupants.
- .5 Their own transportation and parking costs during the entire project life cycle. Paid visitor parking is available at the Tunney's Pasture locations.
- .6 Tracking and completing all contract deliverables/tasks.
- .7 Carry-out work using only qualified licenced certified workers or apprentices in accordance with Provincial, Territorial, act respecting manpower vocational training and qualification. Permit employees registered in Provincial, Territorial apprentices program to perform specific tasks only if under direct supervision of qualified licenced workers. Determine permitted activities and tasks by apprentices based on level of training attended and demonstration of ability to perform specific duties.
- .8- Assuming responsibility of any accident or damage caused by its employees and/or equipment to Health Canada property or personnel as a result of the Contractor's activities.
- .9- Assuming responsibility for the security of its equipment and materials during and after working hours. Health Canada shall not be liable for any vandalism, theft, or loss.
- .10- Notifying the Project Manager of any on-site activity and obtaining approval to gain access to the building 48 hours before entering on site.

4.3 Location of Work, Work Site and Delivery Point

The work is to be conducted at the Laboratory Centre for Disease Control (LCDC) - 100 Eglantine Driveway

4.4 Language of Work

All work can be conducted in either official language.

5.0 Project Schedule- Expected Start and Completion Dates

This building contains laboratories and/or office space. Therefore, the Contractor must account and include for all after hours labour costs in their bids for the shutdown period during which time the fire alarm system will be removed from service and reinstalled as a new unit. This project work is to be completed no later than March 31st, 2022. Preparatory work or work not affecting occupant operations can be completed during regular working hours. However, noisy work or work with smells, odours, dust or work requiring shutdowns must be completed after hours from Monday to Friday from 18:00 to 06:00 or on weekends from Friday night at 1800 hours to Monday morning 0600 hours. When it is necessary to shut down the system, or when entry into laboratory space is required, arrangements must be made with the Project Manager. We require approximately three weeks notice prior to any shutdowns, or entrance to any labs, as we are required to inform the client users of any disruption to services. Some lab experiments are ongoing for several weeks at a time, so prior notice is mandatory in order to not interfere with various experiments.

6.0 Applicable Documents

.1 Applicable Websites

Insurance Terms (Real Property Contracting 5.R)

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

Certificate of Insurance (form PWGSC-TPSGC 357)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/357.pdf>

SACC Manual

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

7.0 Fire Safety

.1 Comply with both the National Building Code of Canada 2015 (NBC) and the National Fire Code of Canada 2015 (NFC) for safety of persons in buildings in the event of a fire and the protection of persons in buildings in the event of a fire and the protection of buildings from the effects of fire, as follows:

.1.1 The National Building Code (NBC): for fire safety and fire protection features that are required to be incorporated in a building during construction.

.1.2 The National Fire Code (NFC)

.1.2.1 The on-going maintenance and use of the fire safety and fire protection features incorporated in buildings

.1.2.2 The conduct of activities that might cause fire hazards in and around buildings

.1.2.3 Limitations on hazardous contents in and around buildings

.1.2.4 The establishment of fire safety plans

.1.2.5 Fire safety at construction and demolition sites

.2 Welding and cutting:

.1 Before welding, soldering, grinding and/or cutting work, obtain a permit from the Technical Authority. No hot work shall be undertaken unless authorized by the Technical Authority.

8.0 Environmental Protection

The Contractor shall conform to all of the following legislation where applicable.

1. Federal Legislation

a. Canada Labour Code, Part II, Sections 124 and 125

i. Canada Occupational Health and Safety Regulations

b. Canadian Environmental Protection Act, 1999 (CEPA, 1999)

i. Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (SOR/2008-197)

1. Canadian Council of Minister of the Environment (CCME) Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products

2. National Fire Code of Canada (NFCC)

3. CAN/CSA B139 Installation Code for Oil-Burning Equipment

ii. PCB Regulations (SOR/2008-273)**

c. Hazardous Product Act, 1985

d. Hazardous Materials Information Review Act, 1985

e. Fisheries Act, 1985

f. Transportation of Dangerous Goods Act, 1992 (TDGA)

2. Provincial Legislation

a. Ontario Occupational Health and Safety Act

i. O.Reg. 490/09: Designated Substances

b. Technical Standards and Safety Act, 2000

i. O.Reg. 213/01: Fuel Oil

ii. O.Reg. 215/01: Fuel Industry Certificates

iii. O.Reg. 216/01: Certification of Petroleum Mechanics

c. Ontario Environmental Protection Act

i. O.Reg. 347/09: General – Waste Management

ii. O.Reg. 362/90: Waste Management – PCB**

- d. Fire Protection and Prevention Act
 - i. O.Reg. 213/07: Fire Code
- 3. Municipal Legislation
 - a. Sewer Use (By-law No. 2003-514)

9.0 Site Safety

The Contractor is to provide to the Departmental Representative, a company Safe Work Procedure and a Safe Work Practice. A safety plan may be required by the Departmental Representative.

10.0 Required Resources

The contractor is to provide a list of all required resources proposed to do the work.

11.0 Subcontracting

- .1 Neither the whole nor any part of the work may be subcontracted by the Contractor without the written consent of the Departmental Representative.
- .2 The Contractor shall notify the Departmental Representative in writing of the Contractor's intention to subcontract.
- .3 The Contractor shall notify the Departmental Representative in writing identifying the part of the work, and the subcontractor with whom it is intended to subcontract.
- .4 If the Departmental Representative objects to a subcontracting pursuant, the contractor shall not enter into the intended subcontracting.
- .5 Neither a subcontracting nor the Departmental Representative's consent to a subcontracting by the Contractor shall be construed to relieve the Contractor from any obligation under the contract or to impose any liability upon the Government of Canada.
- .6 Should the Departmental Representative consent to the subcontractor, all submittal requirements in this contract shall apply. Submittals shall be made for review by the Departmental Representative prior to the subcontractor being permitted to enter the construction site.

12.0 Insurance Requirements

The Contractor is responsible for ensuring that they manage and have relevant financial protection against the risks to which they are exposed, especially those over which they have control. Consequently, the general policy of the Government is not to indemnify contractors against such risks. Normally, therefore, a general condition of every contract is that the contractors indemnify and save the Crown harmless from all manner of claims and damages. Insurance is for the protection of Contractors in support of their potential liability to indemnify the Crown and others, and only ultimately for the protection of the Crown.

The Contractor must provide a copy of certificate from an insurance broker or an insurance company licensed to operate in Canada stating that the Contractor, if awarded a contract as a result of the ITT, can be insured in accordance with the Commercial General Liability Insurance requirements specified in R2900D (Insurance Terms) of the SACC Manual, and in the amount of \$2,000,000.00. If there is a conflict between the Insurance Terms of R2910D and the instructions of this ITT, the instructions of the ITT prevail.

If the information is not provided in the tender, the Senior Procurement Contracting Officer will inform the Contractor and provide the Contractor with a time frame within which to meet the requirement. Failure to comply with the request of the Senior Procurement Contracting Officer and meet the requirement within that time period will render the tender non-responsive and the tender will be disqualified.

ANNEX B - SPECIFICATIONS

CONTINUED ON THE FOLLOWING PAGE

SCOPE OF WORK

1. SUMMARY

- 1.1. 100 EGLANTINE DRIVEWAY IS A 3 STOREY FEDERAL OFFICE AND LABORATORY BUILDING WITH A MECHANICAL PENTHOUSE. THE BUILDING WAS CONSTRUCTED IN 1954.
- 1.2. THE BUILDING IS CURRENTLY EQUIPPED WITH A SIMPLEX 4120 SINGLE-STAGE FIRE ALARM SYSTEM.
- 1.3. THE BUILDING IS PARTIALLY SPRINKLERED.
- 1.4. THE INTENT OF THE PROJECT IS TO PROVIDE A FULLY ADDRESSABLE-NETWORKED SINGLE-STAGE FIRE ALARM SYSTEM THROUGHOUT. THE SYSTEM WILL EMPLOY PEER-TO-PEER COMMUNICATIONS BETWEEN TRANSPONDERS AND THE FIRE ALARM CONTROL PANEL (FACP) LOCATED IN THE ELECTRICAL ROOM IN BLOCK 3. THE SYSTEM SHALL OPERATE AS A NETWORK WITH DEGRADED AND STANDALONE CAPABILITIES.
- 1.5. ALL WORK SHALL BE COMPLIANT WITH THE NATIONAL BUILDING CODE OF CANADA, INCLUDING THE APPLICABLE CODES AND STANDARDS LISTED BELOW, ALONG WITH PROJECT DRAWINGS AND SPECIFICATIONS.
 - 1.5.1. NATIONAL BUILDING CODE OF CANADA 2015 EDITION, AS AMENDED.
 - 1.5.2. NATIONAL FIRE CODE OF CANADA 2015, AS AMENDED.
 - 1.5.3. CSA C22.1-12 CANADIAN ELECTRICAL CODE, PART 1.
 - 1.5.4. CAN/ULC-S524-14 STANDARD FOR THE INSTALLATION OF FIRE ALARM SYSTEMS.
 - 1.5.5. CAN/ULC-S536-13 STANDARD FOR THE INSPECTION AND TESTING OF FIRE ALARM SYSTEMS.
 - 1.5.6. CAN/ULC-S537-13 STANDARD FOR THE VERIFICATION OF FIRE ALARM SYSTEMS.
 - 1.5.7. CAN/ULC-S561-13 STANDARD FOR THE INSTALLATION AND SERVICES FOR FIRE SIGNAL RECEIVING CENTRES AND SYSTEMS.
 - 1.5.8. CAN/ULC-S1001-11 STANDARD FOR INTEGRATED SYSTEM TESTING OF FIRE PROTECTION AND LIFE SAFETY SYSTEMS.
- 1.6. THE WORK CONSIST OF THE FOLLOWING SCOPE:
- 1.7. REPLACEMENT OF CURRENT SIMPLEX 4120 ALARM SYSTEM.
- 1.8. NEW FIRE ALARM TRANSPONDER, FACP AND NETWORK ANNUNCIATOR.
 - 1.8.1. BASED ON THE SYSTEM MANUFACTURER REQUIREMENTS, CONTRACTOR TO CARRY ALL COSTS IN THE RELOCATION OF EXISTING EQUIPMENT IN THE AREA AS REQUIRED TO ENSURE ADEQUATE MOUNTING SPACE FOR NEW FIRE ALARM EQUIPMENT. APPROVAL FROM THE CLIENT IS REQUIRED BEFORE RELOCATING ANY EXISTING EQUIPMENT.
 - 1.8.2. THE NEW PANELS AND ANNUNCIATOR ARE TO BE SURFACE MOUNTED.
- 1.9. NEW DCLC BACKBONE NETWORK IN CONFORMANCE WITH ULC-S524.
 - 1.9.1. NEW RACEWAY SHALL BE CONCEALED WHEREVER POSSIBLE AND WHERE SURFACE RACEWAYS ARE REQUIRED THE LAYOUT OF THE RACEWAY PATH SHALL BE REVIEWED BY THE CONSULTANT PRIOR TO INSTALLATION FOR CLIENT ACCEPTANCE.
- 1.10. REPLACE ALL INITIATING DEVICES WITH NEW ADDRESSABLE FIELD DEVICES, INCLUDING ALL HARDWARE REQUIRED TO INSTALL THE NEW DEVICES IN THE EXISTING LOCATIONS.
- 1.11. RECAPTURE ALL EXISTING INITIATING CIRCUITS AND TRANSFER TO THE NEW FIRE ALARM SYSTEM.
- 1.12. REPLACE ALL RELAYS AND MONITORING MODULES WITH NEW ADDRESSABLE DEVICES.
- 1.13. RECAPTURE ALL AUDIO AND VISUAL SIGNALING DEVICES.
 - 1.13.1. WHERE EXISTING VISUAL SIGNALING DEVICES ARE NOT COMPATIBLE WITH THE NEW FIRE ALARM SYSTEM, REPLACE ALL SIGNALING DEVICES WITH NEW COMPATIBLE DEVICES.

- 1.13.2. PROVIDE SUFFICIENT POWER OR ADDITIONAL AUXILIARY POWER SUPPLIES FOR ALL SIGNALING CIRCUITS.
- 1.14. RECAPTURE ALL EXISTING SIGNALING CIRCUITS AND TRANSFER TO THE NEW FIRE ALARM SYSTEM.
- 1.15. RECAPTURE ALL ANCILLARY DEVICES AND PROVIDE NEW FIRE ALARM INTERFACES.
 - 1.15.1. CONTRACTOR TO PROVIDE NEW LAMICOID LABELS FOR ALL SPRINKLER EQUIPMENT. LABELS TO MATCH ANNUNCIATOR NOMENCLATURE.
- 1.16. RECAPTURE ALL ANCILLARY CIRCUITS AND TRANSFER TO THE NEW FIRE ALARM SYSTEM.
- 1.17. CONTRACTOR TO LOCATE AND CONFIRM ALL END-OF-LINE PRIOR TO DELETING OR REPLACING. PROVIDE NEW END OF LINE DEVICES IN CONFORMANCE WITH ULC-S524 AND NEW FIRE ALARM MANUFACTURE REQUIREMENTS.
- 1.18. CONTRACTOR TO PROVIDE FIRE ZONE LIST AND DEVICE NOMENCLATURE LIST FOR CONSULTANT REVIEW AND CLIENT APPROVAL PRIOR TO PROGRAMMING.
- 1.19. PROVIDE VERIFICATION AND INTEGRATED SYSTEM TESTING AS REQUIRED BY ULC-S537 AND S1001.
 - 1.19.1. INCLUDE AND CARRY ALL COSTS FOR ALL SUBCONTRACTORS REQUIRED FOR INSTALLATION, TESTING AND VERIFICATION CAPTURED IN THE WORK.
- 1.20. REMOVE EXISTING LEGACY FIRE ALARM EQUIPMENT AND MAKE GOOD ALL FINISHES.
- 1.21. PROVIDE CONSULTANT WITNESS TESTING AT SUBSTANTIAL COMPLETION AND PROVIDE AUTHORITY HAVING JURISDICTION WITNESS TESTS AS REQUIRED.
- 1.22. THE BUILDING IS AND WILL REMAIN, OCCUPIED AND OPERATION DURING THE CONSTRUCTION PERIOD. CONSTRUCTION SHALL BE STAGED IN SUCH A MANNER THAT WILL MITIGATE THE REQUIREMENT FOR FIRE WATCH. OPERATIONS AND SECURITY REQUIREMENTS WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS. ALL FIRE WATCHES REQUIRED TO COMPLETE THE WORK AND FACILITATE BUSINESS CONTINUITY WILL BE AT THE CONTRACTOR'S EXPENSE
- 1.23. THE FIRE ALARM SYSTEM MUST BE INSTALLED IN A STAGED MANNER. THE EXISTING SIMPLEX 4120 SYSTEM AND THE NEW FIRE ALARM SYSTEM SHALL BE INTERFACED TO OPERATE IN A COORDINATED MANNER THROUGHOUT THE COURSE OF THE CONSTRUCTION. CONTRACTOR TO PROVIDE THE REQUIRED CABLE AND RACEWAY REQUIRED FOR A TEMPORARY INTERCONNECTION BASED ON THE SYSTEM MANUFACTURER'S REQUIREMENTS.
- 1.24. CONTRACTOR TO MAINTAIN ALL EXISTING CONNECTION TO FIRE ALARM ANCILLARY SYSTEMS DURING CONSTRUCTION SUCH AS BUT NOT LIMITED TO HVAC, ACCESS CONTROL, CENTRAL MONITORING STATION, ELEVATOR RECALL, SPRINKLER, PRE-ACTION UNITS, ETC.
 - 1.24.1. PROVIDE AND INSTALL NEW DEMARCATION TERMINAL BOX FOR THE INTERCONNECTION OF THE NEW FIRE ALARM SYSTEM AND THE REMOTE MONITORING STATION.
 - 1.24.2. THE DEMARCATION BOX SHALL BE PROVIDED WITH TERMINAL STRIPS WITHIN AN APPROPRIATE SIZED JUNCTION BOX. PROVIDE CLEARLY LABELED TERMINAL STRIP SCHEDULE FOR ALARM, TROUBLE AND SUPERVISORY SIGNALS INDIVIDUALLY FOR TRANSFER TO NEW SYSTEM AS PER CAN/ULC-S524-14 AND CAN/ULC-S561-13 REQUIREMENTS.
- 1.25. THE FACILITY IS ALSO EQUIPPED WITH A STANDALONE SIMPLEX PAGING SYSTEM. THE SYSTEM IS NOT CONNECTED TO THE FIRE ALARM SYSTEM AND FALLS OUTSIDE OF THE SCOPE OF THIS PROJECT.
- 1.26. ALTHOUGH DESIGNATED SUBSTANCES ARE NOT WITHIN THE SCOPE OF MORRISON HERSHFIELD FOR THIS PROJECT, CONTRACTOR SHALL REVIEW CURRENT DESIGNATED SUBSTANCE REPORTS (DSS) AND AVOID ALL DESIGNATED SUBSTANCES.
 - 1.26.1. CONTRACTOR TO REFER TO ATTACHED DESIGNATED SUBSTANCE REPORTS.
 - 1.26.2. CONTRACTOR TO ROUTE ALL NEW RACEWAY OUTSIDE OF DESIGNATED AREA WHERE POSSIBLE.
 - 1.26.3. IF EXPOSURE AND/OR DISTURBANCE OF DESIGNATED SUBSTANCE IS REQUIRED OR HAS BEEN CARRIED OUT INADVERTENTLY, CONTRACTOR SHALL NOTIFY CLIENT'S REPRESENTATIVE IMMEDIATELY.

1.26.4. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL LEGISLATION TO CONTAIN DESIGNATE SUBSTANCE AND REPAIR ALL EXPOSURE.

1.27. CONTRACTOR MUST CAREFULLY EXAMINE THE SITE AND CONDITIONS OF THE PROPOSED WORK TOGETHER WITH THE WORK OF ALL OTHER TRADES AND INCLUDE IN THE PRICE ALL COSTS FOR WORK SUCH AS CUTTING AND PATCHING, REROUTING AND REPOSITIONING OF ELECTRICAL EQUIPMENT AND WIRING, MADE NECESSARY TO ACCOMMODATE THE SYSTEMS SHOWN. CUTTING AND PATCHING OF EXISTING BUILDING TO ACCOMMODATE THE WORK OF THIS TRADE SHALL BE DONE BY WORKMEN SKILLED IN THE APPROPRIATE TRADES.

1.28. ALL OPENINGS CREATED IN FIRE SEPARATIONS SHALL BE PROVIDED WITH NEW ULC LISTED FIRE STOPPING TO MATCH EXISTING FIRE SEPARATION RATING AND FINISHED TO MATCH EXISTING.

1.29. THE CONTRACTOR SHALL FURNISH ALL LABOUR, MATERIALS, EQUIPMENT AND SUPERVISION FOR THE REPLACEMENT OF THE FIRE ALARM SYSTEM.

1.30. SOME ASPECTS OF ELECTRICAL DESIGN ARE COMMONLY EXPRESSED IN SCHEMATIC FORM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INTERPRET THEM ACCURATELY AND CARRY OUT THE CONSTRUCTION AND/OR INSTALLATION SATISFACTORY TO THE CONSULTANT AND THE CLIENT. IN CASE OF ANY UNCERTAINTIES OR AMBIGUITIES PROMPTLY CONSULT WITH THE PROJECT MANAGER FOR CLARIFICATION.

1.31. CONTRACTOR TO NOTIFY THE CONSULTANT OF ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF THE WORK.

2. SECURITY CLEARANCE

2.1. CONTRACTOR TO CARRY ALL FEES TO OBTAIN REQUIRED SECURITY CLEARANCES.

3. CONSTRUCTION SCHEDULE AND COORDINATION

3.1. ALL WORK SHALL BE PERFORMED AS INDICATED IN TENDER DOCUMENTS.

3.2. ALL SHUTDOWNS AND ALARMS SHALL BE COORDINATED WITH THE CLIENT.

3.3. CONSTRUCTION PLAN/SCHEDULE SHALL BE PRESENTED TO THE CLIENT FOR REVIEW IN ORDER TO ESTABLISH AN ACCEPTABLE SCHEDULE.

3.3.1. CONTRACTOR SHALL PROVIDE AND MAINTAIN A TWO WEEK LOOK AHEAD SCHEDULE FOR AREAS OF WORK FOR THE DURATION OF THE CONSTRUCTION

3.3.2. THE CONTRACTOR CANNOT CLAIM ANY DELAY OR COSTS DUE TO THIS PROJECT MANAGEMENT REQUIRED ACTIVITY.

4. SHOP DRAWINGS

4.1. PROVIDE ALL SHOP DRAWINGS IN DIGITAL FORMAT (PDF) FOR CONSULTANT REVIEW PRIOR TO PURCHASE AND INSTALLATION OF ANY EQUIPMENT. ALL SHOP DRAWINGS SHALL BE BEST QUALITY IN COLOR CLEARLY IDENTIFYING PRODUCT SELECTED FOR THIS INSTALLATION.

4.1.1. SHOP DRAWINGS SHALL INCLUDE BUT NOT LIMITED TO:

4.1.1.1. PANEL COMPONENT LAYOUT,

4.1.1.2. BATTERY CALCULATIONS,

4.1.1.3. ALL FIELD DEVICES,

4.1.1.4. WIRING SPECIFICATIONS,

4.1.1.5. RISER DIAGRAMS,

4.1.1.6. FIRE ZONE NOMENCLATURE,

4.1.1.7. FIELD DEVICE NOMENCLATURE,

4.1.1.8. FACP ANNUNCIATION LAYOUTS,

4.1.1.9. SEQUENCE OF OPERATIONS, AND

4.1.1.10. FIRE STOPPING METHODS AND FIRESTOP ASSEMBLIES.

4.2. CONSULTANT WILL PROVIDE ONE REVIEW OF SUBMITTED SHOP DRAWINGS.

4.3. FOLLOWING CONSULTANT'S REVIEW AND COMMENTS, CONTRACTOR SHALL SUBMIT FINAL SHOP DRAWINGS FOR CLIENT'S APPROVAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL FEES WHERE FURTHER REVIEW OF SHOP DRAWINGS AFTER CONSULTANT'S ORIGINAL REVIEW IS REQUIRED.

5. ELECTRICAL

5.1. LOCATE ALL FIRE ALARM JUNCTION BOXES, RACEWAYS AND CABLE.

5.2. PROVIDE NEW EMT RACEWAY AND FIRE ALARM CABLE WHERE REQUIRED.

5.3. PROVIDE NEW JUNCTION BOXES AND MOUNTING EQUIPMENT WHERE REQUIRED.

5.4. PROVIDE TERMINAL STRIPS IN ALL NEW AND EXISTING JUNCTION BOXES IN PREPARATION FOR TRANSFER OF CIRCUITS TO NEW FIRE ALARM SYSTEM.

5.5. PROVIDE NEW 120 VAC EMERGENCY CIRCUIT AND EMT RACEWAY TO NEW FIRE ALARM CONTROL PANEL, TRANSPONDERS AND ANNUNCIATOR. COORDINATE WITH CLIENT ON THE CIRCUIT TO BE UTILIZED.

5.6. PROVIDE FIRE ALARM CIRCUIT ISOLATION COMPLIANT WITH NATIONAL BUILDING CODE OF CANADA 2015 EDITION, AS AMENDED, AND ULC STANDARD CAN/ULC-S524-14.

5.7. REMOVE ALL EXISTING / OLD FIRE ALARM DEVICES, EXPOSED CONDUIT AND JUNCTION BOXES.

5.8. OLD WIRING SHALL BE PULLED BACK TO CEILINGS OR CONDUITS WHICH ARE TO BE LABELED CLEARLY AS DECOMMISSIONED AND LEFT IN CEILING SPACE TO MINIMIZE AMOUNT OF INTERRUPTION TO OPERATIONS.

6. CUTTING AND PATCHING

6.1. PRIOR TO CUTTING OR CORING, X-RAY SCANNING MUST BE USED TO MAP ALL BURIED CONDUITS AND CABLES.

6.1.1. ALL THE SCANNING AND LOCATION WORK IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO INCLUDE COSTS IN THE BASE BID PRICE.

6.2. ALL OPENINGS CREATED THROUGH FIRE SEPARATION SHALL BE SEALED WITH ULC LISTED FIRE STOPPING METHODS, TAGGED AND COMPLY WITH PROJECT SPECIFICATIONS. FINISH TO MATCH EXISTING OR AS PER CLIENT'S DIRECTIONS.

6.3. ALL EXISTING OR NEW PENETRATIONS THROUGH FIRE RATED SEPARATIONS FOR CONDUITS OR SERVICES SHALL BE SEALED WITH AN ULC LISTED FIRE STOPPING METHODS, TAGGED AND APPROVED BY DESIGN CONSULTANT AND THE CLIENT PRIOR TO DRILLING.

6.3.1. CONTRACTOR MUST REPAIR ANY DAMAGED SERVICES.

6.4. ALL OPENINGS CREATED THAT MAY REQUIRE FUTURE ACCESS SHALL BE PROVIDED WITH RATED ACCESS HATCH.

6.4.1. THE ACCESS HATCH SHALL BE PAINTED TO MATCH EXISTING OR AS PER CLIENT'S DIRECTIONS.

6.5. DEMOLITION OF CEILING FINISHES TO ACCESS THE VOID ABOVE PAINTED DRYWALL OR ACOUSTICAL LAY-IN CEILING TILE SPACE SHALL BE LIMITED TO THE LOCAL WORK AREA AND NOT INVOLVE PRELIMINARY TOTAL CEILING DEMOLITION OF ENTIRE CONDUIT ROUTE. MAKE GOOD DRYWALL CEILING AND LAY-IN CEILING TILE FINISHES. THE DEMOLITION AND THE MAKE GOOD TASKS SHALL BE COMPLETED ON A LOCALIZED BASIS WHILE THE AREA IS HOARDED AND CONTAINED.

6.5.1. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) SAMPLES OF MATCHING MATERIALS, SUCH AS WALL TILE, FOR REVIEW AND APPROVAL PRIOR TO STARTING THE LOCAL AREA OF WORK.

7. DEMOLITION

7.1. ALL SALVAGEABLE EQUIPMENT, FIXTURES, DEVICES, ETC. NOT BEING RE-USED SHALL BE TURNED OVER TO THE CLIENT FOR STORAGE AND/OR FOR USE. WHEN DIRECTED BY THE CLIENT, PROPERLY AND SAFELY DISPOSE OF THE UNWANTED MATERIALS.

- 7.2. WHERE THE REMOVAL OF ANY DEVICE, FIXTURE, AND/OR EQUIPMENT INTERRUPTS THE CONTINUITY OF AN EXISTING (TO REMAIN) CIRCUIT, PROVIDE ALL CONNECTIONS AND CIRCUITRY NECESSARY TO MAINTAIN EXISTING CIRCUIT CONTINUITY.
- 7.3. EXACT LOCATION OF ANY EXISTING (TO REMAIN OR TO BE RELOCATED) MATERIAL SHALL BE ESTABLISHED AND VERIFIED IN FIELD.
- 7.4. REMOVAL OF ANY ELECTRICAL EQUIPMENT SHALL INCLUDE THE REMOVAL OF ALL CONTROLS (INCLUDING SWITCHES), WIRES AND CONDUITS (WHERE PRACTICAL) ASSOCIATED WITH SUCH MATERIAL, UNLESS OTHERWISE NOTED.

8. CLEAN-UP

- 8.1. REMOVE AND CLEAN UP ANY DEBRIS OR MATERIAL FROM THE SITE THROUGHOUT THE DURATION OF THE CONTRACT AND ON COMPLETION OF THE WORK AS DIRECTED BY CLIENT'S REPRESENTATIVE.
- 8.2. ALL DEBRIS OR MATERIAL SHALL BE REMOVED AT THE END OF EACH WORK SHIFT.

9. SYSTEM TRAINING AND OPERATIONS MANUAL

- 9.1. PROVIDE OPERATOR TRAINING TO DESIGNATED RESPONSE STAFF ON SYSTEM OPERATION.
 - 9.1.1. PROVIDE 2 X TWO (2) HOUR SESSIONS AT COMPLETION OF NEW FIRE ALARM SYSTEM. ALLOW FOR ONE SESSION DURING REGULAR HOURS AND ONE SESSION DURING PREMIUM HOURS.
 - 9.1.2. TRAINING SESSIONS WILL INCLUDE A POWER POINT PRESENTATION ON USB THAT WILL BE RETAINED BY THE CLIENT FOR FUTURE STAFF TRAINING SESSIONS.
- 9.2. PROVIDE 2 X TWO (2) HOUR TRAINING SESSIONS TO DESIGNATED MAINTENANCE STAFF INCLUDING DETAILED INSTRUCTIONS ON FIRE ALARM SYSTEM INCLUDING THE FOLLOWING OPERATIONS:
 - 9.2.1. DEVICE BY-PASS
 - 9.2.2. HISTORY REVIEW
 - 9.2.3. TRAINING SHALL INCLUDE A POWER POINT PRESENTATION ON USB THAT WILL BE RETAINED BY THE CLIENT FOR FUTURE STAFF TRAINING SESSIONS.
 - 9.2.4. ALLOW FOR ONE TRAINING SESSION DURING REGULAR HOURS AND ONE SESSION DURING PREMIUM HOURS.
- 9.3. PROVIDE COMPLETE OPERATION AND MAINTENANCE MANUALS
 - 9.3.1. ONE PRINTED COLOUR THREE RING BINDER WITH INDEX AND DIVIDED SECTIONS.
 - 9.3.2. DIGITAL COPIES ON USB.
- 9.4. PROVIDE FIRE ALARM SYSTEM RESPONSE INSTRUCTIONS FOR ALARM, SUPERVISORY AND TROUBLE EVENTS IN COLOUR.
 - 9.4.1. POST THE INSTRUCTIONS ADJACENT TO FACP AND REMOTE ANNUNCIATOR FOR USE BY FIRST RESPONSE PERSONNEL.

10. AS-BUILT AND RECORDS SET

- 10.1. PROVIDE FULL SET OF RECORD / AS-BUILT DRAWINGS IN AUTOCAD AND PDF FORMATS INDICATING:
 - 10.1.1. ALL FIRE ALARM INPUT DEVICE LOCATIONS SUCH AS MANUAL STATIONS, SMOKE DETECTORS, HEAT DETECTOR, FLOW SWITCHES, ISOLATOR, ADDRESSABLE MONITOR MODULES, CONTROL OR RELAY MODULES, ETC.
 - 10.1.2. ALL FIRE ALARM SUPERVISORY DEVICES SUCH AS FLOW SWITCHES, SUPERVISED VALVES AND LOW PRESSURE SWITCHES,
 - 10.1.3. ALL FIRE ALARM SIGNALING DEVICES,
 - 10.1.4. ALL END-OF-LINE DEVICES,
 - 10.1.5. ALL NEW RACEWAYS AND JUNCTION BOX LOCATIONS INCLUDING TERMINAL STRIP WIRING LEGEND AND DIAGRAMS.

10.1.6. FIRE ALARM CONTROL PANEL SYSTEM LAYOUT INCLUDING INTERNAL CABINET WIRING DIAGRAMS

10.1.7. FIRE ALARM RISER DIAGRAM

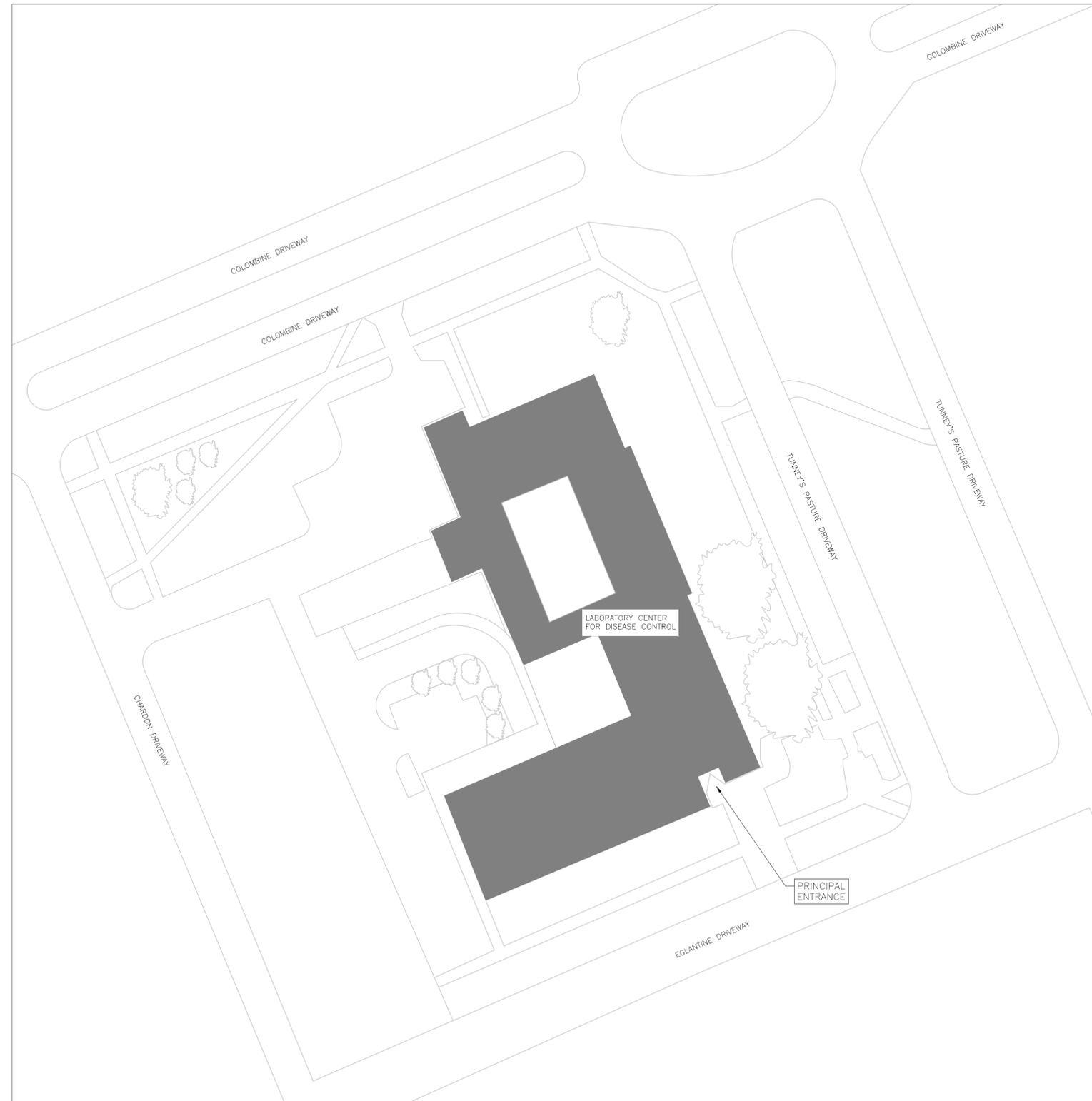
LCDC BUILDING – FIRE ALARM SYSTEM UPGRADE

100 EGLANTINE DRIVEWAY, OTTAWA, ONTARIO.



| DRAWING LIST | |
|--------------|--|
| Sheet Number | Sheet Title |
| G 00 | SITE PLAN, DRAWING LIST & LEGEND |
| G 1.0 | GENERAL NOTES & EXISTING DEVICE COUNTS |
| G 2.0 | FIRE ALARM RISERS |
| FA 1.0 | FIRE ALARM DEVICES GROUND FLOOR NORTH |
| FA 1.1 | FIRE ALARM DEVICES GROUND FLOOR SOUTH |
| FA 2.0 | FIRE ALARM DEVICES SECOND FLOOR NORTH |
| FA 2.1 | FIRE ALARM DEVICES SECOND FLOOR SOUTH |
| FA 3.0 | FIRE ALARM DEVICES THIRD FLOOR NORTH |
| FA 3.1 | FIRE ALARM DEVICES THIRD FLOOR SOUTH |
| FA 4.0 | FIRE ALARM DEVICES PENTHOUSE NORTH |
| FA 4.1 | FIRE ALARM DEVICES PENTHOUSE SOUTH |

| LEGEND | |
|--------|-----------------------------------|
| SYMBOL | |
| A | INDICATES DEVICE TO BE ADDED |
| E | EXISTING DEVICE TO REMAIN |
| D | INDICATES DEVICE TO BE DELETED |
| | MANUAL STATION – SINGLE STAGE |
| | SMOKE DETECTOR |
| | DUCT SMOKE DETECTOR |
| | HEAT DETECTOR – RATE OF RISE |
| | HEAT DETECTOR – FIXED TEMPERATURE |
| | FIRE ALARM CONTROL PANEL |
| | ANNUNCIATOR |
| | FIRE ALARM TRANSPONDER |
| | PRE-ACTION PANEL |
| | ISOLATOR |
| | ADDRESSABLE MODULE |
| | TAMPER SWITCH/SUPERVISED VALVE |
| | FLOW SWITCH |
| | PRESSURE SWITCH |
| | ADDRESSABLE RELAY |
| | BELL |
| | WALL MOUNTED STROBE |



| NO. | DATE | DESCRIPTION |
|-----|------------|--------------------------|
| 4 | 2020-09-03 | ISSUED FOR TENDER |
| 3 | 2020-04-02 | ISSUED FOR CLIENT REVIEW |
| 2 | 2020-04-01 | ISSUED FOR REVIEW |
| 1 | 2020-03-28 | DRAFT DESIGN |
| | YYYY-MM-DD | SUBMISSION INFORMATION |

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PROFESSIONAL SEALS



MORRISON HERSHFIELD
200 - 2932 Baseline Road
Ottawa, ON K2H 1B1
Tel: 613 739 2910

PROJECT
LCDC BUILDING - FIRE ALARM SYSTEM UPGRADE

DRAWING
SITE PLAN, DRAWING LIST & LEGEND

| DESIGN | DATE | SCALE |
|---------|-------------|---------|
| P.L | 2020-09-03 | |
| DRAWN | PROJECT NO. | VERSION |
| TDH | 190467300 | NTS |
| CHECKED | DRAWING NO. | VERSION |
| XXX | G 00 | --- |

P:\2019\180467300-lcdc fire alarm system\09_cad\05 Model\IG 00 SITE PLAN, DRAWING LIST & LEGEND.dwg Last Saved: 2020-09-03 10:44 AM by THajnal Plotted 2020-09-03 10:49 AM by Tim Hejnal

SCOPE OF WORK

1. SUMMARY

- 1.1.100 EGLANTINE DRIVEWAY IS A 3 STOREY FEDERAL OFFICE AND LABORATORY BUILDING WITH A MECHANICAL PENHOUSE. THE BUILDING WAS CONSTRUCTED IN 1954.
- 1.2.THE BUILDING IS CURRENTLY EQUIPPED WITH A SIMPLEX 4120 SINGLE-STAGE FIRE ALARM SYSTEM.
- 1.3.THE BUILDING IS PARTIALLY SPRINKLERED.
- 1.4.THE INTENT OF THE PROJECT IS TO PROVIDE A FULLY ADDRESSABLE-NETWORKED SINGLE-STAGE FIRE ALARM SYSTEM THROUGHOUT. THE SYSTEM WILL EMPLOY PEER-TO-PEER COMMUNICATIONS BETWEEN TRANSPONDERS AND THE FIRE ALARM CONTROL PANEL (FACP) LOCATED IN THE ELECTRICAL ROOM IN BLOCK 3. THE SYSTEM SHALL OPERATE AS A NETWORK WITH DEGRADED AND STANDALONE CAPABILITIES.
- 1.5.ALL WORK SHALL BE COMPLIANT WITH THE NATIONAL BUILDING CODE OF CANADA, INCLUDING THE APPLICABLE CODES AND STANDARDS LISTED BELOW, ALONG WITH PROJECT DRAWINGS AND SPECIFICATIONS.
 - 1.5.1.NATIONAL BUILDING CODE OF CANADA 2015 EDITION, AS AMENDED.
 - 1.5.2.NATIONAL FIRE CODE OF CANADA 2015, AS AMENDED.
 - 1.5.3.CSA C22.1-12 CANADIAN ELECTRICAL CODE, PART 1.
 - 1.5.4.CAN/ULC-S524-14 STANDARD FOR THE INSTALLATION OF FIRE ALARM SYSTEMS.
 - 1.5.5.CAN/ULC-S536-13 STANDARD FOR THE INSPECTION AND TESTING OF FIRE ALARM SYSTEMS.
 - 1.5.6.CAN/ULC-S537-13 STANDARD FOR THE VERIFICATION OF FIRE ALARM SYSTEMS.
 - 1.5.7.CAN/ULC-S561-13 STANDARD FOR THE INSTALLATION AND SERVICES FOR FIRE SIGNAL RECEIVING CENTRES AND SYSTEMS.
 - 1.5.8.CAN/ULC-S1001-11 STANDARD FOR INTEGRATED SYSTEM TESTING OF FIRE PROTECTION AND LIFE SAFETY SYSTEMS.
- 1.6.THE WORK CONSIST OF THE FOLLOWING SCOPE:
 - 1.7.REPLACEMENT OF CURRENT SIMPLEX 4120 ALARM SYSTEM.
 - 1.8.NEW FIRE ALARM TRANSPONDER, FACP AND NETWORK ANNUNCIATOR.
 - 1.8.1.BASED ON THE SYSTEM MANUFACTURER REQUIREMENTS, CONTRACTOR TO CARRY ALL COSTS IN THE RELOCATION OF EXISTING EQUIPMENT IN THE AREA AS REQUIRED TO ENSURE ADEQUATE MOUNTING SPACE FOR NEW FIRE ALARM EQUIPMENT. APPROVAL FROM THE CLIENT IS REQUIRED BEFORE RELOCATING ANY EXISTING EQUIPMENT.
 - 1.8.2.THE NEW PANELS AND ANNUNCIATOR ARE TO BE SURFACE MOUNTED.
 - 1.9.NEW DCLC BACKBONE NETWORK IN CONFORMANCE WITH ULC-S524.
 - 1.9.1.NEW RACEWAY SHALL BE CONCEALED WHEREVER POSSIBLE AND WHERE SURFACE RACEWAYS ARE REQUIRED THE LAYOUT OF THE RACEWAY PATH SHALL BE REVIEWED BY THE CONSULTANT PRIOR TO INSTALLATION FOR CLIENT ACCEPTANCE.
- 1.10. REPLACE ALL INITIATING DEVICES WITH NEW ADDRESSABLE FIELD DEVICES, INCLUDING ALL HARDWARE REQUIRED TO INSTALL THE NEW DEVICES IN THE EXISTING LOCATIONS.
 - 1.11. RECAPTURE ALL EXISTING INITIATING CIRCUITS AND TRANSFER TO THE NEW FIRE ALARM SYSTEM.
 - 1.12. REPLACE ALL RELAYS AND MONITORING MODULES WITH NEW ADDRESSABLE DEVICES.
 - 1.13. RECAPTURE ALL AUDIO AND VISUAL SIGNALING DEVICES.
 - 1.13.1. WHERE EXISTING VISUAL SIGNALING DEVICES ARE NOT COMPATIBLE WITH THE NEW FIRE ALARM SYSTEM, REPLACE ALL SIGNALING DEVICES WITH NEW COMPATIBLE DEVICES.
 - 1.13.2. PROVIDE SUFFICIENT POWER OR ADDITIONAL AUXILIARY POWER SUPPLIES FOR ALL SIGNALING CIRCUITS.
 - 1.14. RECAPTURE ALL EXISTING SIGNALING CIRCUITS AND TRANSFER TO THE NEW FIRE ALARM SYSTEM.
 - 1.15. RECAPTURE ALL ANCILLARY DEVICES AND PROVIDE NEW FIRE ALARM INTERFACES.
 - 1.15.1. CONTRACTOR TO PROVIDE NEW LAMICOID LABELS FOR ALL SPRINKLER EQUIPMENT. LABELS TO MATCH ANNUNCIATOR NOMENCLATURE.
 - 1.16. RECAPTURE ALL ANCILLARY CIRCUITS AND TRANSFER TO THE NEW FIRE ALARM SYSTEM.
 - 1.17. CONTRACTOR TO LOCATE AND CONFIRM ALL END-OF-LINE PRIOR TO DELETING OR REPLACING. PROVIDE NEW END OF LINE DEVICES IN CONFORMANCE WITH ULC-S524 AND NEW FIRE ALARM MANUFACTURE REQUIREMENTS.
 - 1.18. CONTRACTOR TO PROVIDE FIRE ZONE LIST AND DEVICE NOMENCLATURE LIST FOR CONSULTANT REVIEW AND CLIENT APPROVAL PRIOR TO PROGRAMMING.
 - 1.19. PROVIDE VERIFICATION AND INTEGRATED SYSTEM TESTING AS REQUIRED BY ULC-S537 AND S1001.
 - 1.19.1. INCLUDE AND CARRY ALL COSTS FOR ALL SUBCONTRACTORS REQUIRED FOR INSTALLATION, TESTING AND VERIFICATION CAPTURED IN THE WORK.
 - 1.20. REMOVE EXISTING LEGACY FIRE ALARM EQUIPMENT AND MAKE GOOD ALL FINISHES.
 - 1.21. PROVIDE CONSULTANT WITNESS TESTING AT SUBSTANTIAL COMPLETION AND PROVIDE AUTHORITY HAVING JURISDICTION WITNESS TESTS AS REQUIRED.
 - 1.22. THE BUILDING IS AND WILL REMAIN, OCCUPIED AND OPERATION DURING THE CONSTRUCTION PERIOD. CONSTRUCTION SHALL BE STAGED IN SUCH A MANNER THAT WILL MITIGATE THE REQUIREMENT FOR FIRE WATCH, OPERATIONS AND SECURITY REQUIREMENTS WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS. ALL FIRE WATCHES REQUIRED TO COMPLETE THE WORK AND FACILITATE BUSINESS CONTINUITY WILL BE AT THE CONTRACTOR'S EXPENSE
 - 1.23. THE FIRE ALARM SYSTEM MUST BE INSTALLED IN A STAGED MANNER. THE EXISTING SIMPLEX 4120 SYSTEM AND THE NEW FIRE ALARM SYSTEM SHALL BE INTERFACED TO OPERATE IN A COORDINATED MANNER THROUGHOUT THE COURSE OF THE CONSTRUCTION. CONTRACTOR TO PROVIDE THE REQUIRED CABLE AND RACEWAY REQUIRED FOR A TEMPORARY INTERCONNECTION BASED ON THE SYSTEM MANUFACTURER'S REQUIREMENTS.
 - 1.24. CONTRACTOR TO MAINTAIN ALL EXISTING CONNECTION TO FIRE ALARM ANCILLARY SYSTEMS DURING CONSTRUCTION SUCH AS BUT NOT LIMITED TO HVAC, ACCESS CONTROL, CENTRAL MONITORING STATION, ELEVATOR RECALL, SPRINKLER, PRE-ACTION UNITS, ETC.
 - 1.24.1. PROVIDE AND INSTALL NEW DEMARCATION TERMINAL BOX FOR THE INTERCONNECTION OF THE NEW FIRE ALARM SYSTEM AND THE REMOTE MONITORING STATION.
 - 1.24.2. THE DEMARCATION BOX SHALL BE PROVIDED WITH TERMINAL STRIPS WITHIN AN APPROPRIATE SIZED JUNCTION BOX. PROVIDE CLEARLY LABELED TERMINAL STRIP SCHEDULE FOR ALARM, TROUBLE AND SUPERVISORY SIGNALS INDIVIDUALLY FOR TRANSFER TO NEW SYSTEM AS PER CAN/ULC-S524-14 AND CAN/ULC-S561-13 REQUIREMENTS.
 - 1.25. THE FACILITY IS ALSO EQUIPPED WITH A STANDALONE SIMPLEX PAGING SYSTEM. THE SYSTEM IS NOT CONNECTED TO THE FIRE ALARM SYSTEM AND FALLS OUTSIDE OF THE SCOPE OF THIS PROJECT.
 - 1.26. ALTHOUGH DESIGNATED SUBSTANCES ARE NOT WITHIN THE SCOPE OF MORRISON HERSHFIELD FOR THIS PROJECT, CONTRACTOR SHALL REVIEW CURRENT DESIGNATED SUBSTANCE REPORTS (DSS) AND AVOID ALL DESIGNATED SUBSTANCES.
 - 1.26.1. CONTRACTOR TO REFER TO ATTACHED DESIGNATED SUBSTANCE REPORTS.
 - 1.26.2. CONTRACTOR TO ROUTE ALL NEW RACEWAY OUTSIDE OF DESIGNATED AREA WHERE POSSIBLE.
 - 1.26.3. IF EXPOSURE AND/OR DISTURBANCE OF DESIGNATED SUBSTANCE IS REQUIRED OR HAS BEEN CARRIED OUT INADVERTENTLY, CONTRACTOR SHALL NOTIFY CLIENT'S REPRESENTATIVE IMMEDIATELY.
 - 1.26.4. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL LEGISLATION TO CONTAIN DESIGNATE SUBSTANCE AND REPAIR ALL EXPOSURE.
 - 1.27. CONTRACTOR MUST CAREFULLY EXAMINE THE SITE AND CONDITIONS OF THE PROPOSED WORK TOGETHER WITH THE WORK OF ALL OTHER TRADES AND INCLUDE IN THE PRICE ALL COSTS FOR WORK SUCH AS CUTTING AND PATCHING, REROUTING AND REPOSITIONING OF ELECTRICAL EQUIPMENT AND WIRING, MADE NECESSARY TO ACCOMMODATE THE SYSTEMS SHOWN. CUTTING AND PATCHING OF EXISTING BUILDING TO ACCOMMODATE THE WORK OF THIS TRADE SHALL BE DONE BY WORKMEN SKILLED IN THE APPROPRIATE TRADES.
 - 1.28. ALL OPENINGS CREATED IN FIRE SEPARATIONS SHALL BE PROVIDED WITH NEW ULC LISTED FIRE STOPPING TO MATCH EXISTING FIRE SEPARATION RATING AND FINISHED TO MATCH EXISTING.

- 1.29. THE CONTRACTOR SHALL FURNISH ALL LABOUR, MATERIALS, EQUIPMENT AND SUPERVISION FOR THE REPLACEMENT OF THE FIRE ALARM SYSTEM.
- 1.30. SOME ASPECTS OF ELECTRICAL DESIGN ARE COMMONLY EXPRESSED IN SCHEMATIC FORM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INTERPRET THEM ACCURATELY AND CARRY OUT THE CONSTRUCTION AND/OR INSTALLATION SATISFACTORY TO THE CONSULTANT AND THE CLIENT. IN CASE OF ANY UNCERTAINTIES OR AMBIGUITIES PROMPTLY CONSULT WITH THE PROJECT MANAGER FOR CLARIFICATION.
- 1.31. CONTRACTOR TO NOTIFY THE CONSULTANT OF ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF THE WORK.
- 2. SECURITY CLEARANCE
 - 2.1. CONTRACTOR TO CARRY ALL FEES TO OBTAIN REQUIRED SECURITY CLEARANCES.
- 3. CONSTRUCTION SCHEDULE AND COORDINATION
 - 3.1. ALL WORK SHALL BE PERFORMED AS INDICATED IN TENDER DOCUMENTS.
 - 3.2. ALL SHUTDOWNS AND ALARMS SHALL BE COORDINATED WITH THE CLIENT.
 - 3.3. CONSTRUCTION PLAN/SCHEDULE SHALL BE PRESENTED TO THE CLIENT FOR REVIEW IN ORDER TO ESTABLISH AN ACCEPTABLE SCHEDULE.
 - 3.3.1. CONTRACTOR SHALL PROVIDE AND MAINTAIN A TWO WEEK LOOK AHEAD SCHEDULE FOR AREAS OF WORK FOR THE DURATION OF THE CONSTRUCTION
 - 3.3.2. THE CONTRACTOR CANNOT CLAIM ANY DELAY OR COSTS DUE TO THIS PROJECT MANAGEMENT REQUIRED ACTIVITY.
- 4. SHOP DRAWINGS
 - 4.1. PROVIDE ALL SHOP DRAWINGS IN DIGITAL FORMAT (PDF) FOR CONSULTANT REVIEW PRIOR TO PURCHASE AND INSTALLATION OF ANY EQUIPMENT. ALL SHOP DRAWINGS SHALL BE BEST QUALITY IN COLOR CLEARLY IDENTIFYING PRODUCT SELECTED FOR THIS INSTALLATION.
 - 4.1.1. SHOP DRAWINGS SHALL INCLUDE BUT NOT LIMITED TO:
 - 4.1.1.1. PANEL COMPONENT LAYOUT,
 - 4.1.1.2. BATTERY CALCULATIONS,
 - 4.1.1.3. ALL FIELD DEVICES,
 - 4.1.1.4. WIRING SPECIFICATIONS,
 - 4.1.1.5. RISER DIAGRAMS,
 - 4.1.1.6. FIRE ZONE NOMENCLATURE,
 - 4.1.1.7. FIELD DEVICE NOMENCLATURE,
 - 4.1.1.8. FACP ANNUNCIATION LAYOUTS,
 - 4.1.1.9. SEQUENCE OF OPERATIONS, AND
 - 4.1.1.10. FIRE STOPPING METHODS AND FIRESTOP ASSEMBLIES.
 - 4.2. CONSULTANT WILL PROVIDE ONE REVIEW OF SUBMITTED SHOP DRAWINGS.
 - 4.3. FOLLOWING CONSULTANT'S REVIEW AND COMMENTS, CONTRACTOR SHALL SUBMIT FINAL SHOP DRAWINGS FOR CLIENT'S APPROVAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL FEES WHERE FURTHER REVIEW OF SHOP DRAWINGS AFTER CONSULTANT'S ORIGINAL REVIEW IS REQUIRED.
- 5. ELECTRICAL
 - 5.1. LOCATE ALL FIRE ALARM JUNCTION BOXES, RACEWAYS AND CABLE.
 - 5.2. PROVIDE NEW EMT RACEWAY AND FIRE ALARM CABLE WHERE REQUIRED.
 - 5.3. PROVIDE NEW JUNCTION BOXES AND MOUNTING EQUIPMENT WHERE REQUIRED.
 - 5.4. PROVIDE TERMINAL STRIPS IN ALL NEW AND EXISTING JUNCTION BOXES IN PREPARATION FOR TRANSFER OF CIRCUITS TO NEW FIRE ALARM SYSTEM.
 - 5.5. PROVIDE NEW 120 VAC EMERGENCY CIRCUIT AND EMT RACEWAY TO NEW FIRE ALARM CONTROL PANEL, TRANSPONDERS AND ANNUNCIATOR. COORDINATE WITH CLIENT ON THE CIRCUIT TO BE UTILIZED.
 - 5.6. PROVIDE FIRE ALARM CIRCUIT ISOLATION COMPLIANT WITH NATIONAL BUILDING CODE OF CANADA 2015 EDITION, AS AMENDED, AND ULC STANDARD CAN/ULC-S524-14.
 - 5.7. REMOVE ALL EXISTING / OLD FIRE ALARM DEVICES, EXPOSED CONDUIT AND JUNCTION BOXES.
 - 5.8. OLD WIRING SHALL BE PULLED BACK TO CEILINGS OR CONDUITS WHICH ARE TO BE LABELED CLEARLY AS DECOMMISSIONED AND LEFT IN CEILING SPACE TO MINIMIZE AMOUNT OF INTERRUPTION TO OPERATIONS.
- 6. CUTTING AND PATCHING
 - 6.1. PRIOR TO CUTTING OR CORING, X-RAY SCANNING MUST BE USED TO MAP ALL BURIED CONDUITS AND CABLES.
 - 6.1.1. ALL THE SCANNING AND LOCATION WORK IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO INCLUDE COSTS IN THE BASE BID PRICE.
 - 6.2. ALL OPENINGS CREATED THROUGH FIRE SEPARATION SHALL BE SEALED WITH ULC LISTED FIRE STOPPING METHODS, TAGGED AND COMPLY WITH PROJECT SPECIFICATIONS. FINISH TO MATCH EXISTING OR AS PER CLIENT'S DIRECTIONS.
 - 6.3. ALL EXISTING OR NEW PENETRATIONS THROUGH FIRE RATED SEPARATIONS FOR CONDUITS OR SERVICES SHALL BE SEALED WITH AN ULC LISTED FIRE STOPPING METHODS, TAGGED AND APPROVED BY DESIGN CONSULTANT AND THE CLIENT PRIOR TO DRILLING.
 - 6.3.1. CONTRACTOR MUST REPAIR ANY DAMAGED SERVICES.
 - 6.4. ALL OPENINGS CREATED THAT MAY REQUIRE FUTURE ACCESS SHALL BE PROVIDED WITH RATED ACCESS HATCH.
 - 6.4.1. THE ACCESS HATCH SHALL BE PAINTED TO MATCH EXISTING OR AS PER CLIENT'S DIRECTIONS.
 - 6.5. DEMOLITION OF CEILING FINISHES TO ACCESS THE VOID ABOVE PAINTED DRYWALL OR ACOUSTICAL LAY-IN CEILING TILE SPACE SHALL BE LIMITED TO THE LOCAL WORK AREA AND NOT INVOLVE PRELIMINARY TOTAL CEILING DEMOLITION OF ENTIRE CONDUIT ROUTE. MAKE GOOD DRYWALL, CEILING AND LAY-IN CEILING TILE FINISHES. THE DEMOLITION AND THE MAKE GOOD TASKS SHALL BE COMPLETED ON A LOCALIZED BASIS WHILE THE AREA IS HOARDED AND CONTAINED.
 - 6.5.1. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) SAMPLES OF MATCHING MATERIALS, SUCH AS WALL TILE, FOR REVIEW AND APPROVAL PRIOR TO STARTING THE LOCAL AREA OF WORK.
- 7. DEMOLITION
 - 7.1. ALL SALVAGEABLE EQUIPMENT, FIXTURES, DEVICES, ETC. NOT BEING RE-USED SHALL BE TURNED OVER TO THE CLIENT FOR STORAGE AND/OR FOR USE. WHEN DIRECTED BY THE CLIENT, PROPERLY AND SAFELY DISPOSE OF THE UNWANTED MATERIALS.
 - 7.2. WHERE THE REMOVAL OF ANY DEVICE, FIXTURE, AND/OR EQUIPMENT INTERRUPTS THE CONTINUITY OF AN EXISTING (TO REMAIN) CIRCUIT, PROVIDE ALL CONNECTIONS AND CIRCUITRY NECESSARY TO MAINTAIN EXISTING CIRCUIT CONTINUITY.
 - 7.3. EXACT LOCATION OF ANY EXISTING (TO REMAIN OR TO BE RELOCATED) MATERIAL SHALL BE ESTABLISHED AND VERIFIED IN FIELD.
 - 7.4. REMOVAL OF ANY ELECTRICAL EQUIPMENT SHALL INCLUDE THE REMOVAL OF ALL CONTROLS (INCLUDING SWITCHES), WIRES AND CONDUITS (WHERE PRACTICAL) ASSOCIATED WITH SUCH MATERIAL, UNLESS OTHERWISE NOTED.
- 8. CLEAN-UP
 - 8.1. REMOVE AND CLEAN UP ANY DEBRIS OR MATERIAL FROM THE SITE THROUGHOUT THE DURATION OF THE CONTRACT AND ON COMPLETION OF THE WORK AS DIRECTED BY CLIENT'S REPRESENTATIVE.
 - 8.2. ALL DEBRIS OR MATERIAL SHALL BE REMOVED AT THE END OF EACH WORK SHIFT.
- 9. SYSTEM TRAINING AND OPERATIONS MANUAL
 - 9.1. PROVIDE OPERATOR TRAINING TO DESIGNATED RESPONSE STAFF ON SYSTEM OPERATION.
 - 9.1.1. PROVIDE 2 X TWO (2) HOUR SESSIONS AT COMPLETION OF NEW FIRE ALARM SYSTEM. ALLOW FOR ONE SESSION DURING REGULAR HOURS AND ONE SESSION DURING PREMIUM HOURS.
 - 9.1.2. TRAINING SESSIONS WILL INCLUDE A POWER POINT PRESENTATION ON USB THAT WILL BE RETAINED BY THE CLIENT FOR FUTURE STAFF TRAINING SESSIONS.
 - 9.2. PROVIDE 2 X TWO (2) HOUR TRAINING SESSIONS TO DESIGNATED MAINTENANCE STAFF INCLUDING DETAILED INSTRUCTIONS ON FIRE ALARM SYSTEM INCLUDING THE FOLLOWING OPERATIONS:
 - 9.2.1. DEVICE BY-PASS
 - 9.2.2. HISTORY REVIEW
 - 9.2.3. TRAINING SHALL INCLUDE A POWER POINT PRESENTATION ON USB THAT WILL BE RETAINED BY THE CLIENT FOR FUTURE STAFF TRAINING SESSIONS.
 - 9.2.4. ALLOW FOR ONE TRAINING SESSION DURING REGULAR HOURS AND ONE SESSION DURING PREMIUM HOURS.

- 9.3. PROVIDE COMPLETE OPERATION AND MAINTENANCE MANUALS
 - 9.3.1. ONE PRINTED COLOUR THREE RING BINDER WITH INDEX AND DIVIDED SECTIONS.
 - 9.3.2. DIGITAL COPIES ON USB.
- 9.4. PROVIDE FIRE ALARM SYSTEM RESPONSE INSTRUCTIONS FOR ALARM, SUPERVISORY AND TROUBLE EVENTS IN COLOUR.
 - 9.4.1. POST THE INSTRUCTIONS ADJACENT TO FACP AND REMOTE ANNUNCIATOR FOR USE BY FIRST RESPONSE PERSONNEL.
- 10. AS-BUILT AND RECORDS SET
 - 10.1. PROVIDE FULL SET OF RECORD / AS-BUILT DRAWINGS IN AUTOCAD AND PDF FORMATS INDICATING:
 - 10.1.1. ALL FIRE ALARM INPUT DEVICE LOCATIONS SUCH AS MANUAL STATIONS, SMOKE DETECTORS, HEAT DETECTOR, FLOW SWITCHES, ISOLATOR, ADDRESSABLE MONITOR MODULES, CONTROL OR RELAY MODULES, ETC.
 - 10.1.2. ALL FIRE ALARM SUPERVISORY DEVICES SUCH AS FLOW SWITCHES, SUPERVISED VALVES AND LOW PRESSURE SWITCHES,
 - 10.1.3. ALL FIRE ALARM SIGNALING DEVICES,
 - 10.1.4. ALL END-OF-LINE DEVICES,
 - 10.1.5. ALL NEW RACEWAYS AND JUNCTION BOX LOCATIONS INCLUDING TERMINAL STRIP WIRING LEGEND AND DIAGRAMS.
 - 10.1.6. FIRE ALARM CONTROL PANEL SYSTEM LAYOUT INCLUDING INTERNAL CABINET WIRING DIAGRAMS
 - 10.1.7. FIRE ALARM RISER DIAGRAM

| EXISTING DEVICE COUNTS | | |
|------------------------|---------------------|----------|
| DEVICE | DESCRIPTION | QUANTITY |
| DS | DUCT SMOKE DETECTOR | 3 |
| HD | HEAT DETECTOR | 20 |
| MS | MANUAL PULL STATION | 69 |
| V | STROBE WALL MOUNTED | 223 |
| S | SMOKE DETECTOR | 64 |
| B | BELL | 94 |
| AM | ADDRESSABLE MODULE | 18 |
| FS | FLOW SWITCH | 5 |
| TS | TAMPER SWITCH | 7 |

| NO. | DATE | DESCRIPTION |
|-----|------------|--------------------------|
| 4 | 2020-09-03 | ISSUED FOR TENDER |
| 3 | 2020-04-02 | ISSUED FOR CLIENT REVIEW |
| 2 | 2020-04-01 | ISSUED FOR REVIEW |
| 1 | 2020-03-26 | DRAFT DESIGN |
| | YYYY-MM-DD | SUBMISSION INFORMATION |

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PROFESSIONAL SEALS



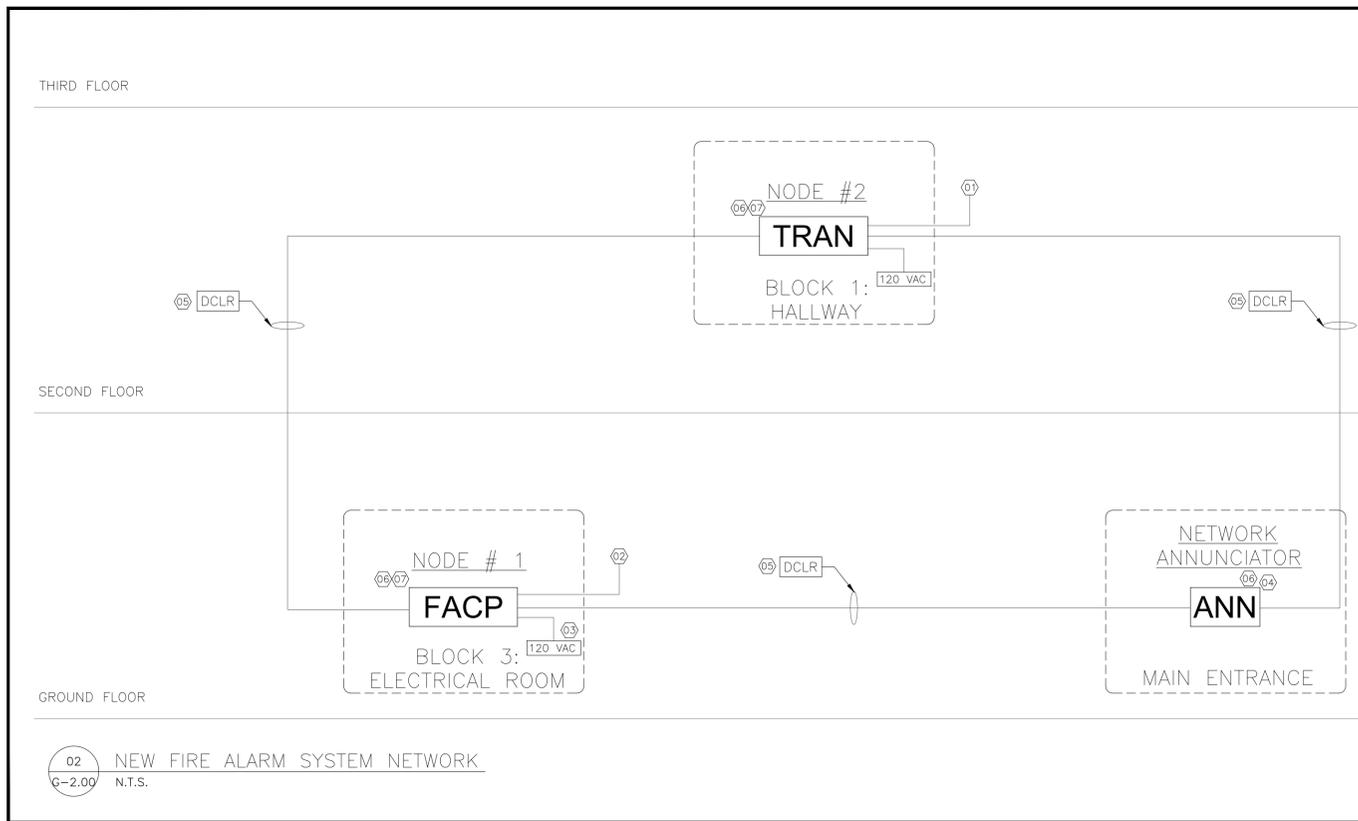
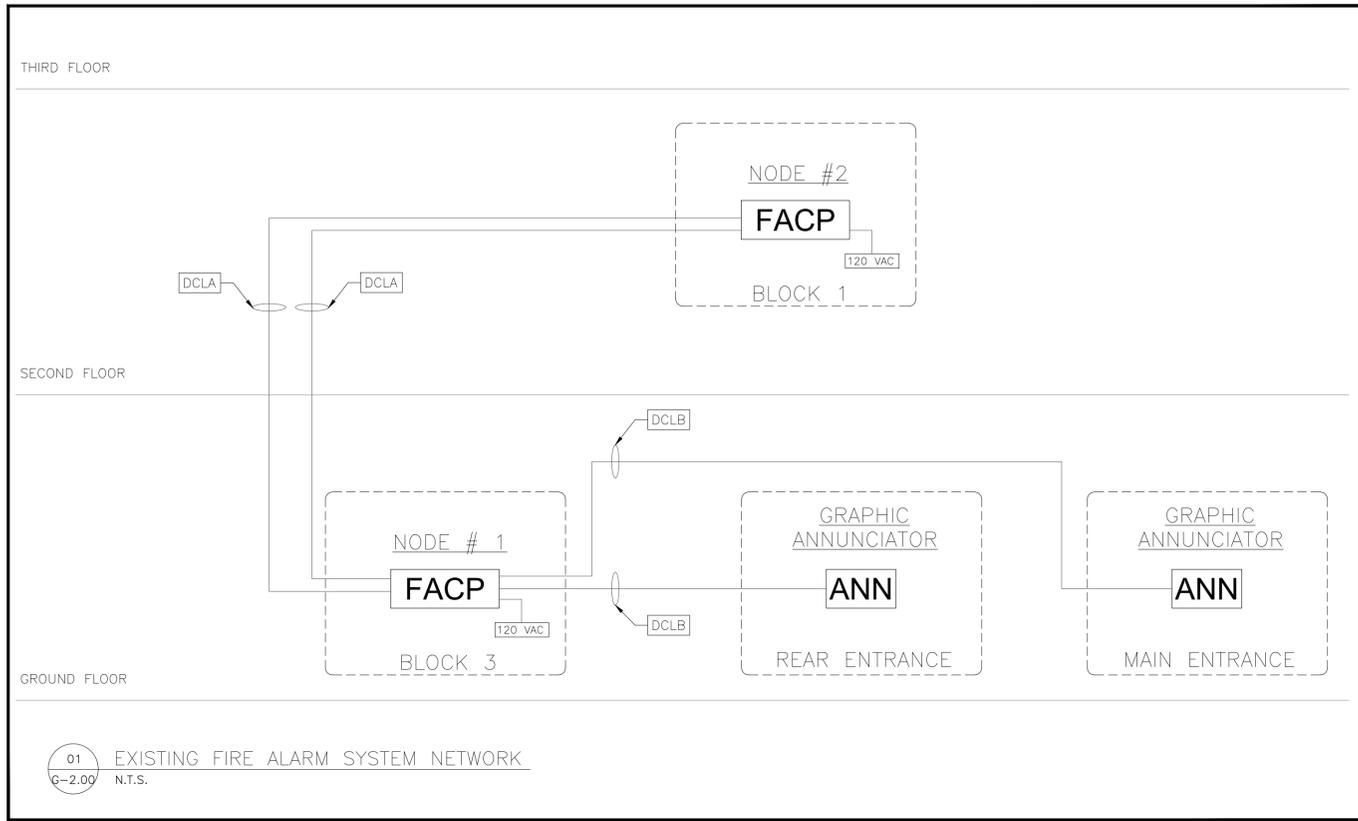
200 - 2932 Baseline Road
Ottawa, ON K2H 1B1
Tel: 613 739 2910

PROJECT
**LCDC BUILDING -
FIRE ALARM SYSTEM
UPGRADE**

DRAWING
**GENERAL NOTES & EXISTING
DEVICE COUNTS**

| DESIGN | DATE | SCALE |
|-----------------|--------------------------|----------------|
| P.L | 2020-09-03 | As Shown |
| DRAWN | PROJECT NO. 190467300 | |
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| APPROVED XXX | G 1.0 | |

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GENERAL NOTES

1. CONTRACTOR TO DETERMINE THE EXACT ROUTE ON SITE.
2. REFER TO FLOOR PLANS AND TEST REPORT FOR DEVICE TYPES AND QUANTITIES.
3. PROVIDE ADDRESSABLE ISOLATORS AS REQUIRED BY CODE.
4. ALL NEW CIRCUITS ARE TO BE CONCEALED UNLESS OTHERWISE NOTED.
5. THIS IS A SCHEMATIC DRAWING ONLY. NOT FOR CONSTRUCTION. CONTRACTOR TO FIELD VERIFY AS REQUIRED.

NOTES

- 01 INTERCONNECTION TO EXISTING NODE # 2.
 - 02 INTERCONNECTION TO EXISTING NODE #1.
 - 03 NEW 120VAC C/W CONDUIT AND WIRE TO CLOSEST DISTRIBUTION PANEL. PROVIDE SEPARATE BREAKER C/W LOCK OUT.
 - 04 NEW NETWORK ANNUNCIATOR TO BE ULC LISTED MULT-LINE, EIGHT (8) EVENT ANNUNCIATOR.
 - 05 DCLR TO BE MINIMUM 1 HOUR RATED CABLE CONFORMING TO CAN/ULC S-139.
 - 06 NEW PANELS TO BE SURFACE MOUNTED.
- TRANSPONDERS AND FIRE ALARM CONTROL PANELS TO BE PROVIDED WITH RAIN HOODS.

| | | |
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PROFESSIONAL SEALS



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Tel: 613 739 2910

PROJECT
**LCDC BUILDING -
FIRE ALARM SYSTEM
UPGRADE**

DRAWING
FIRE ALARM RISERS

| | | |
|----------------|--------------------------|------------------|
| DESIGN P.L | DATE 2020-09-03 | SCALE NTS |
| DRAWN TDH | PROJECT NO. 190467300 | VERSION G 2.0 |
| CHECKED XXX | DRAWING NO. | VERSION ---- |

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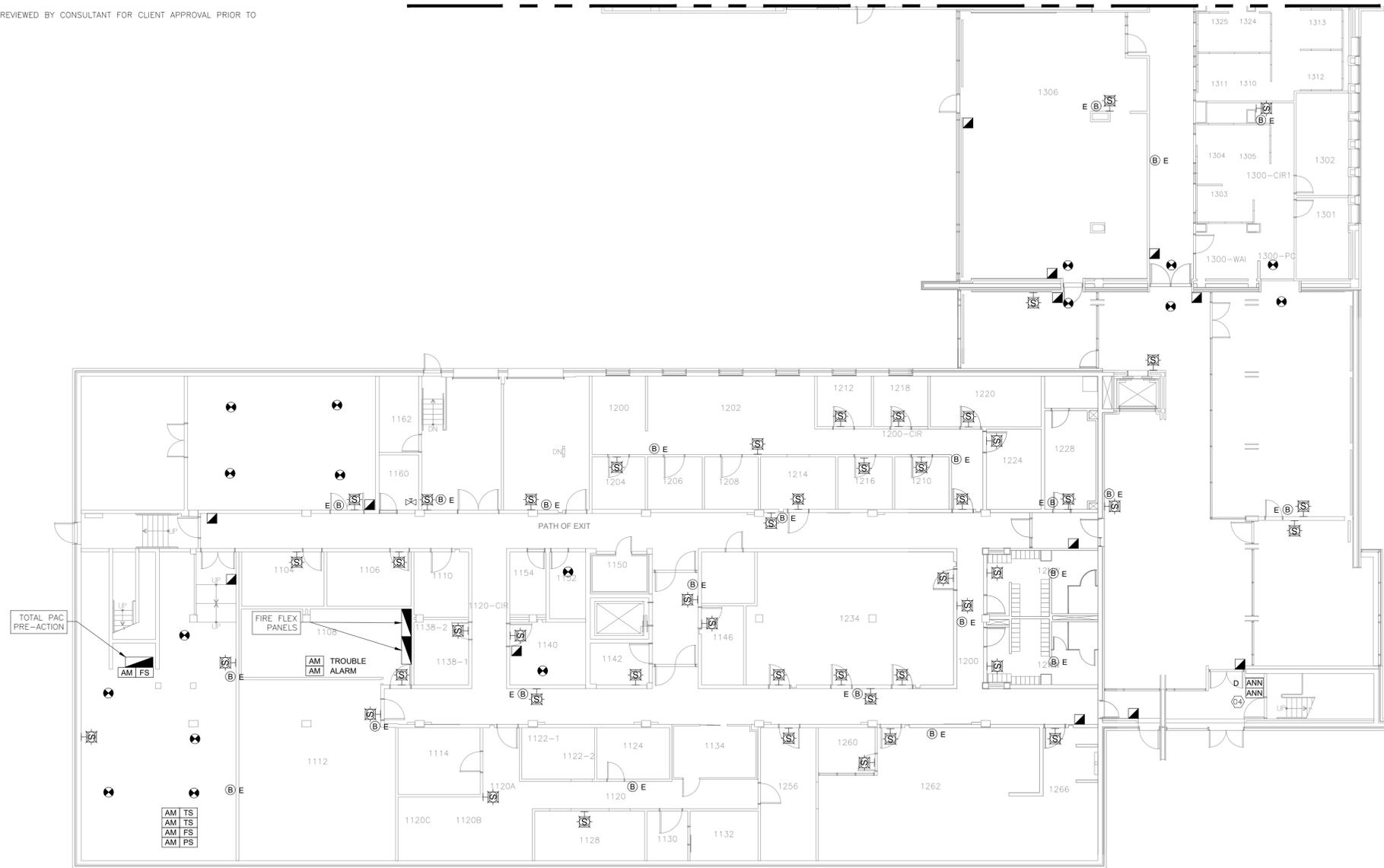
DRAWING NOTES

- 01 CONTRACTOR TO VERIFY LOCATION OF SPRINKLER SUPERVISORY DEVICES ON SITE AND PROVIDE NEW ADDRESSABLE MODULE FOR EACH.
- 02 CONTRACTOR TO PROVIDE NEW NOMENCLATURE FOR ALL SPRINKLER DEVICES FOR CLIENT APPROVAL.
- 03 CONTRACTOR TO PROVIDE NEW PERMANENT NAMEPLATE (LAMACOID) TO MATCH APPROVED NOMENCLATURE.
- 04 NEW ANNUNCIATOR LOCATION TO BE REVIEWED BY CONSULTANT FOR CLIENT APPROVAL PRIOR TO INSTALLATION.

GENERAL NOTES

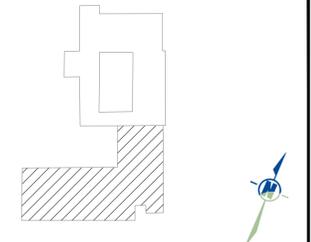
- 1. ALL FIRE ALARM DEVICES ON THE DRAWING ARE NEW UNLESS OTHERWISE NOTED.
- 2. DUE TO THE SCALE OF THESE DRAWINGS, THE LOCATION OF THE DEVICES ARE APPROXIMATE. THE CONTRACTOR MAY BE REQUIRED TO MAKE MINOR ADJUSTMENTS IN DEVICE LOCATIONS. DRAWINGS ARE TO BE REVIEWED IN CONJUNCTION WITH THE LATEST ANNUAL INSPECTION REPORT.
- 3. ALL INITIATING DEVICES ARE TO BE MONITORED AND IDENTIFIED INDIVIDUALLY. ENGLISH DESCRIPTIONS FOR THE DEVICES ARE TO BE REVIEWED BY CONSULTANT FOR CLIENT APPROVAL PRIOR TO FINAL PROGRAMMING.
- 4. CONCEALED DUCT SMOKE DETECTORS SHALL BE PROVIDED WITH REMOTE ALARM/INDICATING LAMPS.
- 5. CONTRACTOR TO LOCATE AND CONFIRM ALL END-OF-LINES PRIOR TO DELETION OR REPLACEMENT.
- 6. ALL NEW RELAYS AND MONITORING MODULES TO BE LABELED IN THE FIELD WITH DEVICE DESCRIPTION MATCHING ANNUNCIATOR NOMENCLATURE.

CONTINUED ON FA 1.0



01 FIRE ALARM DEVICES – FIRST FLOOR (SOUTH)
FA-1.1 SCALE: 1:150

KEYPLAN



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PROFESSIONAL SEALS



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Tel: 613 739 2910

PROJECT
**LCDC BUILDING -
FIRE ALARM SYSTEM
UPGRADE**

DRAWING
**FIRE ALARM DEVICES GROUND
FLOOR SOUTH**

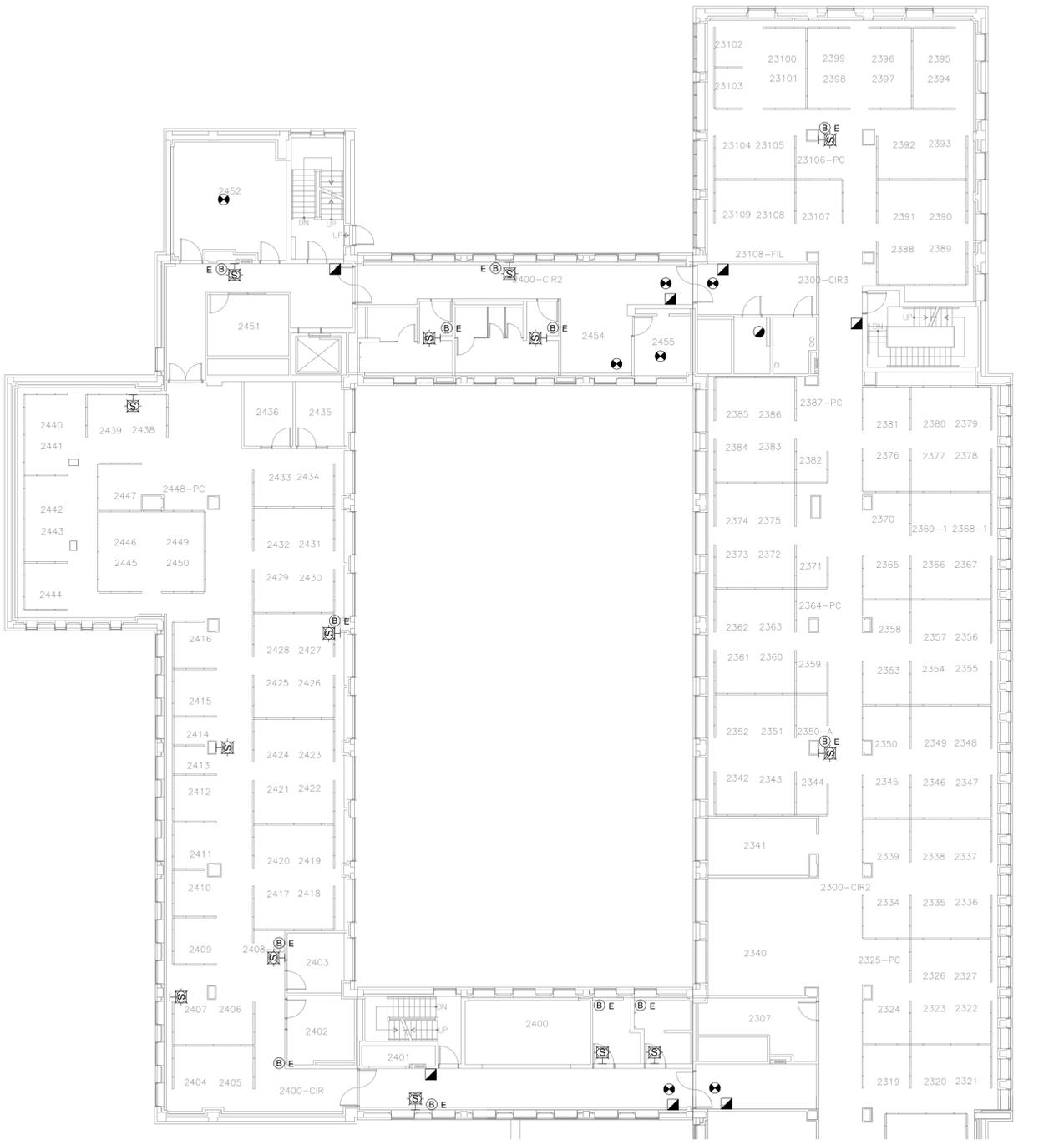
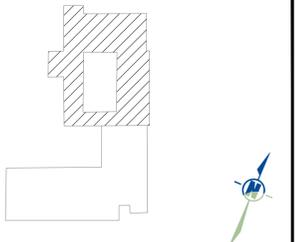
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GENERAL NOTES

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PROJECT
**LCDC BUILDING -
FIRE ALARM SYSTEM
UPGRADE**

DRAWING
**FIRE ALARM DEVICES SECOND
FLOOR NORTH**

| DESIGN | DATE | SCALE |
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01 FIRE ALARM DEVICES - SECOND FLOOR (NORTH)
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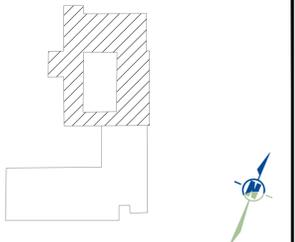
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01 FIRE ALARM DEVICES - THIRD FLOOR (NORTH)
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PROJECT
**LCDC BUILDING -
FIRE ALARM SYSTEM
UPGRADE**

DRAWING
**FIRE ALARM DEVICES THIRD
FLOOR NORTH**

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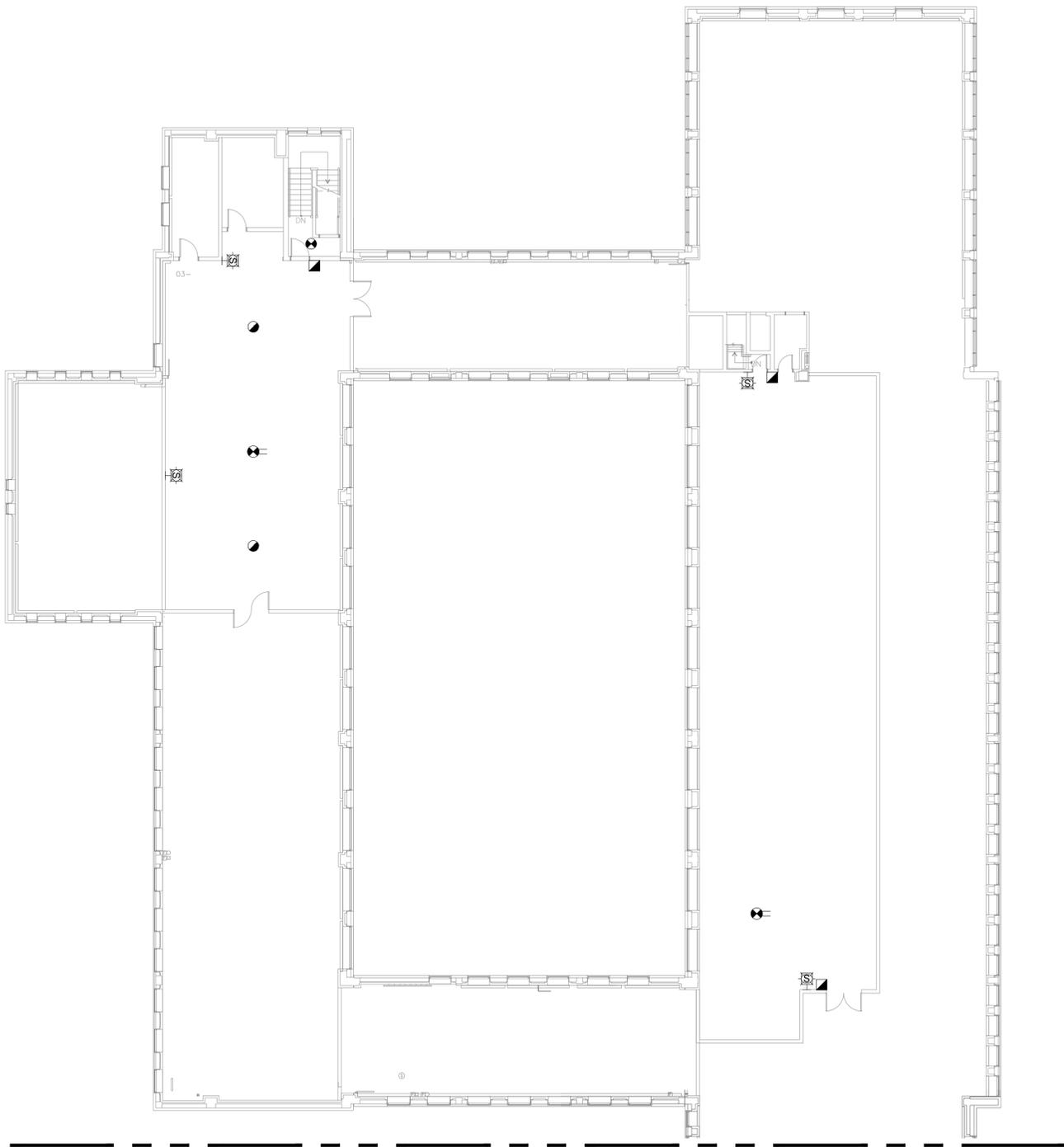
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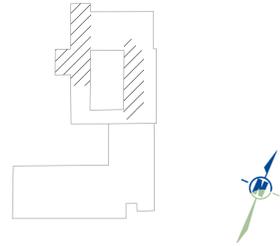
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PROJECT
**LCDC BUILDING -
FIRE ALARM SYSTEM
UPGRADE**

DRAWING
**FIRE ALARM DEVICES
PENTHOUSE NORTH**

| DESIGN | DATE | SCALE |
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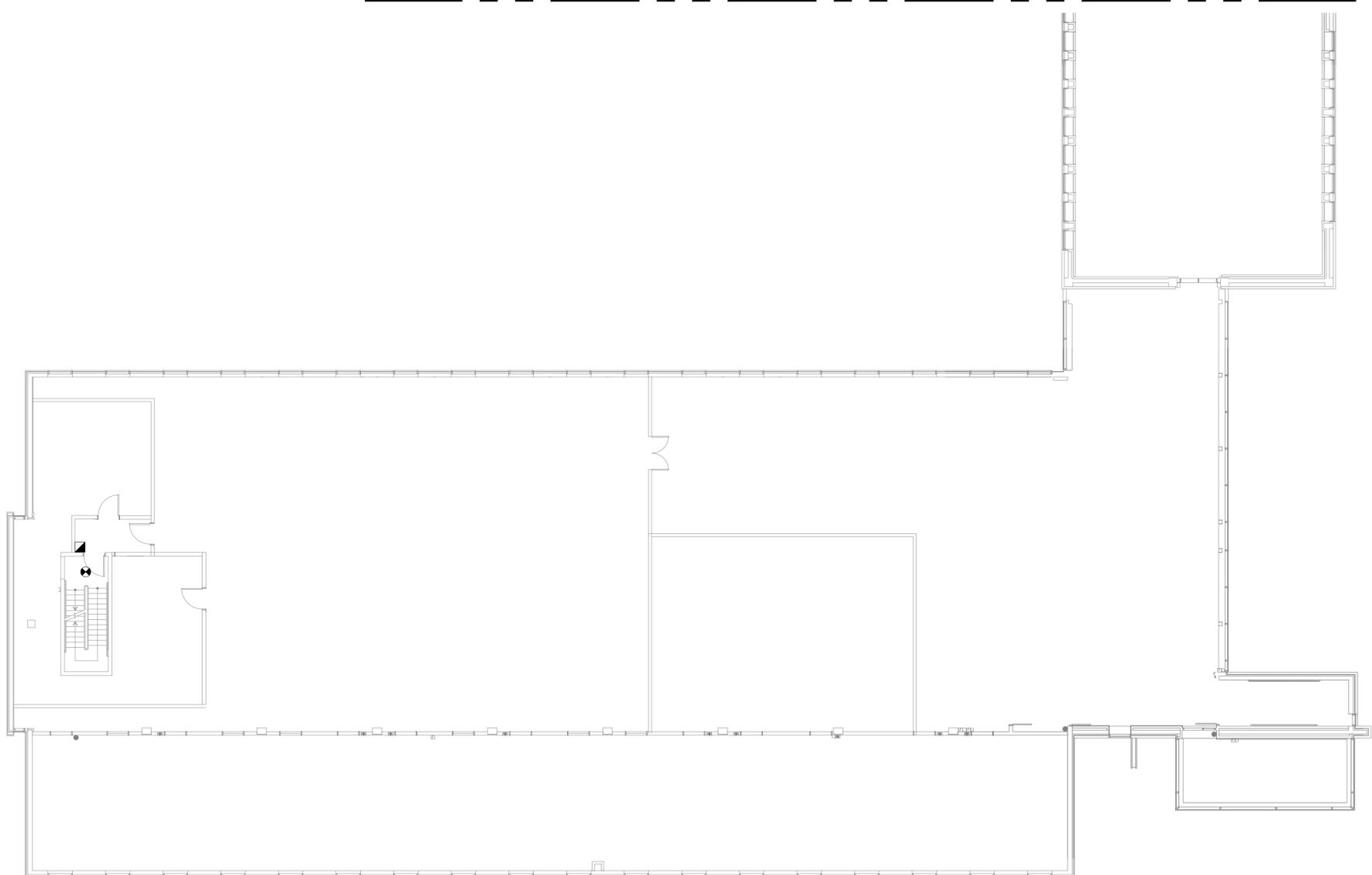
01 FIRE ALARM DEVICES – MECHANICAL PENTHOUSE (NORTH)
FA-4.0 SCALE: 1:150

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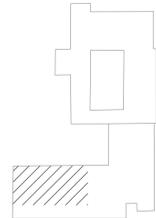
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PROJECT
**LCDC BUILDING -
FIRE ALARM SYSTEM
UPGRADE**

DRAWING
**FIRE ALARM DEVICES
PENTHOUSE SOUTH**

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01 FIRE ALARM DEVICES - MECHANICAL PENTHOUSE (SOUTH)
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ANNEX C - DESIGNATED SUBSTANCE REPORT

CONTINUED ON THE FOLLOWING PAGE

Health Canada
151 Goldenrod Driveway
Ottawa, Ontario

October 1, 2020

Attention: Norm Price, Project Manager

RE: Project-Specific Designated Substance Survey
Fire Alarm Panel/Node and Double Door Replacement Projects
Laboratory Centre for Disease Control, 100 Eglantine Driveway, Ottawa

DST File No.: 02004240.000

1.0 INTRODUCTION

DST Consulting Engineers Inc., a division of Englobe (DST) was retained by Health Canada to complete a Project-Specific Designated Substance Report (DSR) for the Fire Alarm Panel/Node and Double Door Replacement Projects at the Laboratory Centre for Disease Control located at 100 Eglantine Driveway in Ottawa, Ontario.

The DSR is required under the *Ontario Occupational Health and Safety Act* in order to identify designated substances that may be present within the project areas. The *Canada Labour Code* also stipulates under *Part II, Section 124* that every employer shall ensure that the health and safety at work of every person employed by the employer is protected. By having a DSR conducted, the Project Manager will be able to inform his or her employees, contractors, and tenants of any designated substances that may be present and possibly disturbed throughout the project area.

DST staff completed non-destructive investigations of building materials within the project areas for the presence of suspected designated substances and hazardous materials on September 29th, 2020.

2.0 SCOPE OF WORK

The survey implemented by DST included the 11 designated substances, as identified under the Ontario Occupational Health and Safety Act. These are as follows:

- Acrylonitrile,
- Arsenic,
- Asbestos,
- Benzene,
- Coke Oven Emissions,
- Ethylene Oxide,
- Isocyanates,
- Lead,
- Mercury,
- Silica, and
- Vinyl Chloride.

Other Hazardous Materials that are not classified as Designated Substances, but were included as part of the survey and considered pertinent due to applicable regulations, best practice guidelines and/or potential risks to human health and/or the environment, are:

- Polychlorinated Biphenyls (PCBs),
- Halocarbons, and
- Other hazardous materials, as deemed pertinent.

3.0 METHODOLOGY

In general, the following tasks were completed by DST:

- Investigation and sampling (as required) for any materials suspected of containing designated substances (e.g. asbestos, lead) or other hazardous materials,
- Collection and analysis of the required number of additional suspect ACM samples to satisfy the requirements of O.Reg. 278/05 (as amended) where applicable,
- Determining the presence and extent of the Designated Substances and Hazardous Materials held within the elevator renovation area; and
- Collecting sufficient information to subsequently enable DST to recommend appropriate mitigation measures to bring the building into compliance with applicable legislation and/or to mitigate risks to human health and/or the environment.

The planned project areas were outlined to DST personnel on site by a consultant from Health Canada. The survey included any wall and ceiling materials that could be impacted as part of the fire alarm panel/node and double door replacement projects. Materials suspected of containing designated substances were visually identified, based on the surveyor's knowledge of the historical composition of building products. Visual identification of materials suspected to contain asbestos was supported by the collection and analysis of a limited number of representative samples, where applicable. Materials suspected of containing designated substances other than asbestos or lead (in paint) were identified by appearance, age, and knowledge of historic applications.

In Ontario, a material is defined as an Asbestos-Containing Material (ACM) if the material has a minimum asbestos content of 0.5 per cent (%) by dry weight, as per *Ontario Regulation (O. Reg.) 278/05 Asbestos on Construction Projects and in Buildings and Repair Operations* enabled under the *Occupational Health and Safety Act (R.S.O. 1990, Chapter 0.1)*, as amended. ACMs can be divided into two categories: friable and non-friable material. A friable ACM is a material that can be crumbled, powdered, or pulverized by hand pressure and can readily release fibres when disturbed. Common applications of friable ACMs are sprayed or trowelled surfacing materials (e.g. sprayed fireproofing and textured coatings) as well as mechanical and thermal insulation. Non-friable materials are materials that will generally release fibres only when cut or shaped. Common non-friable ACMs include vinyl floor products, caulking applications, asbestos textile products and asbestos cement products (Transite). Some of these products may become friable with time or when disturbed.

Representative bulk samples of suspected ACMs were collected by DST during the site investigation. Samples were collected in order to meet the bulk sampling requirements stipulated in *O.Reg. 278/05, as amended*. Bulk samples were submitted to and analyzed by Paracel Laboratories Ltd. (Paracel). Paracel is an accredited laboratory through the Canadian Association for Laboratory Accreditation (CALA) and the National Voluntary Laboratory Accreditation Program (NVLAP). The bulk samples were analyzed using polarised light microscopy (PLM). This analytical method complies with the United States Environmental Protection Agency (U.S. EPA) Method 600/R-93/116 dated July, 1993, which is the regulatory approved protocol for bulk asbestos analysis in Ontario.

With regards to lead in paint in Canada, the Federal Canada Consumer Product Safety Act's *Surface Coating Materials Regulations SOR/2016-193* has lowered the allowable concentration of lead in paints for new consumer products to 0.009% lead content by weight (90 ppm). For the purposes of the survey and this report, paint applications having concentration of lead greater than 90ppm are considered to be lead-containing.

Lead paint samples were analyzed at Paracel. Paracel is certified under the Canadian Association for Laboratory Accreditation Inc. (CALA) to perform lead in paint sample analysis. The samples were analysed by Paracel using Inductively Coupled Plasma – Optical Emission Spectrometry (ICP-OES) in accordance with MOE E3470, ICP-OES.

Laboratory certificates of analysis are included in Appendix A. Representative photographs for asbestos-containing materials is included in Appendix B.

4.0 FINDINGS

The following sections outline the complete findings of all accessible designated substances and hazardous building materials that were noted present within the project areas.

4.1. Asbestos

Table 1 below presents the findings of bulk asbestos material samples collected for the fire alarm panel/node project.

| Table 1: Summary of Bulk Samples Analyzed for Asbestos Content by Polarized Light Microscopy (PLM) | | | |
|--|------------------------------------|------------------------|---------------------------|
| Sample I.D. | Sample Location | Sample Description | Asbestos Content and Type |
| 4240-01A | Main Lobby, Wall behind Fire Panel | Drywall Joint Compound | None Detected |
| 4240-01B | | | None Detected |
| 4240-01C | | | None Detected |
| 4240-02A | Room 1228, Wall behind Fire Panel | Drywall Joint Compound | None Detected |
| 4240-02B | | | None Detected |
| 4240-02C | | | None Detected |

| Table 1: Summary of Bulk Samples Analyzed for Asbestos Content by Polarized Light Microscopy (PLM) | | | |
|---|---|--|--|
| Sample I.D. | Sample Location | Sample Description | Asbestos Content and Type |
| 4240-03A | Hallway in front of Room 1452, Ceiling above Fire Panel | 1.5' x 1.5' (45cm x 45cm) Ceiling Tile – Pinhole with Deep Fleck Pattern | None Detected |
| 4240-03B | | | None Detected |
| 4240-03C | | | None Detected |
| 4240-04A | Hallway in front of Room 1452, Wall behind Fire Panel | Plaster, White and Grey Layers | White: None Detected Grey: 1% Chrysotile |
| 4240-04B | | | White: None Detected Grey: Positive Stop, Not Analyzed |
| 4240-04C | | | White: None Detected Grey: Positive Stop, Not Analyzed |
| 4240-05A | Electrical Room 1392, Wall behind Fire Panel | Drywall Joint Compound | None Detected |
| 4240-05B | | | None Detected |
| 4240-05C | | | None Detected |
| 4240-06A | Hallway in front of Room 2254, Wall behind Fire Panel | Drywall Joint Compound | None Detected |
| 4240-06B | | | None Detected |
| 4240-06C | | | None Detected |
| 4240-07A | Hallway in front of Room 2254, Ceiling above Fire Panel | 2' x 4' (60cm x 120cm) Ceiling Tile – Pinhole Pattern | None Detected |
| 4240-07B | | | None Detected |
| 4240-07C | | | None Detected |

Bold items represent materials that contain 0.5% or more asbestos, and are considered asbestos-containing materials, as per O.Reg. 278/05, as amended.

Table 2 below presents the findings of bulk asbestos material samples collected for the double door replacement project.

| Table 2: Summary of Bulk Samples Analyzed for Asbestos Content by Polarized Light Microscopy (PLM) | | | |
|---|--|---------------------------|----------------------------------|
| Sample I.D. | Sample Location | Sample Description | Asbestos Content and Type |
| DOOR-01A | In Front of Elevator on Ground Floor adjacent Double Doors, Wall | Drywall Joint Compound | None Detected |
| DOOR-01B | | | None Detected |
| DOOR-01C | | | None Detected |

Bulk sampling, visual observations, and/or subsequent laboratory analysis has determined that the following materials contain regulated amounts of asbestos:

- Friable (when disturbed) wall plaster, grey layer, was confirmed to contain 1% Chrysotile asbestos (DST Sample ID 4240-04A-C). Approximately four (4) square metres of this material was observed behind the fire panel in the hallway in front of room 1452. The white layer of plaster atop the grey layer should also be treated as asbestos-containing due to the inseparable nature of the materials. No plaster materials were observed in the double door replacement project area.

Bulk sampling, visual observations, and/or subsequent laboratory analysis has determined that the following materials do not contain regulated amounts of asbestos:

- Drywall joint compound sampled from the wall behind the fire panel in the main lobby (DST Sample ID 4240-01A-C),
- Drywall joint compound sampled from the wall behind the fire panel in room 1228 (DST Sample ID 4240-02A-C),
- 1.5' x 1.5' (45cm x 45cm) ceiling tile – pinhole with deep fleck pattern sampled from above the fire panel in the hallway in front of room 1452 (DST Sample ID 4240-03A-C),
- Drywall joint compound sampled from the wall behind the fire panel in electrical room 1392 (DST Sample ID 4240-05A-C),
- Drywall joint compound sampled from the wall behind the fire panel in the hallway in front of room 2254 (DST Sample ID 4240-06A-C),
- 2' x 4' (60cm x 120cm) ceiling tile – pinhole pattern sampled from above the fire panel in the hallway in front of room 2254 (DST Sample ID 4240-07A-C), and
- Drywall joint compound sampled from the wall adjacent the double doors in front of the elevator on the ground floor (DST Sample ID DOOR-01A-C).

Vinyl flooring, terrazzo flooring, vinyl baseboard mastic and concrete block/terracotta mortar will not be impacted as part of this project and therefore were not sampled.

4.2. Lead

Table 3 below presents the findings of bulk lead (in paint) samples collected for the fire alarm panel/node project.

| Table 3: Summary of Bulk Paint Samples Analyzed for Lead Content Analysis by ICP-OES | | | |
|---|---|---------------------------|-----------------------------------|
| Sample I.D. | Sample Location | Sample Description | Lead Content (ppm or µg/g) |
| 4240-LP01 | Main Lobby, Wall behind Fire Panel | Beige Paint | <25 |
| 4240-LP02 | Hallway in front of Room 1452, Wall behind Fire Panel | Grey Paint | <20 |
| 4240-LP03 | Electrical Room 1392, Wall behind Fire Panel | White Paint | <20 |

| Table 3: Summary of Bulk Paint Samples Analyzed for Lead Content Analysis by ICP-OES | | | |
|---|--|---------------------------|-----------------------------------|
| Sample I.D. | Sample Location | Sample Description | Lead Content (ppm or µg/g) |
| 4240-LP04 | Hallway in front of Room 2254, Wall behind Fire Panel | Blue Paint | <20 |

Table 4 below presents the findings of bulk lead (in paint) samples collected for the double door replacement project.

| Table 4: Summary of Bulk Paint Samples Analyzed for Lead Content Analysis by ICP-OES | | | |
|---|---|---------------------------|-----------------------------------|
| Sample I.D. | Sample Location | Sample Description | Lead Content (ppm or µg/g) |
| DOOR-LP01 | In Front of Elevator on Ground Floor, Double Doors | Brown Paint | <30 |

The below-noted paint samples collected by DST contain a lead concentration less than the 90 ppm limit established by the Federal Canada Consumer Product Safety Act's *Surface Coating Materials Regulations SOR/2016-193*, as amended:

- Beige paint sampled from the wall behind the fire panel in the main lobby was confirmed to contain <25 ppm lead (DST Sample ID 4240-LP01),
- Grey paint sampled from the wall behind the fire panel in the hallway in front of room 1452 was confirmed to contain <20 ppm lead (DST Sample ID 4240-LP02). This paint colour was also observed on the wall in front of the elevator on the ground floor adjacent the double doors.,
- White paint sampled from the wall behind the fire panel in electrical room 1392 was confirmed to contain <20 ppm lead (DST Sample ID 4240-LP03),
- Blue paint sampled from the wall behind the fire panel in the hallway in front of room 2254 was confirmed to contain <20 ppm lead (DST Sample ID 4240-LP04), and
- Brown paint sampled from the double doors in front of the elevator on the ground floor was confirmed to contain <20 ppm lead (DST Sample ID DOOR-LP01).

4.3. Mercury

Mercury is assumed to be present in fluorescent light tubes throughout the project areas, however, fluorescent light tubes are not anticipated to be disturbed for either the fire alarm panel/node or double door replacement projects.

4.4. Silica

Based on the composition of building materials, silica is expected to be naturally present in the following materials noted at the building:

- Drywall building materials,
- Plaster building materials, and
- Ceiling tiles.

4.5. Other Designated Substances and Hazardous Materials

The following Designated Substances and Hazardous Materials were neither observed, nor suspected of being present, in forms or quantities expected to have an impact on future work operations based on the understood project scope of work:

- Acrylonitrile,
- Arsenic,
- Benzene,
- Coke Oven Emissions,
- Ethylene Oxide,
- Isocyanates,
- Halocarbons,
- PCBs, and
- Vinyl Chloride.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the site investigation, sampling and analysis, the following materials are present in forms and quantities expected to have an impact on future work operations associated with Project-Specific Designated Substances Survey for the fire alarm panel/node and double door replacement projects at the Laboratory Centre for Disease Control located at 100 Eglantine Driveway in Ottawa, Ontario.

- Asbestos, and
- Silica.

5.1. Asbestos

The disturbance of ACMs on construction and demolition projects is governed by the *Canada Occupational Health and Safety Regulations* and in the province of Ontario is governed by *O.Reg. 278/05*, as amended. These regulations classify all asbestos disturbances as Low Risk (Type 1), Moderate Risk (Type 2), or High Risk (Type 3), each of which has defined precautionary measures. All asbestos materials are subject to specific handling and disposal precautions and must be removed prior to demolition. The Ontario Ministry of Labour (MoL) must be notified of any project involving removal of more than a minor amount (e.g. typically 1 square metre) of friable asbestos material. In the event of conflict between regulations, the more stringent procedures apply.

Identified friable ACMs require a minimum of Moderate Risk abatement procedures when removing or disturbing one (1) square metre or less of the material. Should demolition,

disturbance, or repair be required of more than one (1) square metre of friable ACM, High-Risk abatement procedures are required.

The transport and disposal of asbestos waste is governed by *O. Reg. 347/90 – General – Waste Management*, as amended. This regulation requires that asbestos waste be sealed in appropriately labelled, double containers resistant to puncture and tears. The waste must be disposed at a licensed waste disposal site.

The time weight average exposure limit (TWAEEL) for airborne asbestos is prescribed by *O.Reg. 490/09 Designated Substances*, as amended and the *Canada Labour Code, Occupational Health and Safety Regulations*. Work procedures and personal protective equipment must be used to ensure that workers are not exposed to airborne asbestos levels that exceed this TWAEEL.

The following recommendations apply to ACMs and suspected ACMs:

- Appropriate work procedures and precautionary measures must be used, as outlined in *O.Reg. 278/05, as amended*, and the *Canada Occupational Health and Safety Regulations*, as amended, when performing work that may disturb ACMs or suspected ACMs, including prior to building demolition.
- Disturbance and/or removal of ACMs must be appropriately recorded as part of the building's Asbestos Management Plan.
- Before undertaking any work activity that involves asbestos-containing materials, an Asbestos Exposure Control Plan shall be developed, in accordance with the requirements of the *Canada Occupational Health and Safety Regulations*, which includes classification of asbestos specific work activities, onsite labelling of ACMs, and education/training of applicable federal employees specific to ACMs.
- If ACMs or suspected ACMs become damaged and worker exposure to the material is likely to occur, the damaged material must be repaired or removed following work procedures outlined in *O. Reg. 278/05, as amended*, and *Canada Labour Code, Occupational Health and Safety Regulations, as amended*.

DST made the attempt to evaluate the project areas to identify hazardous materials present. In spite of these efforts, some ACMs may be concealed and not observed at the time of the survey. As such, should any previously unidentified suspect ACMs be encountered as part of future work, these materials are to be treated as ACMs and handled accordingly, unless sampling proves otherwise. Materials that have not been analyzed but are visibly similar to other materials identified as asbestos-containing, must be considered asbestos-containing unless proven otherwise by laboratory analysis.

5.2. Silica

The Occupational Health and Safety Branch of the Ontario MoL have published *Guideline: Silica on Construction Projects*. This document classifies all silica disturbances as Type 1, Type 2 or Type 3 work, and assigns different levels of respiratory protection and work procedures for each classification. This guideline should be followed during disturbance of silica-containing materials.

As a general rule, it is preferable to use more stringent dust suppression techniques and engineering controls as opposed to relying on respiratory protection to control worker exposure. Respiratory protection should only be relied on as a last resort when dust suppression techniques and engineering controls fail to control worker exposure.

The TWael for airborne silica is prescribed by *Ontario Regulation 490/09 Designated Substances*, as amended. Work procedures and personal protective equipment must be used to ensure that workers are not exposed to airborne silica levels that exceed this exposure limit.

Dust control procedures, which are typical of any well executed renovation project, are usually sufficient to control airborne silica levels. As a general rule, it is preferable to use more stringent dust suppression techniques and engineering controls as opposed to relying on respiratory protection to control worker exposure. Respiratory protection should only be relied on as a last resort when dust suppression techniques and engineering controls fail to control worker exposure to silica.

6.0 CLOSURE

A Limitations of Report section, which forms an integral part of this report, is attached.

We trust that the information contained herein meets your needs. Should you have any questions or comments, please do not hesitate to contact us.

DST CONSULTING ENGINEERS INC. A DIVISION OF ENGLOBE



Kylie Bennett, B.Sc., EPT
Environmental Scientist
Kbennett@dstgroup.com



for

Matthew DesRoches, M.Sc(A), CIH, ROH
Senior Technical Advisor
Mdesroches@dstgroup.com

LIMITATIONS OF REPORT

This report is intended for client use only. Any use of this document by a third party, or any reliance on or decisions made based on the findings described in this report, are the sole responsibility of such third parties, and DST Consulting Engineers Inc. accepts no responsibility for damages, suffered by any third party as a result of decisions made or actions conducted based on this report. No other warranties are implied or expressed.

The data, conclusions and recommendations which are presented in this report, and the quality thereof, are based on a scope of work authorized by the client. The sampling program included bulk sampling in select representative areas for laboratory analysis. There is a practical limitation on the number of samples that can be collected in a building. This requires the investigator to extrapolate observations and analytical results between sample locations. The uncertainty, and inherent risk, associated with this necessity increases with the distance between sampling locations. Note, however, that no scope of work, no matter how exhaustive, can guarantee to identify all contaminants. This report therefore cannot warranty that all building conditions are represented by those identified at specific locations.

Note also that standards, guidelines and practices related to DST's scope of work may change with time. Those which were applied at the time of this program may be obsolete or unacceptable at a later date.

Any comments given in this report on potential remediation problems and possible methods are intended only for the guidance of the designer. The scope of work may not be sufficient to determine all of the factors that may affect construction, clean-up methods and/or costs. Contractors bidding on this project or undertaking clean-ups should, therefore, make their own interpretation of the factual information presented and draw their own conclusions as to how the conditions may affect their work.

Any results from an analytical laboratory or other subcontractor reported herein have been carried out by others, and DST Consulting Engineers Inc. cannot warranty their accuracy. Similarly, DST cannot warranty the accuracy of information supplied by the client.

APPENDIX A

Laboratory Certificates of Analysis

Certificate of Analysis

DST Consulting Engineers Inc. (Ottawa)

203-2150 Thurston Dr.
Ottawa, ON K1G 5T9
Attn: Kyle Thompson

Client PO:

Project: 02004240.000

Custody: 49318

Report Date: 30-Sep-2020

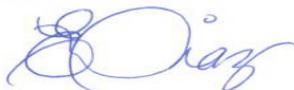
Order Date: 29-Sep-2020

Order #: 2040174

This Certificate of Analysis contains analytical data applicable to the following samples as submitted :

| Parcel ID | Client ID |
|--------------|-----------|
| 2040174-01 | 4240-01-A |
| 2040174-02 | 4240-01-B |
| 2040174-03 | 4240-01-C |
| 2040174-04 | 4240-02-A |
| 2040174-05 | 4240-02-B |
| 2040174-06 | 4240-02-C |
| 2040174-07 | 4240-03-A |
| 2040174-08 | 4240-03-B |
| 2040174-09 | 4240-03-C |
| 2040174-10.1 | 4240-04-A |
| 2040174-10.2 | 4240-04-A |
| 2040174-11.1 | 4240-04-B |
| 2040174-11.2 | 4240-04-B |
| 2040174-12.1 | 4240-04-C |
| 2040174-12.2 | 4240-04-C |
| 2040174-13 | 4240-05-A |
| 2040174-14 | 4240-05-B |
| 2040174-15 | 4240-05-C |
| 2040174-16 | 4240-06-A |
| 2040174-17 | 4240-06-B |
| 2040174-18 | 4240-06-C |
| 2040174-19 | 4240-07-A |
| 2040174-20 | 4240-07-B |
| 2040174-21 | 4240-07-C |
| 2040174-22.1 | Door-01-A |
| 2040174-22.2 | Door-01-A |

Approved By:



Emma Diaz

Senior Analyst

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

Certificate of Analysis

Client: **DST Consulting Engineers Inc. (Ottawa)**

Client PO:

Report Date: 30-Sep-2020

Order Date: 29-Sep-2020

Project Description: **02004240.000**

| | |
|------------|-----------|
| 2040174-23 | Door-01-B |
| 2040174-24 | Door-01-C |

Certificate of Analysis
 Client: DST Consulting Engineers Inc. (Ottawa)
 Client PO:

Report Date: 30-Sep-2020
 Order Date: 29-Sep-2020
 Project Description: 02004240.000

Asbestos, PLM Visual Estimation **MDL - 0.5%**

| Parcel ID | Sample Date | Colour | Description | Asbestos Detected | Material Identification | % Content |
|--------------|-------------|------------|------------------------|-------------------|--|----------------|
| 2040174-01 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: 4240-01-A Non-Fibers | 100 |
| 2040174-02 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: 4240-01-B Non-Fibers | 100 |
| 2040174-03 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: 4240-01-C Non-Fibers | 100 |
| 2040174-04 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: 4240-02-A Non-Fibers | 100 |
| 2040174-05 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: 4240-02-B Non-Fibers | 100 |
| 2040174-06 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: 4240-02-C Non-Fibers | 100 |
| 2040174-07 | 29-Sep-20 | White/Grey | Ceiling Tile | No | Client ID: 4240-03-A Cellulose MMVF Non-Fibers | 30 30 40 |
| 2040174-08 | 29-Sep-20 | White/Grey | Ceiling Tile | No | Client ID: 4240-03-B Cellulose MMVF Non-Fibers | 30 30 40 |
| 2040174-09 | 29-Sep-20 | White/Grey | Ceiling Tile | No | Client ID: 4240-03-C Cellulose MMVF Non-Fibers | 30 30 40 |
| 2040174-10.1 | 29-Sep-20 | White | Plaster | No | Client ID: 4240-04-A Non-Fibers | 100 |

Certificate of Analysis
 Client: DST Consulting Engineers Inc. (Ottawa)
 Client PO:

Report Date: 30-Sep-2020
 Order Date: 29-Sep-2020
 Project Description: 02004240.000

Asbestos, PLM Visual Estimation **MDL - 0.5%**

| Parcel ID | Sample Date | Colour | Description | Asbestos Detected | Material Identification | % Content |
|--------------|-------------|--------|------------------------|-------------------|---|-----------|
| 2040174-10.2 | 29-Sep-20 | Grey | Plaster | Yes | Client ID: 4240-04-A Chrysotile | 1 |
| | | | | | Cellulose | 1 |
| | | | | | Non-Fibers | 98 |
| 2040174-11.1 | 29-Sep-20 | White | Plaster | No | Client ID: 4240-04-B Non-Fibers | 100 |
| 2040174-11.2 | 29-Sep-20 | Grey | Plaster | | Client ID: 4240-04-B not analyzed, positive stop | |
| 2040174-12.1 | 29-Sep-20 | White | Plaster | No | Client ID: 4240-04-C Non-Fibers | 100 |
| 2040174-12.2 | 29-Sep-20 | Grey | Plaster | | Client ID: 4240-04-C not analyzed, positive stop | |
| 2040174-13 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: 4240-05-A Non-Fibers | 100 |
| 2040174-14 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: 4240-05-B Non-Fibers | 100 |
| 2040174-15 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: 4240-05-C Non-Fibers | 100 |
| 2040174-16 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: 4240-06-A Non-Fibers | 100 |
| 2040174-17 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: 4240-06-B Non-Fibers | 100 |
| 2040174-18 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: 4240-06-C Non-Fibers | 100 |

Certificate of Analysis
 Client: **DST Consulting Engineers Inc. (Ottawa)**
 Client PO:

Report Date: 30-Sep-2020
 Order Date: 29-Sep-2020
 Project Description: **02004240.000**

Asbestos, PLM Visual Estimation **MDL - 0.5%**

| Parcel ID | Sample Date | Colour | Description | Asbestos Detected | Material Identification | % Content |
|--------------|-------------|------------|------------------------|-------------------|-----------------------------|-----------|
| 2040174-19 | 29-Sep-20 | White/Grey | Ceiling Tile | No | Client ID: 4240-07-A | |
| | | | | | Cellulose | 20 |
| | | | | | MMVF | 40 |
| | | | | | Non-Fibers | 40 |
| 2040174-20 | 29-Sep-20 | White/Grey | Ceiling Tile | No | Client ID: 4240-07-B | |
| | | | | | Cellulose | 20 |
| | | | | | MMVF | 40 |
| | | | | | Non-Fibers | 40 |
| 2040174-21 | 29-Sep-20 | White/Grey | Ceiling Tile | No | Client ID: 4240-07-C | |
| | | | | | Cellulose | 20 |
| | | | | | MMVF | 40 |
| | | | | | Non-Fibers | 40 |
| 2040174-22.1 | 29-Sep-20 | Off-white | Drywall Joint Compound | No | Client ID: Door-01-A | |
| | | | | | Non-Fibers | 100 |
| 2040174-22.2 | 29-Sep-20 | White | Drywall Joint Compound | No | Client ID: Door-01-A | |
| | | | | | Non-Fibers | 100 |
| 2040174-23 | 29-Sep-20 | Off-white | Drywall Joint Compound | No | Client ID: Door-01-B | |
| | | | | | Non-Fibers | 100 |
| 2040174-24 | 29-Sep-20 | Off-white | Drywall Joint Compound | No | Client ID: Door-01-C | |
| | | | | | Non-Fibers | 100 |

* MMVF: Man Made Vitreous Fibers: Fiberglass, Mineral Wool, Rockwool, Glasswool

** Analytes in bold indicate asbestos mineral content.

Certificate of Analysis
 Client: **DST Consulting Engineers Inc. (Ottawa)**
 Client PO:

Report Date: 30-Sep-2020
 Order Date: 29-Sep-2020
 Project Description: **02004240.000**

Analysis Summary Table

| Analysis | Method Reference/Description | Lab Location | Lab Accreditation | * | Analysis Date |
|---------------------------------|------------------------------|-----------------|-------------------|---|---------------|
| Asbestos, PLM Visual Estimation | by EPA 600/R-93/116 | 2 - Ottawa West | NVLAP 200812-0 | | 29-Sep-20 |

* Reference to the NVLAP term does not permit the user of this report to claim product certification , approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Ottawa West Lab: 25 Northside Rd, Unit C Nepean, Ontario K2H 8S1

Qualifier Notes

Sample Qualifiers :

Z-01: Results are from sample bag DOOR-01B per client.

Work Order Revisions | Comments

None



Parcel ID: 2040174



Lab Office
 1-2319 St. Laurent Blvd.
 Ottawa, Ontario K1G 4J8
 -800-749-1947
 aracel@paracellabs.com

Chain of Custody
 (Lab Use Only)

No 49318

Page 1 of 1

| | | |
|-------------------------------------|--|---|
| Client Name: DST Consulting | Project Reference: 02004240.000 | Turnaround Time: <input type="checkbox"/> Immediate <input checked="" type="checkbox"/> 1 Day <input type="checkbox"/> 4 Hour <input type="checkbox"/> 2 Day <input type="checkbox"/> 8 Hour <input type="checkbox"/> 3 Day <input type="checkbox"/> Regular Date Required: _____ |
| Contact Name: Kyle Thompson | Quote #: 16-117 | |
| Address: 2150 Thurston Suite 203 | PO #: | |
| Telephone: 613 608 7258 | Email Address: Kthompson@dstgroup.com Kbennett@ | |

ASBESTOS & MOLD ANALYSIS

Matrix: Air Bulk Tape Lift Swab Other Regulatory Guideline: ON QC AB SK Other:
 Analyses: Microscopic Mold Culturable Mold Bacteria GRAM PCM Asbestos PLM Asbestos Chatfield Asbestos TEM Asbestos

| Parcel Order Number: 2040174 | | Asbestos - Bulk | | | |
|------------------------------|---------------|-----------------|-------------------|---|-------------------------------------|
| Sample ID | Sampling Date | Air Volume (L) | Analysis Required | Identify Distinct Building Materials to Be Analyzed (if not specified, all materials identified will be analyzed) * | Positive Stop? |
| 1 | Sept 29 | | PLM | Drywall joint compound | <input checked="" type="checkbox"/> |
| 2 | | | | Drywall joint compound | <input checked="" type="checkbox"/> |
| 3 | | | | ceiling tile | <input checked="" type="checkbox"/> |
| 4 | | | | plaster | <input checked="" type="checkbox"/> |
| 5 | | | | Drywall joint compound | <input checked="" type="checkbox"/> |
| 6 | | | | Drywall joint compound | <input checked="" type="checkbox"/> |
| 7 | | | | ceiling tile | <input checked="" type="checkbox"/> |
| 8 | | | | Drywall joint compound | <input checked="" type="checkbox"/> |
| 9 | | | | | <input type="checkbox"/> |
| 10 | | | | | <input type="checkbox"/> |
| 11 | | | | | <input type="checkbox"/> |
| 12 | | | | | <input type="checkbox"/> |

* If left blank, all distinct materials identified in the samples will be analyzed and reported separately as per EPA 600/R-93/116. Additional charges will apply.

Comments: _____ Method of Delivery: Drop Box

| | | | |
|---|--------------------|------------------------------|-----------------------------|
| Relinquished By (Sign): <i>Kyle Bennett</i> | Received at Depot: | Received at Lab: <i>Ally</i> | Verified By: <i>Ally</i> |
| Relinquished By (Print): Kyle Bennett | | | |
| Date/Time: Sept 29/20 10:55 am | Date/Time: | Date/Time: Sept 29/20 11:15 | Date/Time: Sept 29/20 12:25 |

Certificate of Analysis

DST Consulting Engineers Inc. (Ottawa)

203-2150 Thurston Dr.
Ottawa, ON K1G 5T9
Attn: Kyle Thompson

Client PO:
Project: 02004240.000
Custody: 128745

Report Date: 30-Sep-2020
Order Date: 29-Sep-2020

Order #: 2040171

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Parcel ID | Client ID |
|------------|-----------|
| 2040171-01 | 4240-LP01 |
| 2040171-02 | 4240-LP02 |
| 2040171-03 | 4240-LP03 |
| 2040171-04 | 4240-LP04 |
| 2040171-05 | DOOR-LP01 |

Approved By:



Dale Robertson, BSc
Laboratory Director

Any use of these results implies your agreement that our total liability in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Certificate of Analysis

Report Date: 30-Sep-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 29-Sep-2020

Client PO:

Project Description: 02004240.000

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|-----------------|------------------------------|-----------------|---------------|
| Metals, ICP-OES | based on MOE E3470, ICP-OES | 30-Sep-20 | 30-Sep-20 |

Sample and QC Qualifiers Notes

1- GEN01 : Elevated Reporting Limits due to limited sample volume.

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

Certificate of Analysis

Report Date: 30-Sep-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 29-Sep-2020

Client PO:

Project Description: 02004240.000

Sample Results

| Lead | | | | Matrix: Paint |
|------------|-----------|-------|-----|------------------------|
| | | | | Sample Date: 29-Sep-20 |
| Parcel ID | Client ID | Units | MDL | Result |
| 2040171-01 | 4240-LP01 | ug/g | 20 | <25 [1] |
| 2040171-02 | 4240-LP02 | ug/g | 20 | <20 |
| 2040171-03 | 4240-LP03 | ug/g | 20 | <20 |
| 2040171-04 | 4240-LP04 | ug/g | 20 | <20 |
| 2040171-05 | DOOR-LP01 | ug/g | 20 | <30 [1] |

Laboratory Internal QA/QC

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------|--------|-----------------|-------|---------------|------|------------|------|-----------|-------|
| Matrix Blank | | | | | | | | | |
| Lead | ND | 20 | ug/g | | | | | | |
| Matrix Duplicate | | | | | | | | | |
| Lead | 468 | 20 | ug/g | 499 | | | 6.41 | 30 | |
| Matrix Spike | | | | | | | | | |
| Lead | 498 | 20.00 | ug/g | 257 | 96.3 | 70-130 | | | |

APPENDIX B

Select Photographs

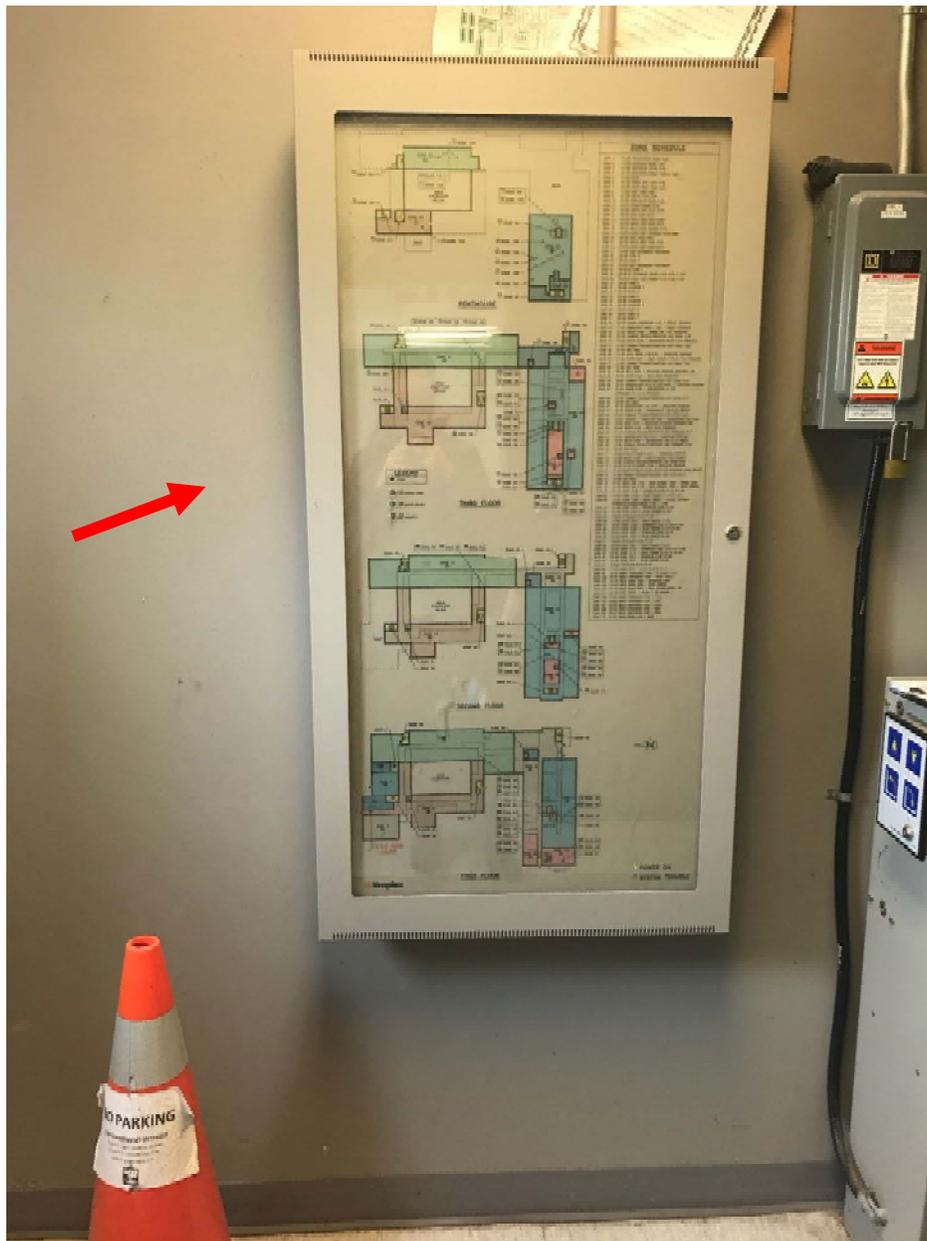


Photo 1. Friable (when disturbed) wall plaster, grey layer, was confirmed to contain 1% Chrysotile asbestos (DST Sample ID 4240-04A-C). Approximately four (4) square metres of this material was observed behind the fire panel in the hallway in front of room 1452. The white layer of plaster atop the grey layer should also be treated as asbestos-containing due to the inseparable nature of the materials.

ANNEX D - SECURITY REQUIREMENT CHECKLIST (SRCL)

CONTINUED ON THE FOLLOWING PAGE



**SECURITY REQUIREMENTS CHECK LIST (SRCL)
LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)**

PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE

1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine: HEALTH CANADA
 2. Branch or Directorate / Direction générale ou Direction: NAMLO

3. a) Subcontract Number / Numéro du contrat de sous-traitance
 3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant

4. Brief Description of Work / Brève description du travail
 Engage a contractor to install a new fire alarm control panel, annunciator panel and associated parts outlined in the attached specifications

5. a) Will the supplier require access to Controlled Goods? / Le fournisseur aura-t-il accès à des marchandises contrôlées? No / Non Yes / Oui

5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? / Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques? No / Non Yes / Oui

6. Indicate the type of access required / Indiquer le type d'accès requis

6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? / Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui
 (Specify the level of access using the chart in Question 7. c) / (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c)

6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. / Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé. No / Non Yes / Oui

6. c) Is this a commercial courier or delivery requirement with no overnight storage? / S'agit-il d'un contrat de messagerie ou de livraison commerciale sans entreposage de nuit? No / Non Yes / Oui

7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès

Canada NATO / OTAN Foreign / Étranger

7. b) Release restrictions / Restrictions relatives à la diffusion

| | | |
|---|---|---|
| No release restrictions / Aucune restriction relative à la diffusion <input type="checkbox"/> | All NATO countries / Tous les pays de l'OTAN <input type="checkbox"/> | No release restrictions / Aucune restriction relative à la diffusion <input type="checkbox"/> |
| Not releasable / À ne pas diffuser <input type="checkbox"/> | | |
| Restricted to: / Limité à: <input type="checkbox"/> | Restricted to: / Limité à: <input type="checkbox"/> | Restricted to: / Limité à: <input type="checkbox"/> |
| Specify country(ies): / Préciser le(s) pays: | Specify country(ies): / Préciser le(s) pays: | Specify country(ies): / Préciser le(s) pays: |

7. c) Level of information / Niveau d'information

| | | |
|---|--|---|
| PROTECTED A / PROTÉGÉ A <input type="checkbox"/> | NATO UNCLASSIFIED / NATO NON CLASSIFIÉ <input type="checkbox"/> | PROTECTED A / PROTÉGÉ A <input type="checkbox"/> |
| PROTECTED B / PROTÉGÉ B <input type="checkbox"/> | NATO RESTRICTED / NATO DIFFUSION RESTREINTE <input type="checkbox"/> | PROTECTED B / PROTÉGÉ B <input type="checkbox"/> |
| PROTECTED C / PROTÉGÉ C <input type="checkbox"/> | NATO CONFIDENTIAL / NATO CONFIDENTIEL <input type="checkbox"/> | PROTECTED C / PROTÉGÉ C <input type="checkbox"/> |
| CONFIDENTIAL / CONFIDENTIEL <input type="checkbox"/> | NATO SECRET / NATO SECRET <input type="checkbox"/> | CONFIDENTIAL / CONFIDENTIEL <input type="checkbox"/> |
| SECRET / SECRET <input type="checkbox"/> | COSMIC TOP SECRET / COSMIC TRÈS SECRET <input type="checkbox"/> | SECRET / SECRET <input type="checkbox"/> |
| TOP SECRET / TRÈS SECRET <input type="checkbox"/> | | TOP SECRET / TRÈS SECRET <input type="checkbox"/> |
| TOP SECRET (SIGINT) / TRÈS SECRET (SIGINT) <input type="checkbox"/> | | TOP SECRET (SIGINT) / TRÈS SECRET (SIGINT) <input type="checkbox"/> |



PART A (continued) / PARTIE A (suite)

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets?
 Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui
 If Yes, indicate the level of sensitivity:
 Dans l'affirmative, indiquer le niveau de sensibilité :
9. Will the supplier require access to extremely sensitive INFOSEC information or assets?
 Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate? No / Non Yes / Oui
- Short Title(s) of material / Titre(s) abrégé(s) du matériel :
 Document Number / Numéro du document :

PART B - PERSONNEL (SUPPLIER) / PARTIE B - PERSONNEL (FOURNISSEUR)

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis
- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> RELIABILITY STATUS COTE DE FIABILITÉ | <input type="checkbox"/> CONFIDENTIAL CONFIDENTIEL | <input type="checkbox"/> SECRET SECRET | <input type="checkbox"/> TOP SECRET TRÈS SECRET |
| <input type="checkbox"/> TOP SECRET-SIGINT TRÈS SECRET - SIGINT | <input type="checkbox"/> NATO CONFIDENTIAL NATO CONFIDENTIEL | <input type="checkbox"/> NATO SECRET NATO SECRET | <input type="checkbox"/> COSMIC TOP SECRET COSMIC TRÈS SECRET |
| <input type="checkbox"/> SITE ACCESS ACCÈS AUX EMPLACEMENTS | | | |
- Special comments:
 Commentaires spéciaux : _____
- NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.
 REMARQUE : Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscreened personnel be used for portions of the work?
 Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail? No / Non Yes / Oui
 If Yes, will unscreened personnel be escorted?
 Dans l'affirmative, le personnel en question sera-t-il escorté? No / Non Yes / Oui

PART C - SAFEGUARDS (SUPPLIER) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)

- INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS**
11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises?
 Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui
11. b) Will the supplier be required to safeguard COMSEC information or assets?
 Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC? No / Non Yes / Oui

PRODUCTION

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises?
 Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ? No / Non Yes / Oui

INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data?
 Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui
11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency?
 Existera-t-il un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale? No / Non Yes / Oui



PART C - (continued) / PARTIE C - (suite)

For users completing the form manually use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.

Les utilisateurs qui remplissent le formulaire manuellement doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form online (via the Internet), the summary chart is automatically populated by your responses to previous questions.

Dans le cas des utilisateurs qui remplissent le formulaire en ligne (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

| Category / Catégorie | PROTECTED / PROTÉGÉ | | | CLASSIFIED / CLASSIFIÉ | | | NATO | | | | COMSEC | | | | | |
|--|---------------------|---|---|-----------------------------|--------|--------------------------|---|---------------------------------------|-------------|--|---------------------|---|---|-----------------------------|--------|--------------------------|
| | A | B | C | CONFIDENTIAL / CONFIDENTIEL | SECRET | TOP SECRET / TRÈS SECRET | NATO RESTRICTED / NATO DIFFUSION RESTREINTE | NATO CONFIDENTIAL / NATO CONFIDENTIEL | NATO SECRET | COSMIC TOP SECRET / COSMIC TRÈS SECRET | PROTECTED / PROTÉGÉ | | | CONFIDENTIAL / CONFIDENTIEL | SECRET | TOP SECRET / TRÈS SECRET |
| | | | | | | | | | | | A | B | C | | | |
| Information / Assets / Renseignements / Biens / Production | | | | | | | | | | | | | | | | |
| IT Media / Support TI | | | | | | | | | | | | | | | | |
| IT Link / Lien électronique | | | | | | | | | | | | | | | | |

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?

La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE?

No / Non Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".

Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée

« Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?

La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE?

No / Non Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments).

Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée

« Classification de sécurité » au haut et au bas du formulaire et indiquez qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).



PART D - AUTHORIZATION / PARTIE D - AUTORISATION

13. Organization Project Authority / Chargé de projet de l'organisme

| | | | |
|---|-----------------------------------|--|-----------------------------------|
| Name (print) - Nom (en lettres moulées) Mike Haerkens | | Title - Titre Senior Project Manager | Signature <i>Mike Haerkens</i> |
| Telephone No. - N° de téléphone 613-882-6915 | Facsimile No. - N° de télécopieur | E-mail address - Adresse courriel michael.haerkens@canada.ca | Date October 2, 2020 |

14. Organization Security Authority / Responsable de la sécurité de l'organisme

| | | | |
|---|-----------------------------------|--|----------------------------------|
| Name (print) - Nom (en lettres moulées) Sonia Larose | | Title - Titre Security in Contracting | Signature <i>Sonia Larose</i> |
| Telephone No. - N° de téléphone 613-954-1775 613-298-0924 | Facsimile No. - N° de télécopieur | E-mail address - Adresse courriel sonia.larose@canada.ca | Date October 2020, 6 |

15. Are there additional instructions (e.g. Security Guide, Security Classification Guide) attached?
Des instructions supplémentaires (p. ex. Guide de sécurité, Guide de classification de la sécurité) sont-elles jointes?

No / Non Yes / Oui

16. Procurement Officer / Agent d'approvisionnement

| | | | |
|--|-----------------------------------|---|-----------|
| Name (print) - Nom (en lettres moulées) Dlana Seguin | | Title - Titre Procurement Officer | Signature |
| Telephone No. - N° de téléphone | Facsimile No. - N° de télécopieur | E-mail address - Adresse courriel | Date |

17. Contracting Security Authority / Autorité contractante en matière de sécurité

| | | | |
|---|-----------------------------------|--|----------------------------------|
| Name (print) - Nom (en lettres moulées) Sonia Larose | | Title - Titre Security in Contracting | Signature <i>Sonia Larose</i> |
| Telephone No. - N° de téléphone 613-954-1775 613-298-0924 | Facsimile No. - N° de télécopieur | E-mail address - Adresse courriel sonia.larose@canada.ca | Date October 2020, 6 |

ANNEX E - CERTIFICATE OF INSURANCE

This **must** be included with the bid. Please refer to SC2.

ANNEX F – MANDATORY CONDITIONS PRECEDENT TO BID ACCEPTANCE AND CONTRACT AWARD**Bidders must provide the following information with their bid. Failure to do so will result in the bid being found non-compliant:**

- 1 The Bidder **must** provide proof of all proposed resource(s) WHIMS certification.
- 2 The Bidder **must** provide proof e.g. letter/certificate and number demonstrating they are in good standing with WSIB (Workmen's Compensation) and covered for the duration of the project.
- 3 The Bidder **must** provide a copy of a certificate from an insurance broker or an insurance company licensed to operate in Canada stating that the Bidder, if awarded a contract as a result of the ITT, can be insured in accordance with the Commercial General Liability Insurance requirements specified in (Insurance Conditions) as indicated in the ITT, in the amount of \$2,000,000.00.
- 4 The Bidder **must** provide the names of the proposed resources that will complete the work, ensuring that their proposed resource meets the security requirement(s) (Please refer to Annex B for the security requirement)
- 5 The Bidder **must** provide a **PDF** of the bid bond, as referred to in GI08 (2018-06-21) Bid security requirements.
- 6 The Bidder **must** provide a signed Contractor Schedule Form (Annex H)
- 7 The Bidder **must** include Appendix 1 – Combined Price Form
- 8 The Bidder **must** sign and complete the Bid Form (BF)

Bidders should provide the following information below with their bid. If the following information is not included in the Bid, the Contracting Authority will contact the Bidder and request the information within a specified timeframe. If the Bidder fails to provide the requested information within the said timeframe, the bid will be considered non-compliant, and given no further consideration:

- 1 The Bidder must provide a copy of their Health and Safety Plan for the proposed construction work within one work week from date of contract award.

ANNEX G – LISTING OF SUBCONTRACTORS

- 1) In accordance with GI06 – Listing of Subcontractors and Suppliers of R2410T- General Instructions - Construction Services GI07 - Listing of Subcontractors and Suppliers of R2710T- General Instructions - Construction Services - Bid Security Requirements, the Bidder must provide a list of all First-tier subcontractor* relationships with his Bid.

*“First-tier subcontractor” means a subcontractor with whom a supplier has a direct contractual relationship to perform a portion of the work pursuant to a contract or real property agreement between the supplier and Canada (meaning all the activities, services, goods, equipment, matters and things required to be done, delivered or performed by the supplier under the contract or real property agreement), unless the subcontractor merely supplies commercial-off-the-shelf goods to the supplier.

| | Subcontractor | Division | Estimated value of work |
|----|---------------|----------|-------------------------|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |

ANNEX H – CONTRACTOR SCHEDULE FORM

It is **Mandatory** to submit this signed Document with your bid submission. The Contractor Schedule will become part of the resulting contract with the Winning Bidder.

The Calendar days must be adhered to. There will be up to a 60 day total allowable variance of the submitted Contractor Schedule. Anything beyond a 60 day total variance will require a signed contract amendment between the Winning Bidder and the Contract Authority. Failure to remain on schedule (within the allocated total variance) may result in contract termination due to default.

The end date in the Contractor Schedule **must be a minimum of 90 days** before the end date of the Contract to allow for a reasonable buffer for any work corrections or variance.

Lines on the Contractor Schedule below can be added or removed by the Bidder in order to accurately describe how and when the delivery of the required work will be performed.

The purpose of the first line is to provide the Bidder with an example and can be modified to accurately describe the work and timeframe.

| Work Description / Milestone | Number of calendar days between work periods / Lead time | Amount of calendar days to Perform the Work |
|------------------------------|--|---|
| Eg. Kickoff meeting | Within 10 days of Contract award | 0.5 days |
| | | |
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| | | |
| Mandatory: Work closeout | Minimum 90 days before contract end date | |

By submitting this signed Contractor Schedule, the Bidder agrees to be bound contractually by the information that is provided and understands that the Contractor Schedule will form part of the resulting contract with the Winning Bidder.

Name and title of person authorized to sign on behalf of Bidder:

Name: _____ Title: _____

Signature: _____ Date: _____

ANNEX I – QUESTIONS AND ANSWERS

Question 1.

On drawing G1.0 existing device counts, are we replacing all of these & adding all the new fire alarm pull stations & smoke detectors? Please confirm.

Answer 1.

From drawing G1.0. All detection and control devices are being replaced and all signalling devices are being retained. Please refer to Items 1.10 to 1.17.

Question 2.

Please advise on what you require for DCLR wiring and whether it has to be fire rated.

Answer 2.

DCLR wiring is to be in EMT conduit and to meet manufacturer's requirements but to be FAS 90 rated, twisted pair, #18 minimum. Number of conductors is dependent upon the manufacturer chosen by the bidder. Fire rated wiring is NOT required anywhere on this project.

Question 3.

Just wanted to know if there is any requirement for specialized control room furniture for this solicitation? Please advise and thanks.

Answer 3.

No there is nothing in the specification for any required specialized control room furniture.

Question 4.

Are we required to connect the building automation system to the fire alarm system.

Answer 4.

Allow for 5 addressable points to monitor the inputs from the building automation system. The existing building automation points are currently connected to the existing fire alarm system main control unit on the ground floor.

Question 5.

Where do I find information on how to submit the bid bond correctly?

Answer 5.

The information relating to bid bonds is available at the following location (refer to "GI08):

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R/R2710T/22#bid-security-requirements>