

APPENDIX A9

Designated Substances Survey

1026 Finch Yard, Building D

Issued April 2021, by Fisher Environmental Ltd.



ENGINEERING



LABORATORY



DESIGNATED SUBSTANCES SURVEY FOR ACCESSIBILITY UPGRADES (IBI GROUP)

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1.0. EXECUTIVE SUMMARY

Fisher Environmental Ltd. ('Fisher') was retained by IBI Group to carry out a survey for the Designated Substances and other potential hazardous materials within specified work areas for Finch Yard Building D, located at 1026 Finch Avenue West, Toronto, Ontario, herein after referred to as the "Site". The site inspection and sampling works were conducted on March 23, 2021.

IBI Group has been commissioned by the City of Toronto to design and implement accessibility upgrades. The scope of the Designated Substances Survey (DSS) was to identify locations and types of designated substances within the building that may be impacted by the planned renovation work, and to provide recommendations for the safe handling or abatement of these materials, if any, prior to demolition.

The purpose of the project is to do the necessary construction and renovation at the locations are outlined on drawings provided by the IBI Group on March 16, 2021.

The survey was conducted in compliance with the Ontario Ministry of Labour (MOL) regulations for designated substances; O. Reg. 490/09 - *Designated Substances* and O. Reg. 278/05 - *Asbestos on Construction Projects and in Buildings and Repair Operations* made under the Occupational Health and Safety Act (OHSA), R.S.O. 1990.

Asbestos

Fisher was not provided with any previous DSS report. During the current survey, eighteen (18) bulk samples of building materials found within the specified work area(s) and that could potentially contain asbestos, were collected and submitted to Fisher Environmental Laboratories for Polarised Light Microscopy (PLM) analysis, as outlined in NIOSH Method 9002.

Based on the current results of laboratory analysis, the following material are found to contain asbestos;

- Cream caulking along the joints of block walls and door frames, at multiple locations.

Based on the findings of the survey, Fisher recommendations are as follows:

- Provide a copy of this report to contractors bidding on or performing work within the subject work areas;
- Remove the asbestos-containing cream caulking along the joints of the block walls and the door frames, using Type 1 abatement procedures, as outlined in O. Reg. 278/05.

Note: Fire doors, present within the specific work areas, may contain asbestos-containing thermal insulation inside the door panel. Removal of any asbestos containing fire doors, in intake condition, will require Type 1 to abatement procedures, as outlined in O. Reg. 278/05 and dispose of as asbestos waste.



Lead

Based on the age of the building, it is possible that lead-based paint and lead plumbing are present within the building. Lead can also be present in various ceramic tiles. During the current investigation, no samples were collected for lead analysis.

Fisher recommends that, prior to the planned renovation work, the removal of lead containing materials found within the specified work area(s), must be conducted using the appropriate lead abatement procedures. Lead abatement procedures to be used are determined by the method(s) of disturbance employed. Refer to *MOL Guideline: Lead on Construction Projects*, for details

Mercury

Mercury is presumed to be present in fluorescent light tubes and thermostatic controls. With the exception of fluorescent light bulbs and building thermostats, no other evidence of mercury was noted during the current survey. Prior to the planned renovation work, Fisher recommends that any presumed mercury-containing fluorescent light tubes and thermostats that will be impacted are to be removed and disposed of in accordance with O. Reg. 558/00.

Silica

No sampling for silica was conducted. However, as the building is constructed of concrete, brick and/or block walls with concrete floors, silica is expected to be found within these components of the buildings. If these materials will be disturbed during the planned renovation work, appropriate precautions should be taken to protect workers from inhaling silica dusts and debris. Refer to *MOL Guideline: Silica on Construction Projects* for details.

Other Designated Substances

The other Designated Substances would not be expected to be present at the Site. No immediate actions were recommended with regard to acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxide, isocyanates, and vinyl chloride.

Mould

During the current survey, no visible mould or favourable conditions for mould growth were observed in the specified work area(s). No action is recommended with regard to mould.



2.0. INTRODUCTION

Fisher Environmental Ltd. ('Fisher') was retained by IBI Group to carry out a survey for the Designated Substances and other potential hazardous materials within specified work areas for Finch Yard Building D, located at 1026 Finch Avenue West, Toronto, Ontario, herein after referred to as the "Site". The site inspection and sampling works were conducted on March 23, 2021.

IBI Group has been commissioned by the City of Toronto to design and implement accessibility upgrades. The scope of the Designated Substances Survey (DSS) was to identify locations and types of designated substances within the building that may be impacted by the planned renovation work, and to provide recommendations for the safe handling or abatement of these materials, if any, prior to demolition.

The purpose of the project is to do the necessary construction and renovation at the locations are outlined on drawings provided by the IBI Group on March 16, 2021.

3.0. REGULATIONS

The survey was conducted in compliance with the Ontario Ministry of Labour (MOL) regulations for designated substances; O. Reg. 490/09 - *Designated Substances* and O. Reg. 278/05 - *Asbestos on Construction Projects and in Buildings and Repair Operations* made under the Occupational Health and Safety Act (OHSA), R.S.O. 1990.

The OHSA, R.S.O. 1990, under the Ontario MOL, defines a toxic substance as a biological, chemical or physical agent (or a combination of such agents) whose presence in the workplace may endanger the health and safety of a worker. Sections of the Act that deals with toxic substances are intended to:

1. ensure that worker exposure to toxic substances is controlled;
2. ensure that toxic substances in the workplace are clearly identified and that workers are provided with enough information to be capable of handling them safely; and,
3. provide the general public with access to information about toxic substances used by industry in their communities.

The Act makes provision for a toxic substance to be "designated", where its use in the workplace is prohibited, regulated, restricted, limited or controlled. Designation is reserved for eleven substances that are particularly hazardous, covered under O. Reg 490/09 – *Designated Substances* that was implemented on July 1, 2010, and include Acrylonitrile, Arsenic, Asbestos, Benzene, Coke Oven Emissions, Ethylene Oxides, Isocyanates, Lead, Mercury, Silica, and Vinyl Chloride. Formerly, regulations for these substances were passed separately and each outlined exposure limits where workers were likely to inhale, ingest and / or absorb the substance.



O. Reg. 490/09 provides a consistent approach to dealing with existing requirements and provisions, and outlines steps required to control worker exposure to these substances, including by inhalation, ingestion, skin absorption or skin contact. Each designated substance has an allowable level of exposure based on a time-weighted average (TWA) limit, and may also have a short-term exposure limit (STEL) and / or ceiling limit (C) assigned to it. TWA refers to the time-weighted average airborne concentration of a biological or chemical agent to which a worker may be exposed in a work day or work week, STEL refers to the maximum airborne concentration of a biological or chemical agent to which a worker may be exposed in any 15 minute period, and C refers to the maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time. Refer to O. Reg. 490/09 – *Designated Substances*.

A supplementary regulation regarding control of asbestos exposures in the construction industry has evolved into O. Reg. 278/05 – *Asbestos on Construction Projects and in Buildings and Repair Operations*. The regulation includes a definition of asbestos-containing materials (ACM), requirements for additional training and clearance air testing, procedures for determining materials that meet the definition of ACM and for the use of glove bags, and provisions for varying from measure and procedures set out in the regulation.

In addition to the OHSA and regulations regarding designated substances, the following regulations, guidelines and standards were also taken into account or referenced:

- O. Reg. 213/91 - *Construction Projects* regulated under the OHSA and last amended by O. Reg. 443/09;
- O. Reg. 558/00 made under the Ministry of Environment (MOE) Environmental Protection Act, amending O. Reg. 347 - *General Waste Management*;
- The Transport of Dangerous Goods Act (TDGA) provides regulations for the transport of asbestos-containing materials and wastes;
- MOL *Guideline: Lead on Construction Projects*, 2011; and,
- MOL *Guideline: Silica on Construction Projects*, 2011.

4.0. METHODOLOGY

Fisher followed the protocols outlined in O. Reg. 278/05 for collecting and analyzing bulk samples of materials suspected to contain asbestos. Visual assessment of the material was the primary method of identification with occasional physical contact for the purpose of collecting bulk samples or examining for underlying layers.

Where applicable, samples of suspect materials were collected in order to establish asbestos or lead content. Samples were grouped according to similarity of appearance (“homogeneous” materials). The frequency at which the samples were collected was sufficient to obtain a general representation of the presence of these materials at the Site. Samples collected are presumed to



be representative of respective building materials in-place at the Site. However, due to potential past renovations, alterations, repairs, or phases of construction, it is possible that individual materials may not be representative of samples collected.

Sampling of roofing materials was not part of the current scope of work. Further, sampling of materials found within operating equipment, portable building articles, or generally non-accessible components such as insulation within electrical switch gears, wiring, motors, light fixtures, elevator brakes, fire door cores, etc. was not performed as part of the current survey.

Samples collected during the survey were placed in plastic zip-lock bags which were labeled and submitted for laboratory analysis. Fisher Environmental Laboratories analysed bulk samples for asbestos type and approximate percent content by performing polarized light microscopy (PLM), as outlined in NIOSH Method 9002. Fisher Environmental Laboratories analysed samples for lead content in paint by performing acid digestion followed by Inductively Coupled Plasma (ICP) analysis.

Site Plan(s), indicating specific work area(s), bulk sample locations and any area(s) of asbestos, are included in Appendix A. The laboratory certificate of analysis is included in Appendix B. Representative photo of Site conditions encountered at the time of the current survey are included in Appendix C.

5.0. REVIEW OF PREVIOUS REPORTS

No previous DSS report was available for review.

6.0. FINDINGS AND RECOMMENDATIONS

6.1. *Acrylonitrile*

Acrylonitrile would not be expected to be present at the Site and was not observed during the current survey. No recommendations for Acrylonitrile are warranted at this time.

6.2. *Arsenic*

Arsenic would not be expected to be present at the Site and was not observed during the current survey. No recommendations for Arsenic are warranted at this time.

6.3. *Asbestos*

6.3.1. General Information

Asbestos is the name given to a group of six different fibrous minerals (amosite, chrysotile, crocidolite, and the fibrous varieties of tremolite, actinolite and anthophyllite) that occur naturally in the environment. Asbestos minerals have separable long fibres that are strong and flexible enough to be spun and woven and are heat resistant.



Because of these characteristics, asbestos has been used for a wide range of manufactured goods, mostly in building materials (roofing shingles, ceiling and floor tiles, paper products, and asbestos cement products), friction products (automobile clutch, brake, and transmission parts), heat-resistant fabrics, packaging, gaskets, and coatings. Some vermiculite or talc products may also contain asbestos.

Asbestos fibres may be released into the air by the disturbance of ACM during product use, renovation or demolition work, building or home maintenance, repair and remodeling. In general, exposure may occur only when the ACM is disturbed in some way to release particles and fibres into the air.

6.3.2. Friable vs. Non-Friable ACM

Based on the requirements of O. Reg. 278/05 and due diligence, an asbestos survey and report must be available at any workplace where asbestos exists identifying locations and types of ACM in the building. The survey must include both friable and non-friable materials confirmed to contain asbestos, as well as any other materials which were not sampled but are suspected (presumed) ACM. The term friable refers to material(s) that could be readily reduced to dust or powder when crushed by hand or moderate pressure. Friable materials have a much greater chance of releasing airborne asbestos fibres when disturbed.

In the past, the most commonly used friable asbestos-containing building materials were surfacing materials (e.g. sprayed on fireproofing, texture, decorative or acoustic plaster) as well as thermal insulation. Examples of manufactured asbestos-containing materials include vinyl floor tiles, ceiling tiles, gasket materials, asbestos cement (transite) pipes or boards, and asbestos textiles. Depending on the above noted formulation, these materials range from non-friable to friable. Although some products are considered non-friable when in Good condition, severe damage or deterioration may cause non-friable materials to generate airborne dust more readily. Severely damaged non-friable materials, or those to be worked on with powered tools, may be considered as friable ACM for abatement purposes.

Examples of common types of ACM by friability include:

- Friable ACM
 - Sprayed Materials (or materials installed by roller or trowel), such as fireproofing, thermal insulation, texture finishes, etc.
 - Mechanical Insulation such as boiler and breeching, ductwork, piping, tanks and associated equipment.
 - Plaster
- Potentially Friable ACM
 - Acoustic Ceiling Tiles



- Vinyl Sheet Flooring
- Non-Friable ACM
 - Vinyl Floor Tiles
 - Asbestos cement (“transite”) piping or paneling
 - Window Caulking

6.3.3. Regulations

Exposure to asbestos is controlled by two Regulations passed under Ontario’s Occupational Health and Safety Act (OHSA), R.R.O. 1990.

- O. Reg. 490/09 – *Designated Substances* regarding asbestos applies to:
 - every employer operating a mine for the purpose of mining, crushing, grinding or sifting asbestos;
 - every employer processing, adapting or using asbestos in connection with manufacturing or assembling of goods or products;
 - every employer engaged in the repair, alteration or maintenance of machinery, equipment, aircraft, ships, locomotives, railway cars and vehicles;
 - every employer engaged in work on a building that is necessarily incidental to the repair, alteration or maintenance of machinery or equipment; and,
 - to those workers of such employers who are likely to be exposed to asbestos.

Exposure limits for this substance are set at 0.1 f/cc (TWA) for all types of asbestos.

- O. Reg. 278/05 - *Asbestos on Construction Projects and in Buildings and Repair Operations* applies to buildings that contain friable and non-friable ACM and to the repair, alteration and/or maintenance of these buildings.

In addition to regulations for controlling work around asbestos-containing building materials there are regulations for packaging, transportation and disposal of asbestos-containing waste:

- O. Reg. 558/00 made under the Ministry of Environment (MOE) Environmental Protection Act, amending O. Reg. 347 - *General Waste Management*; and,
- The Transport of Dangerous Goods Act (TDGA) provides regulations for the transport of asbestos-containing materials and wastes.

6.3.4. Findings

Samples of homogenous materials suspected to contain asbestos were collected and submitted for analysis. Fisher collected eighteen (18) bulk samples of building materials found within the specified work area(s) and that could potentially contain asbestos. Findings of all building materials identified within the specified work areas are outlined in further detail below.



6.3.4.1. Sprayed or Troweled Fireproofing and Thermal Insulation

No indication of sprayed or troweled fireproofing and / or thermal insulation was noted in any of the specified work areas during the current survey.

6.3.4.2. Texture Finish

No texture finish was noted in any of the specified work areas during the current survey.

6.3.4.3. Mechanical Insulation

The majority of mechanical insulation observed throughout the building are either not insulated or are insulated with fibreglass which is not suspected to contain asbestos.

6.3.4.4. Acoustic Ceiling Tile

During the current survey, one (1) visually distinct style of ceiling tile was observed within the specified work areas.

- Ceiling Tile 1 (2'x4' Wide Random Pinpoint)

This ceiling tiles was not sampled as part of the survey, since this material is not expected to be disturbed by the specified scope of work.

6.3.4.5. Plaster / Drywall Joint Compound

Plaster was not observed within the specified work areas during the survey. Drywall Joint Compound (DJC) was observed throughout the building. During the current survey, six (6) samples of DJC were collected and submitted for analysis. The results of analysis revealed that the DJC does not contain asbestos.

6.3.4.6. Asbestos Cement Products

No asbestos cement products, such as Transite pipe or board, were noted in any of the specified work areas during the current survey.

6.3.4.7. Vinyl Sheet Flooring

No vinyl sheet flooring was noted in any of the specified work areas during the current survey.

6.3.4.8. Vinyl Floor Tile

During the current survey, one (1) vinyl floor tile was observed within the specified work areas.

- Vinyl Floor Tile 1 – 12" x 12", Light Grey with Grey

Three (3) samples of this vinyl floor tile were collected for analysis. The results of analysis revealed that Vinyl Floor Tile 1 does not contain asbestos.



6.3.4.9. Other ACM

Cream Caulking

Cream caulking was observed along the joints of the block walls and the door frames at multiple locations. Three (3) samples of the cream caulking were collected for analysis. The results of analysis revealed that the cream caulking contains 0.5-5% Chrysotile asbestos.

White Caulking

White caulking was observed along the joints of the stair structures and the block wall in the stairwells. Three (3) samples of the white caulking were collected for analysis. The results of analysis revealed that the white caulking does not contain asbestos.

Grey Caulking

Grey caulking was observed along the joints of the wall and the door frame in the office area. Three (3) samples of the grey caulking were collected for analysis. The results of analysis revealed that the grey caulking does not contain asbestos.

6.3.5. Recommendations

Prior to demolition or any renovation activities, all asbestos-containing materials must be removed from the specified work area(s) in accordance with O. Reg. 278/05 - *Asbestos on Construction Projects and in Buildings and Repair Operations*, and be disposed of at a MOE licensed landfill in accordance with O. Reg. 558/00 (amending O. Reg. 347, *General – Waste Management*).

Refer to attached Site Plans in Appendix A, which illustrate where the ACM is located within the specified work areas.

Specifically, Fisher recommends the following:

- Provide a copy of this report to contractors bidding on or performing work within the subject work areas;
- Remove the asbestos-containing cream caulking along the joints of the block walls and the door frames using Type 1 abatement procedures, as outlined in O. Reg. 278/05.

Note: Fire doors, present within the specific work areas, may contain asbestos-containing thermal insulation inside the door panel. Removal of any asbestos containing fire doors, in intake condition, will require Type 1 to abatement procedures, as outlined in O. Reg. 278/05 and dispose of as asbestos waste.

The presence of ACM should be presumed in locations not accessed during this survey. It is possible that ACM is present at the Site that is not identified in this report. Should additional suspected ACM be discovered, it should be presumed as ACM until sample analysis determines asbestos content.



Due to the limited nature of the current scope of work and the presence of solid building finishes (i.e. plaster or drywall walls and ceilings etc.) in many locations, the full extent of ACM may not be confirmed. Precautions should be taken when dismantling solid wall or ceiling finishes, or any other building surfaces which may conceal potential ACM. Such precautions include, but are not limited to, isolation measures and appropriate personal protective equipment.

6.4. Benzene

Benzene would not be expected to be present at the Site and was not observed during the current survey. No recommendations for Benzene are warranted at this time.

6.5. Coke Oven Emissions

Coke oven emissions would not be expected to be present at the Site and were not observed during the current survey. No recommendations for coke oven emissions are warranted at this time.

6.6. Ethylene Oxides

Ethylene oxides would not be expected to be present at the Site and were not observed during the current survey. No recommendations for ethylene oxides are warranted at this time.

6.7. Isocyanates

Isocyanates would not be expected to be present at the Site and were not observed during the current survey. No recommendations for isocyanates are warranted at this time.

6.8. Lead

6.8.1. General Information

Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. Most lead in the environment comes from human activities such as burning fossil fuels, mining and manufacturing. Lead is used in the production of batteries, ammunition, metal products (solder and pipes) and X-ray devices.

Lead does not break down but lead compounds are changed by sunlight, air and water. Exposure occurs when eating food or drinking water that contains lead. Deteriorated lead paint can contribute to lead dust. The main target for lead toxicity is the nervous system.

6.8.2. Regulations and Guidelines

The Ontario MOL has not prescribed criteria defining an analyzed sample of bulk material as "lead-containing". Further, the MOL has not established a lower limit for concentrations of lead in paint, below which precautions do not need to be considered during construction projects. However, except for very aggressive disturbance of painted finishes, (e.g., abrasive blasting, torch cutting, or grinding), Fisher believes that a lead content below 0.1% by weight (1,000 ug/g or 1000



ppm) represents a concentration in which the lead content is not the limiting hazard for construction hygiene purposes. Regular construction dust suppression techniques and worker hygiene practices are sufficient for disturbance of paint finishes determined to contain less than 0.1% lead by weight, provided that work is limited to non-aggressive operations.

The regulation for the designated substance lead applies to every employer and worker at a workplace where lead is present, produced, processed, used, handled or stored and at which a worker is likely to be exposed to lead. Exposure limits for this substance are set at 0.05 – 0.10 mg/m³ (TWA) depending on the type of lead, and for tetraethyl lead 0.30 mg/m³ (STEL).

Additionally, in 2011 the MOL revised *Guideline: Lead on Construction Projects* outlining practices that should be followed during construction projects to protect workers' from exposure to lead. This includes the methods and equipment employed in the removal of lead-containing coatings that reduce the creation of dust, providing appropriate facilities for workers to wash after each shift, and providing protective clothing and respirators where necessary.

6.8.3. Findings

Based on the age of the building, it is possible that lead-based paint and lead plumbing are present within the building. Lead can also be present in various ceramic tiles. During the current investigation, no samples were collected for lead analysis.

6.8.4. Recommendations

Where any lead-containing materials may be disturbed or removed, Fisher recommends that appropriate lead abatement procedures be used. The lead abatement procedures to be used are determined by the method(s) of disturbance employed. Regular construction dust suppression techniques and worker hygiene practices are sufficient for disturbance of paint finishes determined to contain less than 0.1% lead by weight, provided that work is limited to non-aggressive operations. The table below outlines lead abatement operations and associated respirator required, as outlined in Ontario MOL guidelines.

Classifications of Lead-Containing Operations and Required Respirator

Type 1 Operations (where concentrations of airborne lead would be expected to be < 0.05 mg/m ³)	
Activities that include; <ul style="list-style-type: none"> • Removal of lead containing coatings with chemical gel or paste and fibrous laminated cloth wrap • Removal of lead containing coatings / materials using power tool that has an effective dust collection system equipped with HEPA filter • Removal of lead containing coatings / materials using non-powered hand tools other than manual scraping or sanding 	Respirators should not be necessary if general procedures are followed and level of air is less than 0.05 mg/m ³ . However, if worker wishes to use a respirator, a half-mask particulate respirator with N-, R- or P-series filter, and 95, 99 or 100% efficiency should be provided.
Type 2a Operations (where concentrations of airborne lead would be expected to be > 0.05 to 0.50 mg/m ³)	
Activities that include; <ul style="list-style-type: none"> • Removal of lead containing coatings / materials by scraping or sanding using non-powered hand tools 	NIOSH APF = 10



<ul style="list-style-type: none"> Manual demolition of lead painted plaster walls / building components by striking with a sledgehammer or similar tool 	Half-mask particulate respirator with N- , R- or P- series filter, and 95, 99 or 100% efficiency.
Type 2b Operations (where concentrations of airborne lead would be expected to be > 0.50 to 1.25 mg/m ³)	
Not applicable to potential renovation activities.	
Type 3a Operations (where concentrations of airborne lead would be expected to be > 1.25 to 2.50 mg/m ³)	
Activities that include; <ul style="list-style-type: none"> Welding or high temperature cutting of lead-containing coatings or materials indoors or in a confined space. Dry removal of lead-containing mortar using an electronic or pneumatic cutting device. Burning of a surface containing lead Removal of lead containing coatings / materials using power tools without an effective dust collection system equipped with HEPA filter 	NIOSH APF = 50 Full-face piece air-purifying respirator with N- , R- or P- series filter and 100% efficiency. Tight-fitting powered air-purifying respirator with high efficiency filter. Full-face piece supplied-air respirator operated in demand mode. Half-mask or full-face piece supplied air respirator operated in continuous-flow mode.
Type 3b Operations (where concentrations of airborne lead would be expected to be > 2.50 mg/m ³)	
Abrasive blasting of lead-containing coatings or materials.	NIOSH APF >=1000 Type CE abrasive-blast supplied respirator operated in a positive pressure mode with a tight-fitting half-mask face piece.

Refer to MOL *Guideline: Lead on Construction Projects, 2011*, for details of the Ministry's health and safety guidelines regarding lead.

6.9. Mercury

6.9.1. General Information

Mercury is a naturally occurring metal. It is a shiny, silver-white and odourless liquid. It combines with other elements to form inorganic compounds or salts. Metallic mercury is used to produce chlorine gas and caustic soda, and is used in thermostats and thermometers, fluorescent light bulbs, dental fillings and batteries. Exposure occurs when eating fish or shellfish contaminated with methyl mercury, breathing vapors from spills, incinerators, etc.

The nervous system is very sensitive to all forms of mercury. Exposure to high levels of metallic inorganic or organic mercury can permanently damage the brain, kidneys and developing fetus. Short-term exposure may cause lung damage, nausea, vomiting and diarrhea as well as skin and eye irritation.

6.9.2. Regulations

The regulation for mercury applies to every employer and worker at a workplace where mercury is present, produced, processed, used, handled or stored and at which a worker is likely to be exposed to mercury. Exposure limits for this substance are set at 0.025 – 0.01 mg/m³ (TWA) for all forms of mercury excluding alkyl, and for alkyl compounds of mercury 0.03 mg/m³ (STEL).



6.9.3. Findings

Mercury is presumed to be present in fluorescent light tubes and thermostatic controls. With the exception of fluorescent light bulbs and building thermostats, no other evidence of mercury was noted during the current survey.

6.9.4. Recommendations

Prior to the planned renovation work, Fisher recommends that any presumed mercury-containing fluorescent light tubes and thermostats that will be impacted are to be removed and disposed of in accordance with O. Reg. 558/00.

6.10. Silica

6.10.1. General Information

Silica is a crystalline compound occurring abundantly as quartz, sand, and many other minerals, and used to manufacture a variety of materials, especially glass and concrete. When mining this substance, silica can be deadly when it becomes airborne. If inhaled, silica dust can cause silicosis which can be fatal.

Some of the following industries have a high potential for risk to workers: construction (sandblasting, rock drilling, masonry work, jack hammering, tunneling), mining (cutting or drilling through sandstone or granite), foundry work (grinding, mouldings, shakeout, core room), stone cutting (sawing, abrasive blasting, chipping, grinding), manufacturing and use of abrasives, etc.

6.10.2. Regulations

The regulation for silica applies to every employer and worker at a workplace where silica is present, produced, processed, used, handled or stored and at which a worker is likely to be exposed to silica. Exposure limits for this substance are set at 0.05 - 0.10 mg/m³ (TWA), depending on the type of silica.

Additionally, in 2011 the MOL revised *Guideline: Silica on Construction Projects* outlining practices that should be followed during construction projects to protect workers' from exposure to silica. This includes the methods and equipment employed in the removal of silica-containing materials that reduce the creation of dust, providing appropriate facilities for workers to wash after each shift, and providing protective clothing and respirators where necessary.

6.10.3. Findings

No sampling for silica was conducted. However, as the building is constructed of concrete, brick and/or block walls with concrete floors, silica is expected to be found within these components of the buildings.



6.10.4. Recommendations

If these materials will be disturbed during the planned renovation work, appropriate precautions should be taken to protect workers from inhaling silica dusts and debris. Refer to *MOL Guideline: Silica on Construction Projects* for details.

6.11. Vinyl Chloride

Vinyl chloride would not be expected to be present at the Site and was not observed during the current survey. No recommendations for vinyl chloride are warranted at this time.

6.12. Mould

During the current survey, no visible mould or favourable conditions for mould growth were observed in the specified work area(s). No action is recommended with regard to mould.



7.0. LIMITATIONS

Fisher Environmental Ltd. accepts responsibility for the competent performance of its duties in executing this assignment within the normal standards of the profession, but disclaims responsibility for consequential damages, if any.

The scope of the survey is based on prior agreement with the client, and the rationale given in this report. The survey findings rely on professional interpretation of selective sampling and analysis. Sample analysis results have been applied to homogenous materials in unsampled locations; it was not within the scope of work to carry out an exhaustive sampling and analysis program. For non-accessible building spaces, the likelihood of the presence or absence of asbestos and other designated substances has been described, but such assessment is not a definitive statement of presence or absence.

This report was prepared for the IBI Group. The scope of services performed may not be appropriate for the purposes of other users, and any use or reuse of this document or its findings or recommendations represented herein is at the sole risk of any other user.

We trust that the information provided in the report meets your current requirements. If you have any questions or concerns, please do not hesitate to contact the undersigned.

Respectfully submitted,



Iqbal Fattah, M.Sc.
Project Manager

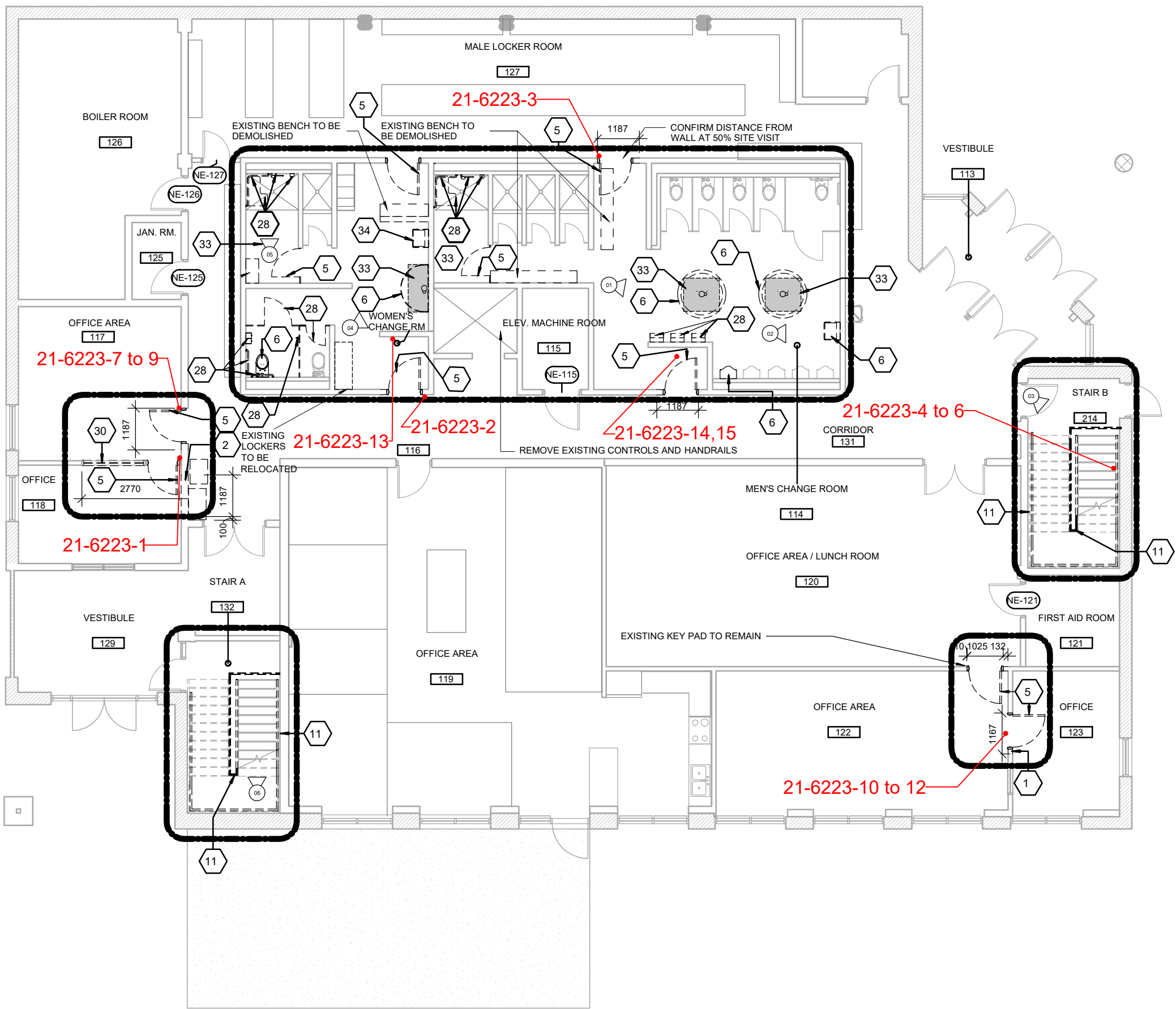


David Fisher, P. Eng., C. Chem.
Principal



APPENDIX A – SITE PLANS





Legend



Area of Work



Asbestos Sample Location

Figure 1

LOCATION: 1026 Finch Avenue West
Toronto, Ontario

BUILDING NAME: Finch Yard Building D

First Floor Plan
Asbestos Sample Locations

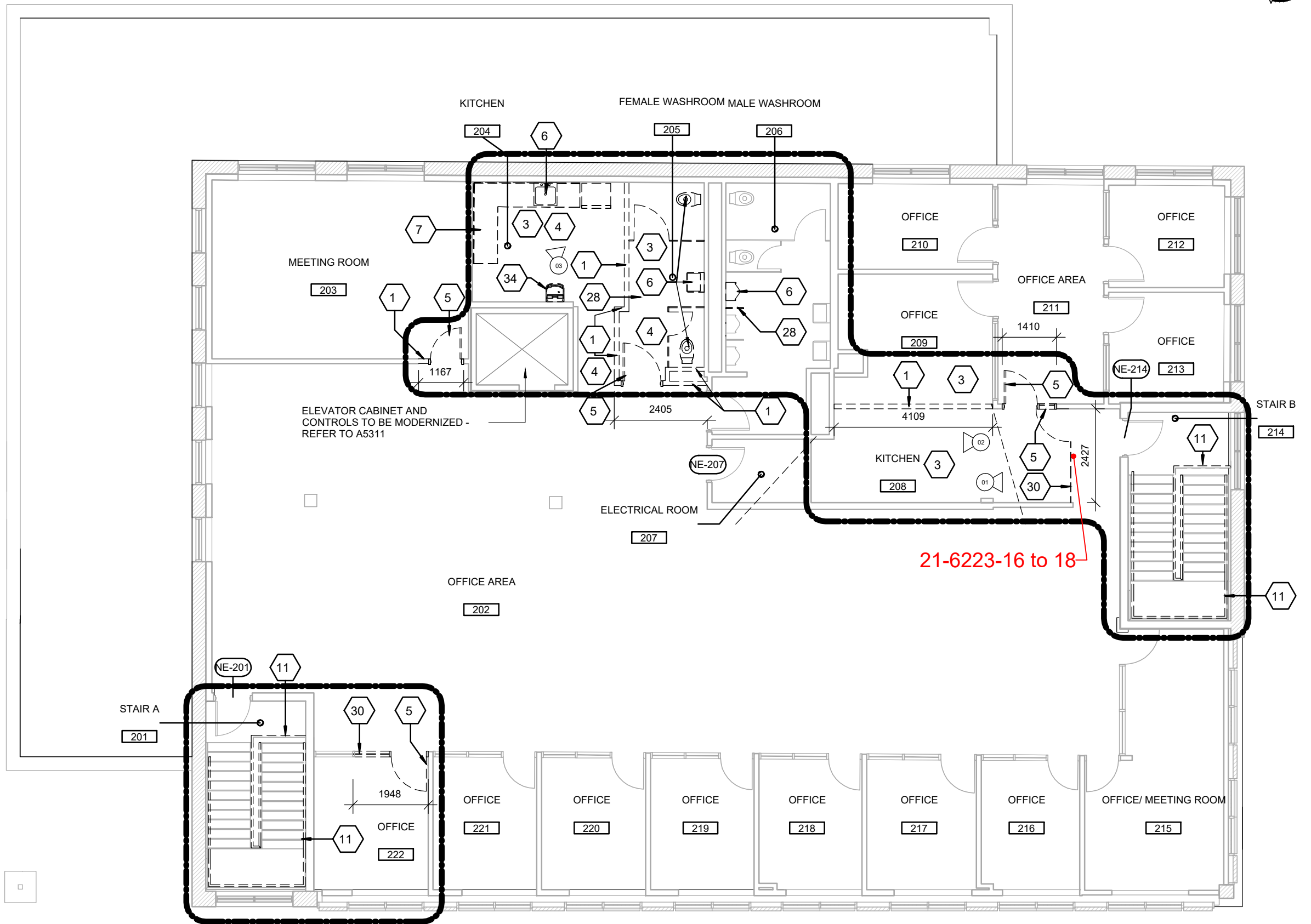
CLIENT: IBI Group

PROJECT NUMBER: FE-P 21-11073	DATE: March 2021	DRW BY: ZA
CAD FILE: FIG1	SCALE: Not to Scale	CHK BY: IF



400 Esna Park Dr., #15
Markham, Ontario
L3R 3K2

Tel: 905 475-7755
Fax: 905 475-7718



Legend



Area of Work



Asbestos Sample Location

Figure 2

LOCATION: 1026 Finch Avenue West
Toronto, Ontario

BUILDING NAME: Finch Yard Building D

Second Floor Plan Asbestos Sample Locations

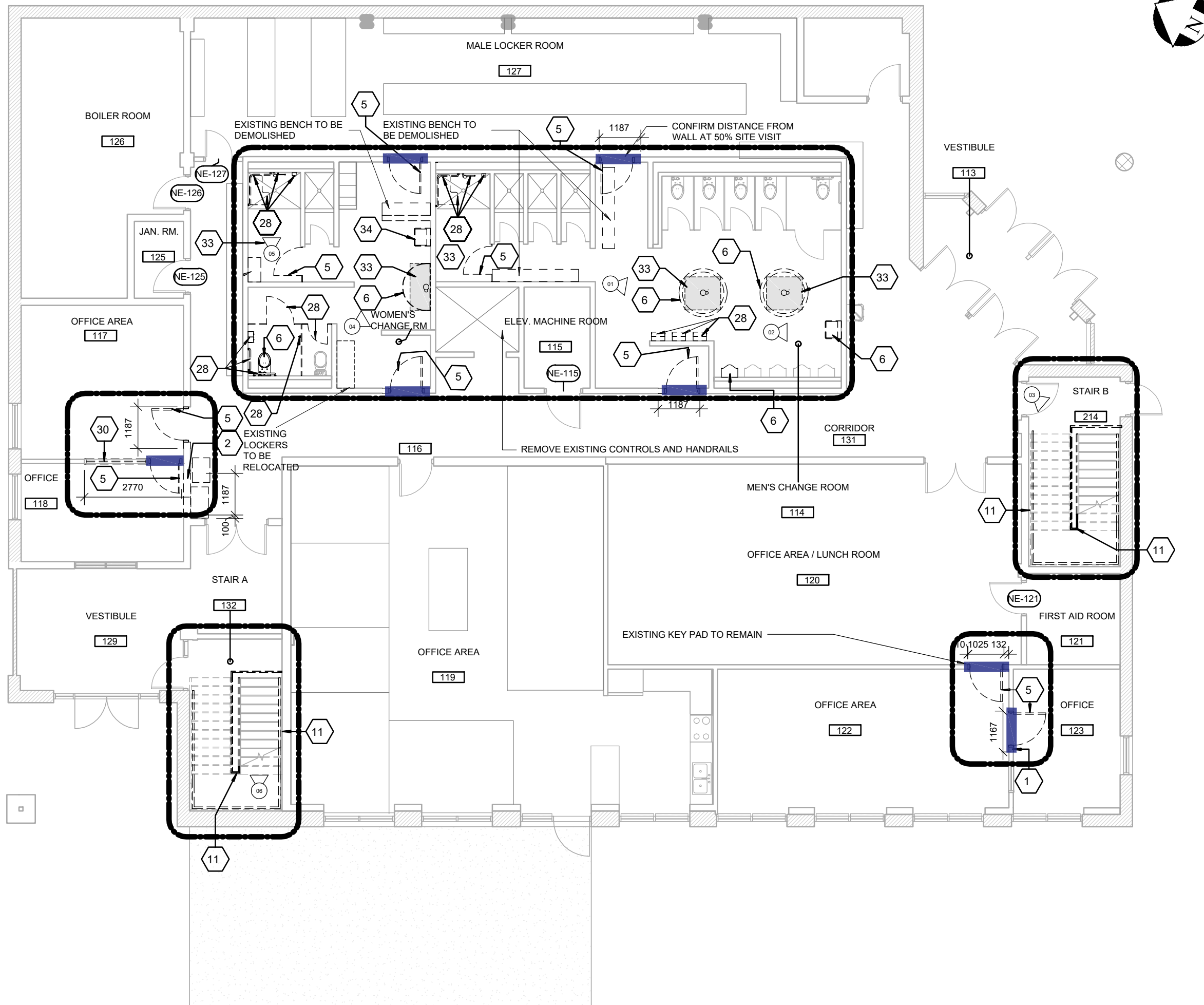
CLIENT: IBI Group

PROJECT NUMBER: FE-P 21-11073	DATE: March 2021	DRW BY: ZA
CAD FILE: FIG2	SCALE: Not to Scale	CHK BY: IF



400 Esna Park Dr., #15
Markham, Ontario
L3R 3K2

Tel: 905 475-7755
Fax: 905 475-7718



Legend



Area of Work



Asbestos-Containing Cream Caulking

Figure 3

LOCATION:
1026 Finch Avenue West
Toronto, Ontario

BUILDING NAME:
Finch Yard Building D

First Floor Plan Asbestos-Containing Material Locations

CLIENT: IBI Group

PROJECT NUMBER: FE-P 21-11073	DATE: March 2021	DRW BY: ZA
CAD FILE: FIG3	SCALE: Not to Scale	CHK BY: IF



400 Esna Park Dr., #15
Markham, Ontario
L3R 3K2

Tel: 905 475-7755
Fax: 905 475-7718

APPENDIX B – CERTIFICATE OF ANALYSIS



Fisher Environmental Ltd

Project No. FE-P 21-11073, April 9, 2021



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www.fisherenvironmental.com

Client: IBI Group
Address: 100-175 Galaxy Blvd.
Toronto, ON
M9W 0C9
Tel.:
E-mail:
Attn: Faraz Bolourian

F.E. Job #: 21-6223
Project Name: DSS
Project ID: FE-P 21-11073
Date Sampled: N/A
Date Received: 25-Mar-2021
Date Reported: 1-Apr-2021
Location: 1026 Finch Avenue West
Building D

Certificate of Analysis

Analysis Requested:	Asbestos by PLM		
Sample Description:	18 Bulk Sample(s)		
Sample Matrix and Client Sample Description	Client Sample Location	Lab Sample ID	Asbestos Content and Fibre Type
1A - Cream Caulking	Ground Floor, Manager Office, Around the door frame	21-6223-1	Not Detected
1B - Cream Caulking	Ground Floor, Women's Washroom, Around the door frame	21-6223-2	0.5-5%, Chrysotile
1C - Cream Caulking	Ground Floor, Men's Washroom, Around the door frame	21-6223-3	0.5-5%, Chrysotile
2A - White Caulking	Ground Floor, Stair B, Along the joint of the stairs and the wall	21-6223-4	Not Detected
2B - White Caulking	Ground Floor, Stair B, Along the joint of the stairs and the wall	21-6223-5	Not Detected
2C - White Caulking	Ground Floor, Stair B, Along the joint of the stairs and the wall	21-6223-6	Not Detected
3A - Grey Caulking	Ground Floor, Office, Around the door frame	21-6223-7	Not Detected
3B - Grey Caulking	Ground Floor, Office, Around the door frame	21-6223-8	Not Detected
3C - Grey Caulking	Ground Floor, Office, Around the door frame	21-6223-9	Not Detected
4A - Vinyl Floor Tile, 12"x12" Light Grey with Grey Streaks	Ground Floor, Office, Floor	21-6223-10	Not Detected
4B - Vinyl Floor Tile, 12"x12" Light Grey with Grey Streaks	Ground Floor, Office, Floor	21-6223-11	Not Detected
4C - Vinyl Floor Tile, 12"x12" Light Grey with Grey Streaks	Ground Floor, Office, Floor	21-6223-12	Not Detected

Certificate of Analysis

Analysis Requested:	Asbestos by PLM
Sample Description:	6 Bulk Sample(s)

Sample Matrix and Client Sample Description	Client Sample Location	Lab Sample ID	Asbestos Content and Fibre Type
5A - Drywall Joint Compound	Ground Floor, Women's Washroom, Ceiling	21-6223-13	Not Detected
5B - Drywall Joint Compound	Ground Floor, Men's Washroom, Ceiling	21-6223-14	Not Detected
5C - Drywall Joint Compound	Ground Floor, Men's Washroom, Ceiling	21-6223-15	Not Detected
6A - Drywall Joint Compound	2nd Floor, Kitchen, Wall	21-6223-16	Not Detected
6B - Drywall Joint Compound	2nd Floor, Kitchen, Wall	21-6223-17	Not Detected
6C - Drywall Joint Compound	2nd Floor, Kitchen, Wall	21-6223-18	Not Detected

Fisher Environmental Laboratories (Lab ID #: 2745) is accredited by CALA (Canadian Association for Laboratory Accreditation Inc.) for asbestos analysis by PLM.

ANALYTICAL METHOD:

Asbestos has been done in accordance with normal professional standard using the following Fisher Environmental Lab Method: Asbestos by PLM (Polarized Light Microscope) F-26, Rev.2.2.

Authorized by:

Lin Rong

Roger Lin, Ph. D., C. Chem.
Laboratory Manager



APPENDIX C – SITE PHOTOS





Photo 1 – View of the asbestos-containing cream caulking along the joint of a brick wall and a door frame.

