

February 26, 2021

MAPLE PROJECT NO. 18683

REPORT ON ASBESTOS-CONTAINING BUILDING MATERIALS

Durham College – J Block

2000 Simcoe Street North

Oshawa, Ontario, L1G 0C5

Presented to:

Kory Thompson

Durham College

2000 Simcoe Street North

Oshawa, Ontario L1G 0C5



EXECUTIVE SUMMARY

MAPLE Environmental Inc. ("MAPLE") was retained by Durham College to conduct an inventory for the presence of asbestos-containing materials ("ACM") within J-Block of Durham College located at 2000 Simcoe Street North, Oshawa, Ontario (the "Site"), and to provide recommendations to fulfill requirements set forth within Ontario Regulation 278/05.

The findings of the current assessment are summarized below. Please refer to the main body of the report for details.

FINDINGS

Confirmed asbestos-containing materials (ACM) identified within the building at the time of the assessment are as follows:

- Vinyl Floor Tiles (VFT-02)
- Transite Cement (Drain Line)

Suspect asbestos-containing materials identified within the building at the time of the assessment are as follows:

- Grey Duct Mastic

Please refer to Room-by-Room data in Appendix II to view location, quantities, and condition of ACM observed within the building at the time of the assessment.

RECOMMENDATIONS

Asbestos-containing materials were found to be present within the building at the time of the assessment therefore an Asbestos Management Program (AMP) is required for this building. For compliance with Regulation 278/05 the following remedial action is required.

Using Type 1 Asbestos procedures remove all ACM in POOR condition at the location listed in the table below:

Loc No.	Room Name	Floor	Building System	Description	Quantity
J106A	Electrical Closet	1	Floor	VFT-02	8 SF

All remaining asbestos-containing materials identified within the building were observed to be in GOOD condition and therefore no additional immediate recommendations are warranted.

Ontario Regulation 278/05 requires an annual re-assessment of all ACM.

General Statement

The Executive Summary must be read in conjunction with the main body of this report.

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	ONTARIO ASBESTOS REGULATIONS.....	1
2.1	ONTARIO REGULATION 278/05	1
2.2	ONTARIO REGULATION 558/00	2
3.0	INVENTORY SCOPE AND METHODOLOGY	2
3.1	INVENTORY METHODOLOGY.....	2
3.2	OMISSIONS FROM SCOPE	3
3.3	SAMPLING STRATEGY AND ANALYTICAL METHODS	3
3.4	ASSESSMENT CRITERIA	4
3.5	DRAWINGS	5
4.0	INVENTORY FINDINGS.....	5
4.1	SPRAYED FIREPROOFING (<i>FRIABLE</i>)	7
4.2	THERMAL MECHANICAL INSULATION (<i>FRIABLE</i>)	8
4.3	TEXTURE FINISH (<i>FRIABLE</i>)	8
4.4	ACOUSTIC CEILING TILES (POTENTIALLY <i>FRIABLE</i>).....	8
4.5	VINYL SHEET FLOORING (<i>POTENTIALLY FRIABLE</i>)	10
4.6	VINYL FLOOR TILE (<i>NON-FRIABLE</i>)	10
4.7	ASBESTOS CEMENT PRODUCTS "TRANSITE" (<i>NON-FRIABLE</i>)	11
4.8	DRYWALL JOINT COMPOUND (<i>POTENTIALLY FRIABLE</i>).....	11
4.9	PLASTER (<i>FRIABLE</i>)	12
4.10	VERMICULITE (<i>FRIABLE</i>)	12
5.0	CONCLUSIONS & RECOMMENDATIONS.....	12
5.1	CONCLUSIONS.....	12
5.2	GENERAL RECOMMENDATIONS	12
5.3	SPECIFIC RECOMMENDATIONS	13
6.0	LIMITATIONS.....	13
6.1	SCOPE OF ACTIVITY	13
6.2	LIMITATION OF USE OF THIS REPORT	13

APPENDIX I LABORATORY ANALYTICAL RESULTS

APPENDIX II ROOM-BY-ROOM ASBESTOS INVENTORY

APPENDIX III DRAWINGS

1.0 INTRODUCTION

MAPLE Environmental Inc. ("MAPLE") was retained by Durham College to conduct an inventory for the presence of asbestos-containing materials ("ACM") within J Block of Durham College located at 2000 Simcoe Street North, Oshawa, Ontario (the "Site"), and to provide recommendations to fulfill requirements set forth within Ontario Regulation 278/05.

The findings of the inventory are contained in the following report. Mark Pollock of MAPLE conducted the fieldwork on January 19, 2021.

Ontario Ministry of Labour Regulation 278/05 requires that a detailed asbestos inventory must be performed in all buildings where friable and non-friable asbestos materials are present. The inventory must be available at the work place and must identify the type of asbestos, and location of asbestos on a room-by-room basis. The following report meets or exceeds the requirements for an asbestos survey under Ontario Regulation 278/05.

The subject building is a 2-storey educational building with a portable attached to the south side. It should be noted that the above noted portable is operated by UOIT and was not included as part of the current survey as directed by the Client.

2.0 ONTARIO ASBESTOS REGULATIONS

Three regulations govern the control, handling, transport and disposal of asbestos in Ontario: Ontario Regulation 278/05: The Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations made under the Ontario Occupational Health and Safety Act R.S.O. 1990, c.0.1, Ontario Regulation 558/00: General Waste Management made under the Ontario Environmental Protection Act R.S.O. 1990, c.E. 19; and, Federal Regulation SOR-2001-286: Transportation of Dangerous Goods Regulation, made under the Transportation of Dangerous Good Act, 1992. Two of these regulations are briefly outlined below.

2.1 Ontario Regulation 278/05

Ontario Regulation 278/05 applies to buildings with regards to maintenance, renovations or demolition work where ACM is present and may be disturbed. The regulation requires all buildings where asbestos has been used as part of the building to implement an Asbestos Management Program (AMP).

The major requirements of the AMP include:

- Preparation and maintenance of an onsite record of where asbestos material is located;
- Written notification provided to tenants or lessees occupying space where asbestos is present;
- Advise workers of the owner, other staff and outside contractors of the presence and location of ACM;
- Institute and maintain a program for the training and instruction of every worker employed in the building that is likely to work in close proximity to and may disturb asbestos. Such training must include;
 - o health effects of exposure,

- o the use, care and disposal of personal protective equipment and personal hygiene, and
- o work practices prescribed by the Regulation.
- Update the asbestos report minimum of every 12 months.
- Preparation of written asbestos work practices;
- Repair or removal of all damaged asbestos where it may be disturbed; and
- Other record keeping.

2.2 Ontario Regulation 558/00

Ontario Regulation 558 applies to the transport of asbestos waste from the location of generation to a landfill site authorized to receive asbestos waste. The method also prescribes procedures on how the asbestos waste is to be handled at the landfill site.

The major requirements of the building owner and the person(s) removing the waste are to ensure that:

- The waste is appropriately packaged and labelled;
- The transport vehicle is appropriately placard; and
- The asbestos waste is to be transported as directly as possible to the landfill site once it leaves the site.

It is important to note that the building owner can be held responsible for the asbestos waste until the waste disposal site accepts it.

3.0 INVENTORY SCOPE AND METHODOLOGY

The following report was prepared to comply with the Ontario Ministry of Labour Regulation 278/05 under the Occupational Health and Safety Act (*Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations*). The scope of the survey included all friable asbestos products and all major non-friable asbestos materials. The term friable is applied to a material that can be readily reduced to dust or powder by hand or moderate pressure. Asbestos materials that are friable have a much greater potential to release airborne asbestos fibres when disturbed.

Typical friable asbestos materials include; sprayed fireproofing or thermal insulation, textured (stippled) plaster, and thermal mechanical insulation. Typical non-friable materials include: asbestos cement (transite) products, vinyl floor tiles, asbestos textiles and gaskets. Additional materials such as ceiling tiles, drywall joint compounds and vinyl sheet flooring are classified as non-friable, but because of their ability to release dust when disturbed are considered as "potentially friable" for the purpose of this report.

3.1 Inventory Methodology

In order to determine the location of ACM in the building, the technician entered all common areas including: mechanical rooms, dining rooms, offices, activity rooms, laundry rooms, etc. where practical (i.e.: where access was possible without the demolition of walls, roof or ceilings or destruction of flooring).

Representative views were made above drywall or plaster ceilings where access via existing ceiling access panels and access hatches where present. The inventory did not include demolition of building systems or finishes to check on possible hidden conditions.

3.2 Omissions from Scope

During a standard ACM inventory, performed for the purposes of regulatory compliance, it is industry practice to exclude some non-friable materials in the inventory. Examples of such assumptions include; elevator brakes, roofing felts and mastics, high voltage wiring, mechanical packing and gaskets, grout, anti-spark flooring, underground services or piping, fire-doors, window caulking and levelling compound.

In addition to the non-friable asbestos materials indicated above, no identification was made of asbestos products used in manufacturing processes or operations (i.e. manufacturing equipment, laboratories, kitchen equipment, etc.).

3.3 Sampling Strategy and Analytical Methods

Bulk samples were collected for analysis during the building review. To collect samples, a small volume of material was removed either from a damaged section of suspect material or cut out of intact material and then repaired by sealing with tape to prevent fibre release. The collected samples were placed in plastic bags and sealed until an independent laboratory opened them. To ensure quality results, the independent laboratory chosen successfully participates in an "Asbestos Proficiency Analytical Testing Program" and as such, these laboratories are responsible for their findings.

The collection of samples was performed with sufficient frequency to obtain a general pattern of asbestos use with-in the building and in accordance with regulatory sampling requirements. Due to building renovations or modifications that have occurred in the past, the consistency of the application of asbestos materials may not be uniform throughout the entire Site. It is important to note that without sampling every wall, pipe section, ceiling tile etc. it is not possible to identify the possible asbestos content in every material present in the building. For this reason, similar materials to those already sampled elsewhere in the building were visually identified as being the same as those samples without additional analysis.

In accordance with Reg. 278/05, samples were collected at the following frequency.

Material Type	No. Samples (Required by Reg.)
Sprayed Fireproofing	Up to 7
Texture Coat	Up to 7
Pipe Fittings	3
Pipe Straights	3
Ductwork	3
Ceiling Tiles	3
Vinyl Sheeting	3
Vinyl Tile	3
Plaster	Up to 7
Drywall Compound	Up to 7

EMC Scientific Inc. (“EMC”), an independent laboratory, was used to analyse the collected samples. EMC followed the Code of Practice for the identification of asbestos in bulk material, as detailed in Ontario Regulation 278/05. Bulk samples were analysed using the Polarized Light Microscopy (“PLM”) Technique with Dispersion Staining. The identification of asbestos fibre in bulk material is based on a collective set of parameters dependent on the unique shape and crystallographic properties of each fibre as viewed through the microscope. This method is useful for the qualitative identification of asbestos and the semi-quantitative determination of asbestos content in bulk materials expressed as a percent of projected area. The method identifies types of asbestos and also measures percent of asbestos as perceived by the analyst in comparison to standard area projections or trained experience.

Where Regulation 278/05 required multiple samples of the same material in order to prove the material as being non-asbestos, the laboratory was instructed to stop analysing the series of samples once a positive asbestos result of greater than 0.5% or greater was obtained. Where samples were not analysed for this reason, they are noted as “sampled not analysed” in the Summary Table in Section 4 and on the Laboratory Analytical Report.

3.4 **Assessment Criteria**

The evaluation takes into consideration the condition and accessibility of the asbestos material as well as other factors such as water damage, vibration, air movement, and general activities in the area.

Where ACM is found to be in GOOD condition and not likely to deteriorate or fall, the general recommendation would be to re-evaluate the condition of the material on an annual basis (required by Regulation 278/05). This recommendation can be subject to change if the material is located in a manner that persons untrained in asbestos awareness could physically damage it.

Where the ACM is found to be damaged (i.e. FAIR or POOR condition), a recommendation to have the material cleaned-up, repaired, removed, enclosed, or encapsulated is offered. The recommendation will also indicate which asbestos procedure should be used to perform the remedial work (i.e. Type 1, Type 2, Type 3, or Glove Bag Removal Methods).

In each area or room inventoried, the technician recorded the quantity, condition (GOOD, FAIR, or POOR) and accessibility (A, B, C, D or E) of each suspect material.

The definitions for condition and accessibility items are as follows:

Condition/Accessibility	Description
GOOD	Material is intact with no visible signs of damage.
FAIR	Material is visibly damaged but can be repaired.
POOR	Material is damaged beyond repair and likely needs to be removed.
Access A	Accessible to all occupants of the building.
Access B	Accessible to Maintenance personnel without the use of a ladder (i.e. Mechanical Room, pipe chase etc.).

Condition/Accessibility	Description
Access C	Accessible to Maintenance personnel with the use of a ladder and is exposed to view without removing building components.
Access D	Accessible to Maintenance personnel with the use of a ladder and is concealed from viewing due to a building component (i.e. above a removable ceiling).
Access E	Not accessible without demolition of a building component (i.e. above a fixed ceiling system).

The asbestos related information collected by the technician was entered into tables and is presented on a room-by-room basis in Appendix II. For each area surveyed, a unique "Location Number" was assigned by the surveyor, and is referred to in the room-by-room data.

3.5 Drawings

Drawings provided in the report (as Appendix III) indicate the following (where present):

- Location Numbers (reference to Room-by-Room asbestos data)
- Asbestos-Containing Sprayed Fireproofing
- Asbestos-Containing Texture Finishes
- Asbestos Containing Ceiling Tiles
- Asbestos-Containing Flooring Materials
- Asbestos-Containing Transite Cement Products
- Presence of Asbestos-Containing Mechanical Insulations will not be specifically indicated on the drawings; however, a general statement regarding the presence of ACM mechanical insulations, where present, has been indicated on the drawings.
- Presence of asbestos-containing drywall joint compound and hard plaster will not be specifically identified on the drawings; however, a general statement regarding the presence of these ACM materials, where present, has been indicated on the drawings.

4.0 INVENTORY FINDINGS

The following is a brief discussion of the extent to which ACM was identified in the building. The discussion is organized under the headings of materials that are generally suspected of containing asbestos. The sample numbers refer to the laboratory analysis report presented as Appendix I and summarised in Table 1 below. Thirty-four (34) bulk samples were collected for the determination of asbestos content and submitted to the lab to be analysed. Due to the presence of more than one phase of material in some of the original samples the laboratory may have performed multiple analysis for some samples. In addition, some of the samples may not have been analysed due to the positive confirmation of asbestos in a previous sample of the same material during analysis. As a result, a total of forty-eight (48) samples were analyzed. Refer to Room-by-Room Survey data in Appendix II for a detailed description and location of all ACM.

Table 1 Summary of Analysis of Bulk Samples Durham College – J Block			
Sample No.	Sample Location	Sample Description	Result
S01A	Under Stair Storage J100	Drywall Joint Compound	None Detected
S01B	Classroom J108	Drywall Joint Compound	None Detected
S01C	Classroom J115	Drywall Joint Compound	None Detected
S01D	Kinesiology Lab 101A	Drywall Joint Compound	None Detected
S01E	Corridor J116	Drywall Joint Compound	None Detected
S01F	Classroom J208A	Drywall Joint Compound	None Detected
S01G	Corridor J210	Drywall Joint Compound	None Detected
S02A	Lower Entrance Corridor J100A	VFT-01 (12" Beige with Brown Streak)	None Detected
		Black Mastic	None Detected
S02B	Staff Room J200A	VFT-01 (12" Beige with Brown Streak)	None Detected
		Black Mastic	None Detected
S02C	Corridor J210	VFT-01 (12" Beige with Brown Streak)	None Detected
		Black Mastic	None Detected
S03A	Lower Entrance Corridor J100A	Rough Plaster	None Detected
S03B	Lower Entrance Corridor J100A	Rough Plaster	None Detected
S03C	Lower Entrance Corridor J100A	Rough Plaster	None Detected
S04A	Office J117	VFT-05 (12" White with Black Fleck)	None Detected
		Yellow Mastic	None Detected
		Grey Cementitious Material	None Detected
S04B	Corridor J210	VFT-05 (12" White with Black Fleck)	None Detected
		Yellow Mastic	None Detected
S04C	Corridor J210	VFT-05 (12" White with Black Fleck)	None Detected
		Yellow Mastic	None Detected
S05A	Electrical Closet J106A	VFT-02 (12" Pale Yellow with Beige Fleck)	1% Chrysotile
		Black Mastic	None Detected
S05B	Classroom J108	VFT-02 (12" Pale Yellow with Beige Fleck)	Not Analyzed
		Black Mastic	None Detected
S05C	GDI Staff Room J114	VFT-02 (12" Pale Yellow with Beige Fleck)	Not Analyzed
		Black Mastic	None Detected

Table 1 Summary of Analysis of Bulk Samples Durham College – J Block			
Sample No.	Sample Location	Sample Description	Result
S06A	Classroom J108	AT-03 (2'x4' Pinhole)	None Detected
S06B	Classroom J115	AT-03 (2'x4' Pinhole)	None Detected
S06C	Classroom J115	AT-03 (2'x4' Pinhole)	None Detected
S07A	Classroom J108	Parging Cement	None Detected
S07B	Custodial J109	Parging Cement	None Detected
S07C	Office J112	Parging Cement	None Detected
S08A	Office J112	VFT-03 (12" Beige with Light & Dark Fleck)	None Detected
		Black Mastic	None Detected
S08B	Corridor J210	VFT-03 (12" Beige with Light & Dark Fleck)	None Detected
		Black Mastic	None Detected
S08C	Corridor J210	VFT-03 (12" Beige with Light & Dark Fleck)	None Detected
		Black Mastic	None Detected
S09A	Classroom J115	VFT-04 (12" Black)	None Detected
		Colourless Mastic	None Detected
S09B	Classroom J115	VFT-04 (12" Black)	None Detected
		Colourless Mastic	None Detected
S09C	Classroom J115	VFT-04 (12" Black)	None Detected
		Colourless Mastic	None Detected
S10A	Classroom J115	AT-06 (2'x4' Pinhole & Width-Wise Fissure)	None Detected
S10B	Corridor J116	AT-06 (2'x4' Pinhole & Width-Wise Fissure)	None Detected
S10C	Staff Room J200A	AT-06 (2'x4' Pinhole & Width-Wise Fissure)	None Detected

Asbestos-containing materials (ACM) are present in the form of vinyl floor tiles (VFT-02) and transite cement products (drain pipes). Details for all confirmed and suspect asbestos-containing materials are presented below under the headings of the most typical asbestos applications in buildings.

Destructive testing was not conducted and as such some areas within the building were not accessible for an assessment (i.e. above solid ceilings, behind walls). Access for viewing within wall and ceiling cavities was not always possible. Suspect asbestos materials may be present within ceiling and wall cavities that were not identified in this report. This comment is particularly important for materials such as mechanical insulation. Caution should be taken when demolishing solid wall finishes within the building.

4.1 **Sprayed Fireproofing (*Friable*)**

No sprayed fireproofing was observed within the building at the time of the assessment.

4.2 **Thermal Mechanical Insulation (*Friable*)**

No asbestos-containing mechanical insulations are present within the building at the time of the assessment.

Piping Systems:

No asbestos-containing pipe systems were observed within the building at the time of the assessment.

Parging cement insulation on pipe fittings (which include elbows, valves, tees, hangers, etc.) was observed on pipe systems throughout the building at the time of the assessment.

Three (3) representative samples (Sample Set S07A-C) of parging cement were collected and analyzed for determination of asbestos content. Analysis of Sample Set S07 found that the samples do not contain asbestos.

All other pipe systems observed within the building were either not insulated or were insulated with fibreglass, which is not suspected to contain asbestos.

It should be noted that ACM transite cement drain lines were observed within the building at the time of the assessment. For more information regarding ACM transite drain lines, refer to **Section 4.7**.

Duct Systems

Duct systems observed throughout the building were observed to be either un-insulated or were insulated with foil-face fibreglass insulation which is not suspected to contain asbestos.

A grey mastic was observed on duct systems throughout the building at the time of the assessment. No bulk samples of grey duct mastic were collected as the collection of the mastic could damage the integrity of the HVAC system. Grey duct mastic should be considered suspect asbestos-containing until sampling confirms otherwise.

Mechanical Equipment

The elevator motor, heaters, radiators, and compressed air tanks were observed to be externally un-insulated.

4.3 **Texture Finish (*Friable*)**

No textured finishes were identified within the building at the time of the assessment.

It should be noted that a non-asbestos rough plaster finish was observed in the building at the time of the assessment. For more information regarding non-asbestos rough plaster finishes, refer to **Section 4.9**.

4.4 **Acoustic Ceiling Tiles (*Potentially Friable*)**

No asbestos-containing acoustic ceiling tile systems were identified within the building at the time of the assessment.

Seven (7) visually distinct types of ceiling tile systems were observed in the building. A brief description of each type of ceiling tile is outlined below.

- **AT-01 (2x4 Small & Medium Pinhole with Dense Fleck):**

AT-01 was observed to be present within the Lower Entrance Corridor J100A, Entrance Vestibule J100B, Office J117 and North Entrance Corridor J210A at the time of the assessment.

No bulk samples of AT-01 were collected as a date stamp manufacture code (06/11/06) was present on the backside of the tile indicating that the tiles were recently manufactured and therefore not suspected to contain asbestos.
- **AT-02 (2x4 Small & Medium Pinhole with Random Fleck):**

AT-02 was observed to be present in various locations at the time of the assessment.

No bulk samples of AT-02 were collected as a date stamp manufacture code (12/11/17) was present on the backside of the tile indicating that the tiles were recently manufactured and therefore not suspected to contain asbestos.
- **AT-03 (2x4 Random Pinhole Large Fissure):**

AT-03 was observed to be limited to Classroom J108 and Classroom J115 at the time of the assessment.

Three (3) representative samples (Sample Set S06A-C) of AT-03 were collected and analyzed for determination of asbestos content. Analysis of Sample Set S06 found that the samples do not contain asbestos.
- **AT-04 (2x4 Fibreglass):**

AT-04 was observed to be present within various locations on the 1st Floor of the building at the time of the assessment.

No bulk samples of AT-04 were collected as they consisted of fibreglass which is not suspected to contain asbestos.
- **AT-05 (2x4 Small & Large Pinhole):**

AT-05 was observed to be limited to Classroom J115 at the time of the assessment.

No bulk samples of AT-05 were collected as a date stamp manufacture code (05/07/93) was present on the backside of the tile indicating that the tiles were recently manufactured and therefore not suspected to contain asbestos.
- **AT-06 (2x4 Pinhole with Width-Wise Fissure):**

AT-06 was observed to be present within various locations of the building at the time of the assessment.

Three (3) representative samples (Sample Set S10A-C) of AT-06 were collected and analyzed for determination of asbestos content. Analysis of Sample Set S10 found that the samples do not contain asbestos.
- **AT-07 (2x2 Small & Medium Pinhole):**

AT-07 was observed to be limited to Storage J101C, Locker Room J101D and Lab J101E at the time of the assessment.

No bulk samples of AT-07 were collected as a date stamp manufacture code (03/09/13) was present on the backside of the tile indicating that the tiles were recently manufactured and therefore not suspected to contain asbestos.

4.5 Vinyl Sheet Flooring (*Potentially Friable*)

No vinyl sheet flooring finishes were identified within the building at the time of the assessment.

4.6 Vinyl Floor Tile (*Non-Friable*)

Asbestos and non-asbestos vinyl floor tile systems were identified within the building at the time of the assessment.

Six (6) visually distinct types of vinyl floor tiles systems were observed in the building. A brief description of each type of vinyl floor tile is outlined below.

- VFT-01 (12x12 Beige with Brown Streaks)

VFT-01 was observed to be limited to the Lower Entrance Corridor J100A, Corridor J210 and North Entrance Corridor J210A at the time of the assessment.

Three (3) representative samples (Sample Set S02A-C) of VFT-01 were collected and analyzed for determination of asbestos content. Analysis of Sample Set S02 found that the samples do not contain asbestos.

Black mastic associated with the tile was included in the analysis as part of the sample set and was found to not contain asbestos.

- **VFT-02 (12x12 Pale Yellow with Beige Fleck)**

VFT-02 was observed to be present within the majority of the building at the time of the assessment.

Three (3) representative samples (Sample Set S05A-C) of VFT-02 were collected and analyzed for determination of asbestos content. Analysis of Sample S05A found that the sample contains **1% Chrysotile asbestos**.

Black mastic associated with the tile was included in the analysis as part of the sample set and was found to not contain asbestos.

The majority of VFT-02 was observed to be in GOOD condition excluding the Electrical Closet J106A where the tiles were found to be in POOR condition.

- VFT-03 (12x12 Beige with Light & Dark Fleck)

VFT-03 was observed to be limited to Office J112 and Corridor J210 at the time of the assessment.

Three (3) representative samples (Sample Set S08A-C) of VFT-03 were collected and analyzed for determination of asbestos content. Analysis of Sample Set S08 found that the samples do not contain asbestos.

Black mastic associated with the tile was included in the analysis as part of the sample set and was found to not contain asbestos.

- VFT-04 (12x12 Black)

VFT-04 was observed to be limited to the perimeter of Classroom J115 at the time of the assessment.

Three (3) representative samples (Sample Set S09A-C) of VFT-04 were collected and analyzed for determination of asbestos content. Analysis of Sample Set S09 found that the samples do not contain asbestos.

Colourless mastic associated with the tile was included in the analysis as part of the sample set and was found to not contain asbestos.

- VFT-05 (12x12 White with Black Fleck)

VFT-05 was observed to be limited to Office J117 and Corridor J210 at the time of the assessment.

Three (3) representative samples (Sample Set S04A-C) of VFT-05 were collected and analyzed for determination of asbestos content. Analysis of Sample Set S04 found that the samples do not contain asbestos.

Yellow mastic and grey cementitious material associated with the tile was included in the analysis as part of the sample set and was found to not contain asbestos.

- VFT-06 (12x12 Grey with Light & Dark Fleck)

VFT-06 was observed to be limited to the thresholds of J106, J107 and J108 within Corridor J116 at the time of the assessment.

No bulk samples of VFT-06 were collected as the tile is suspected to be a replacement tile and sampling of the tiles could cause a tripping hazard at doorway thresholds.

4.7 Asbestos Cement Products “Transite” (Non-Friable)

Asbestos-containing transite cement products were identified within the building at the time of the assessment in the form roof drain lines.

Transite piping was observed within various locations of the building.

No samples were collected of the transite piping as sampling could damage the integrity of the pipe. Transite is historically known to contain Chrysotile, Amosite and/or Crocidolite Asbestos. Visual identification of this material is usually reliable although a non-asbestos equivalent is also available.

All transite cement products (drain lines) were observed to be in GOOD condition at the time of the assessment.

4.8 Drywall Joint Compound (Potentially Friable)

No asbestos-containing drywall joint compound was identified within the building at the time of the assessment.

Interior drywall finishes were present in the form of wall and ceiling finishes throughout the majority of the building.

Seven (7) representative samples (Sample Set S01A-C) of interior drywall joint compound were collected and analyzed for determination of asbestos content. Analysis of Sample Set S01 found that the samples do not contain asbestos.

While sample results indicated all drywall joint compound sampled at the site does not contain asbestos, it should be noted that the concentration of asbestos within drywall joint compound is historically known to be potentially inconsistently distributed.

Further, various phases of construction and renovations may have occurred at the Site. Therefore, the number of samples collected may not be representative of all drywall joint compound finishes on Site. Before the disturbance of any drywall finishes, it is recommended that additional area-specific bulk samples be collected.

4.9 Plaster (*Friable*)

No asbestos-containing plaster finishes were identified within the building at the time of the assessment.

Rough plaster was observed to be present as a partial wall finish within the Lower Entrance Corridor J100A.

Three (3) representative samples (Sample Set S03A-C) of rough plaster were collected and analyzed for determination of asbestos content. Analysis of Sample Set S03 found that the samples do not contain asbestos.

4.10 Vermiculite (*Friable*)

No vermiculite insulation was observed to be present within the surveyed area at the time of the assessment. It should be noted that loose fill vermiculite insulation can often be present within voids of masonry and possibly some pre-manufactured surveyed area components that would not be identified during the course of this assessment.

5.0 CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

Asbestos materials within the site include vinyl floor tiles and transite cement products in the form of drain lines.

Suspect asbestos-containing materials include drywall joint compound and grey duct mastic.

5.2 General Recommendations

General recommendations for each of the confirmed asbestos-containing and suspect asbestos-containing materials are as follows.

Removal or disturbance of ACM vinyl floor tiles requires the use of Type 1 Asbestos procedures (provided no power tools are used and the material is wetted). If power tools are required Type 3 Asbestos procedures must be applied.

Removal or disturbance of ACM transite cement products requires the use of Type 1 Asbestos procedures (provided no power tools are used and the material is wetted). If power tools are required Type 3 Asbestos procedures must be applied.

Removal or disturbance of suspect ACM grey duct mastic requires the use of Type 1 Asbestos procedures (provided no power tools are used and the material is wetted). If power tools are required Type 3 Asbestos procedures must be applied. Consider sampling prior to disturbance.

Removal or disturbance of suspect ACM drywall less than 1m² requires the use of Type 1 Asbestos procedures, greater than 1m² Type 2 Asbestos procedures. Consider project specific sampling in all areas not previously sampled.

It is important to note that due to the presence of solid wall and ceiling systems, the assessment was not able to confirm or deny the presence of ACM within wall and ceiling cavities. The presence of concealed ACM should be assumed as well as within rooms that were not accessible during the assessment. It is possible that ACM is present that was not identified in this report.

5.3 Specific Recommendations

For compliance with Regulation 278/05 the following remedial action is required.

Using Type 1 Asbestos Abatement procedures remove all vinyl floor tiles observed in POOR condition within the following locations:

Loc No.	Room Name	Floor	Building System	Description	Quantity
J106A	Electrical Closet	1	Floor	VFT-02	8 SF

All remaining asbestos-containing materials identified within the building were observed to be in GOOD condition and therefore no additional immediate recommendations are warranted.

Complete a re-assessment of all ACM within the next 12 months.

6.0 LIMITATIONS

Due to the nature of building construction some limitations exist as to the possible thoroughness of an asbestos inventory. The field observations, measurements, and analysis are considered sufficient in detail and scope to form a reasonable basis for the findings presented in this report. MAPLE warrants that the findings and conclusions contained herein have been made in accordance with generally accepted evaluation methods in the industry and applicable regulations at the time of the performance of the inventory.

It is possible that conditions may exist which could not be reasonably identified within the scope of the inventory or which were not apparent during the site investigation. MAPLE believes that the information collected during the inventory period concerning the property is reliable. No other warranties are implied or expressed.

6.1 Scope of Activity

This report is based upon the application of scientific principles and professional judgement to certain facts with resultant subjective interpretations.

6.2 Limitation of Use of This Report

The Client acknowledges this report has been prepared for the exclusive use of Client and agrees that this report may not be used or relied upon by any third parties.

Any use not authorized by Durham College and Maple which any third party makes of this report, or any reliance on or decision(s) to be made based on it, are the responsibility of such third party(ies) and without any liability of any nature to Durham College and Maple. Durham College and Maple accept no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Sincerely,

MAPLE ENVIRONMENTAL INC.
Environment, Health and Safety Consultants

Prepared By:



Mark Pollock
Project Technologist

C:\Users\User\Google Drive\Projects\18600 - 18699\18683 Durham College, Whitby Campus, ACM\J-Block\Report\18683 Durham College, J Block ACM Survey Report.doc

Reviewed By:



Brad Panzer
Senior Project Manager

APPENDIX I
BULK SAMPLE ANALYSIS RESULTS

APPENDIX II
ROOM-BY-ROOM ASBESTOS INVENTORY

APPENDIX III
DRAWINGS