



Hazardous Building Materials Removal Order of Magnitude Estimate St. Thomas More School Plan Number: 023006

MBC Engineering (Group)

May 28, 2024

Subject: Hazardous Building Materials Removal Order of Magnitude Estimate

For: Alberta Infrastructure
6950 113 Street
Edmonton, Alberta, T6H 5V7
Attn: Rob Eckert

Contract ID: 041231

CSF ID: 71830

Plan Number: 023006

Site Address: St. Thomas More School
10208 – 114 Street, Fairview, Alberta, T0H 1L0

Date of Site Visit: May 2, 2024 – May 3, 2024

MBC Group File #: ENV-08628

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Report Date: May 28, 2024

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MBC Engineering (Group) was retained by Rob Eckert on behalf of **Alberta Infrastructure** to conduct a Hazardous Building Materials Assessment ('HBMA') of St. Thomas More School located at 10208 – 114 Street, in Fairview, Alberta, T0H 1L0, (the 'Site'). The purpose of the survey was to evaluate potential hazardous building materials present within the building. The following cost estimate is prepared for the hazardous building materials identified on the Site. The HBMA report should be consulted for further information.

The estimate includes the costs anticipated to be associated with the abatement, handling and/or disposal of the identified hazardous building materials, if required. Where assumptions have been made, they have been included for reference. It should be considered that the estimate is based on the expectations of the current market conditions and can be affected by the number of bidders and the assumptions as listed below.

- 1 The current state of all hazardous building materials inspected by **MBC Engineering (Group)** performed on May 2, 2024, and May 3, 2024, pose no direct health hazard, providing materials remain in good condition and are undisturbed. Should renovations and/or deterioration occur, further abatement/removal actions will be required.
- 2 **MBC Engineering (Group)** developed the cost estimate using the conservative approach of removing materials identified in Table 1 individually (with exception of the miscellaneous hazardous materials such as lead batteries, mercury florescent light tubes, and mercury thermostats) that are confirmed and presumed (assumed) hazardous building materials as identified in the HBMA Report prepared for the Site.
- 3 The pricing is based on abatement being completed on a pre-renovation or pre-demolition basis and allows for one mobilization and demobilization of contractor manpower and equipment.
- 4 The pricing is based on an average crew size of twenty-five (25) people working ten (10) hour shifts.
- 5 The costs are based on **MBC Engineering (Group)** assisting in the development of the specifications, tendering of the abatement work, and providing site inspection and air monitoring during the abatement process. If the work is divided into smaller phased projects or if the regulatory requirements for hazardous building materials handling change, significant variances in the actual cost to budget should be expected.
- 6 It is assumed that waste will be disposed of at the nearest appropriate landfill.
- 7 Cost allowances to remove building contents that may be present, and obstructing are not included in this budget.
- 8 The costs provided assume that electrical and/or mechanical services will be cut, capped, and made safe by others.
- 9 The costs provided assume that power, water, and toilet facilities are available on site.

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- 10 The costs provided exclude costs for hard hoarding, shoring, supports, protection, weather protection, fencing, security, power, water, washrooms, and trailers.
- 11 The cost provided for lead-containing paint assumes scrapping/removal of all loose/flaking paint and transportation and disposal of substrate with good condition lead-containing paint remaining.
- 12 Cost allowances for additional Toxicity Characteristic Leaching Procedures ('TCLP') testing are not included in this cost estimate.
- 13 Cost for abatement or management of Urea-formaldehyde Foam Insulation ('UFFI') materials and silica-containing materials has not been included. It is assumed that these materials are routinely handled by demolition contractors and will remain in place for mechanical demolition.
- 14 All quantities of hazardous materials presented in the applicable survey are estimates based on the surveyor's observations at the time of the survey.
- 15 No allowance for inflation or replacement materials have been included in the budget estimates. MBC recommends that the costs of inflation be considered as approximately 5% per year.
- 16 Individual abatement of specific areas such as hallways, and rooms, identified with asbestos-containing materials are outlined in the table below.

The hazardous building materials assessment included potential asbestos-containing materials, mercury-containing equipment, ozone depleting substances, polychlorinated biphenyls (PCB) in light ballasts, silica, biological hazards, and abandoned chemicals. **MBC Engineering (Group)** conducted the HBMA of the Site building on May 2, 2024, and May 3, 2024. The assessment was limited to hazardous building materials included in our scope of work and to those hazardous building materials found in accessible building areas on the subject property. The quantities of the referenced hazardous building materials are summarized in the following table along with order of magnitude removal costs.

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Table 1: Order of Magnitude Budget

Hazardous Building Material	Estimated Quantity	Removal Method	Estimated Removal Costs	Anticipated Duration in Shifts (approximate)
Removal Contractor Costs				
Asbestos-Containing Materials				
Vinyl Floor Tile - Throughout	4,760 Ft²	Low-Risk Abatement Procedures	\$24,133.20	5
VCT – North Hallway (Senior High Entrance)	850 Ft ²	Low-Risk Abatement Procedures	\$4,309.50	/
VCT – Northwest Hallway (Junior High Entrance)	700 Ft ²	Low-Risk Abatement Procedures	\$3,549.00	/
VCT – Foods Lab Storage Room	200 Ft ²	Low-Risk Abatement Procedures	\$1,014.00	/
VCT – Room 27	750 Ft ²	Low-Risk Abatement Procedures	\$3,802.50	/
VCT – West Stage Hallway	220 Ft ²	Low-Risk Abatement Procedures	\$1,115.40	/
VCT – Southwest Hallway (Grade 5/6 Gym Entrance)	850 Ft ²	Low-Risk Abatement Procedures	\$4,309.50	/
VCT – All Gym Storage Rooms	250 Ft ²	Low-Risk Abatement Procedures	\$1,267.50	/
VCT – Resource Room	280 Ft ²	Low-Risk Abatement Procedures	\$1,419.60	/
VCT – Room 13	220 Ft ²	Low-Risk Abatement Procedures	\$1,115.40	/
VCT – Room 10	220 Ft ²	Low-Risk Abatement Procedures	\$1,115.40	/
VCT – Room 9	220 Ft ²	Low-Risk Abatement Procedures	\$1,115.40	/
Block Wall Vermiculite Insulation	160,000 Ft²	High-Risk Abatement Procedures	\$2,150,000.00	100
Vermiculite – Window Replacement (Each Window)	200 Ft ²	High-Risk Abatement Procedures	\$2,688.00	/
Ceiling Texture – South Boiler/Custodial Room 11	90 Ft²	High-Risk Abatement Procedures	\$850.00	1
Drywall/Plaster - Throughout	1,369 Ft²	Moderate Abatement Procedures	\$4,791.50	6
DWJC – Gym Girl's Changeroom	350 Ft ²	Moderate Abatement Procedures	\$1,225.00	/
DWJC – PE Office	120 Ft ²	Moderate Abatement Procedures	\$420.00	/

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DWJC – Gym Storage Room 1	325 Ft ²	Moderate Abatement Procedures	\$1,137.50	/
DWJC – Gym Storage Room 3	120 Ft ²	Moderate Abatement Procedures	\$420.00	/
DWJC – Gym Boy's Changeroom	350 Ft ²	Moderate Abatement Procedures	\$1,225.00	/
DWJC – Southside Girl's Washroom (Bulkhead)	40 Ft ²	Moderate Abatement Procedures	\$140.00	/
DWJC – Southside Boy's Washroom (Bulkhead)	40 Ft ²	Moderate Abatement Procedures	\$140.00	/
DWJC – Southside Storage Room 13	24 Ft ²	Moderate Abatement Procedures	\$84.00	/
Exterior Window Putty – Outside	32 windows	Low-Risk Abatement Procedures	\$6,500.00	2
Window Putty – (Each Window)	1 each	Low-Risk Abatement Procedures	\$203.13	/
Lead-Containing Batteries				
Suspect Lead Batteries (Exit Signs and Emergency Lighting)	40 Units	Manual Removal and Disposal	\$3,200.00	1
Other Hazardous Building Materials				
Fluorescent Light Fixtures and Suspected thermostats (Potential mercury light tubes)	230 Units (Total)	Manual Removal and Disposal		
Florescent Light Fixtures	212 each	Manual Removal and Disposal	\$1,900.00	1
Thermostats	18 each	Manual Removal and Disposal	\$1,500.00	1
Radioactive Smoke/Heat Detectors	36 Units	Manual Removal and Disposal	\$4,000.00	1
Ozone Depleting Substances (Water Coolers/Refrigerators)	7 Units	Manual Removal and Disposal	\$3,500.00	1
Miscellaneous Hazardous Materials	Allowance	Manual Removal and Disposal	\$5,000.00	1
Removal Contractor Costs Total			\$2,205,374.70	120
Contingency (~20 %)			\$441,074.94	
Total			\$2,646,449.64	

The quantities listed in the above table are approximate and are based on the conditions at the time of the assessment. Prior to any renovation or demolition work, it is recommended that a Hazardous Materials Abatement Contractor conduct a comprehensive review of the site to quantify and obtain all measurements of all building materials detailed in the report for cost estimating purposes.

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ACMs may be present in forms that were not observed or sampled during the Site inspection including, but not limited to, roofing felts, inaccessible caulking materials, fire rated doors, thermal insulating materials such as gaskets associated with mechanical equipment, wiring and electrical components, packing associated with cast iron pipe joints, or in areas that were not accessible at the time of the survey.

Significant savings are possible when the abatement of the identified hazardous building materials is conducted at the same time within the same containment.

This budget estimate is based on observations and collected data from May 2, 2024, and May 3, 2024. No warranty is expressed or implied as to final site conditions. This report provides an analysis and assessment of materials tested and/or inspected and is based on information provided to **MBC Engineering (Group)**.

Sincerely,

MBC Engineering



Jeff Wright, CMI, CMRC, C-NRPP
Senior Environmental Consultant

Reviewed by:



Andrew Grant, B.Sc., P.Eng., EP, CRSP, C-NRPP
National Director and Practice Lead, Environmental Services

1 APPENDIX I: LIMITATIONS

Limitations

The conclusions presented in this report represent the judgement of the assessor based on current environmental and health and safety standards. Due to the nature of the investigation and the limited data available, the assessor cannot warrant against undiscovered environmental liabilities.

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 **MBC Engineering (Group)** accepts no responsibility for damages, suffered by any third party because 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 hazardous building materials assessment program included asbestos bulk sampling and/or paint chip sampling, and the inspection of other potential hazardous building materials, in select representative areas for laboratory analysis. Note, however, that no scope of work, no matter how exhaustive, can guarantee to identify all contaminants. This report therefore cannot warrant that all building conditions are represented by those identified at specific locations.

Recommendations, when included, are made in good faith, and are based on several successful experiences.

Note also that standards, guidelines, and practices related to environmental investigations may change with time. Those which were applied at the time of this investigation may be obsolete or unacceptable later.

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 the factors that may affect construction, clean-up methods and/or costs. Contractor's bidding on this project or undertaking clean-ups should, therefore, make their own interpretation of the information presented and draw their own conclusions as to how the conditions may affect their work.