

COST REVIEW

HAZARDOUS MATERIAL ABATEMENT RATES

2023 UPDATE

February 7, 2023

**Prepared by
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A ESTIMATE BREAKDOWN

per: Advicas Group Consultants Inc.

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INTRODUCTION

This report sets out the cost review of total project cost for the 2023 Update of Hazardous Material Abatement Rates in BC.

Project Description

The project comprises the updating of the following 2020 hazardous material abatement unit rates used by Real Property Division of the Ministry of Citizen Services:

- Asbestos Abatement
- Other Hazardous Materials (e.g. lead paint, other lead products, mould, ODS, PCB, etc.)
- Combined Rate (Asbestos plus Other Hazardous Material)

Gross Floor Area

The gross floor area¹ for the purposes of the cost review is an arbitrary **10,000 sf** or **929 m²**:

¹ measured to the outside face of exterior walls.

ESTIMATE COSTS

The estimate costs have been developed in current (February 2023) dollars only. The estimated total project cost is as follows:

Asbestos Abatement	\$213,638	\$21.36/sf	\$229.92/m²
Other Hazardous Materials (e.g. lead paint, other lead products, mould, ODS, PCB, etc.)	\$160,228	\$16.02/sf	\$172.44/m²
Combined Rate (Asbestos plus Other Hazardous Material)	\$249,244	\$24.92/sf	\$268.23/m²

An estimate breakdown is included in Appendix A.

Assumptions

The above estimate costs are based on an assumed building of 10,000 sf gross floor area.

The above hazardous material abatement unit rates are representative for most of British Columbia except the very northern and not easily accessible areas.

Depending on the hazardous materials survey report, the required abatement can fluctuate somewhat, and the above unit rates are based on an “average” amount of asbestos and other hazardous materials abatement.

Taxes

PST at 7% is included in the estimate. GST is excluded from the estimate.

Escalation

Escalation during Construction Period – the estimate, as is typical, includes any cost increases incurred by the contractor/sub-contractor, and suppliers in conforming to contractor/supplier timelines dictated by the construction schedule. These increases are built into the respective detailed unit rate costs.

Future Escalation – Escalation beyond the current date is not included in the estimate and will be based on values given in the table below.

	Annual Escalation
2023	+10.0%
2024	+8.0%
2025	+7.0%
2026	+5.0%

BASIS OF THE ESTIMATE

We have assumed that the work will be tendered competitively in the open market.

It is assumed the work will be performed in an existing building that is to be renovated and/or upgraded, and prior abatement work is required, and that work is to be carried out during normal working hours.

In all cases the estimates are based upon our assessment of fair value for the work to be carried out. We define fair value as the amount a prudent contractor, taking into account all aspects of the project, would quote for the work. We expect our estimate to be in the middle of the bid range to ensure that funding for the work remains adequate for the duration of the project.

It should be noted that Advicas Group Consultants Inc. does not have control over the cost of labour, materials, or equipment, over the Contractor's methods of determining bid prices, or over competitive market conditions. We define competitive conditions in the project as attracting a minimum of three general contractors' bids with a minimum of two sub-trade tenders, and suppliers' tenders, within each of the sub-trade categories. Accordingly, Advicas Group Consultants Inc. cannot and does not warrant or represent that bids will not vary from the estimate.

The current construction market remains active, bringing with it a volatility in tender price levels. Whilst we endeavor to gauge the developing market conditions, it is not always possible to predict industry interest in this project, and the likely-hood of a poor, uncompetitive, response.

Contingency Reserves

Contingency is an allowance specifically identified within the estimate to meet unforeseen circumstances and represents an assessment of the financial risk relating to this project.

Design Contingency – A design contingency allowance has been included in the base unit rates, to provide for unforeseen items arising during the design phase.

Design contingency is introduced into the estimated cost at the earliest estimate stage and is a measurement of the amount and detail of the design information available. As the design develops and systems and material selections are fixed, the amount of the contingency allowance is reduced and is absorbed into the measured elements. On completion of contract documents, at tender stage, the allowance is normally reduced to zero. Our determination of this risk level and the amount of the contingency allowance is the result of many years of cost planning, on over 4,000 construction projects, and of monitoring

the increasing design information that occurs during the design phase. The design contingency is not a discretionary cost element.

Construction Contingency – A construction contingency allowance has been included at 10%. This typically provides for unforeseen items arising during the construction period – such as field conditions, coordination discrepancies – which will result in Change Orders and extra costs to the contract, other than changes in scope.

Project Contingency – No allowance has been made for project contingency. This is a contingency, held by the Client, to be used at his discretion to fund specific Client driven changes to the project scope, conditions, etc.

Global Supply Chain Issues

After the onset of the pandemic in 2020, we have been experiencing supply chain bottlenecks and labour shortages. Major factors such as the spread of Omicron and other COVID variants, unexpected natural disasters such as major floods and wildfires, lack of shipping containers and backlog of cargo ships have slowed production worldwide and hindered the flow of goods worldwide. Furthermore, just as the pandemic has slowed down, Russia's invasion of Ukraine has now caused further economic uncertainties. Oil prices have surged, increasing costs of transportation, plastics and other industries that rely on petroleum. As a result, the cost and availability of goods in the coming months has become very uncertain.

COVID-19 Premium

COVID-19 was recorded as a Public Health Emergency on January 30, 2020, by the World Health Organization; it became a pandemic as of March 11, 2020. Since this announcement, we have seen the impact of COVID-19 and its emerging variants.

While the Provincial Health Officer has indicated an expected decline in COVID-19 cases, as it pertains to the construction industry, some on-site measures will remain as good practice. Appropriate protocols for Communicable Disease Prevention, issued by WorkSafeBC, under the order of the Provincial Health Officer, will remain as part of on-site operation:

- Maintaining on-site hand hygiene stations.
- Routine site cleaning, to maintain a clean environment.
- Maintaining policies in support of staff through any communicable disease occurrence.
- Additional measures as required by the Medical Health Officer.

All Contractor costs have been reflected in the unit rate costs. This includes realistic contingency allowances to address further potential cost, from increased severity of Omicron variant, and its impact on the industry.

General Requirements and Fee

The General Requirements provide for all General Contractor's costs associated with the management and supervision of the construction work in accordance with the contract documents and construction schedule. Typical costs include site superintendent/foreman, site set up and demobilization, temporary office and storage, temporary equipment including crane, first aid facilities, bonding, and construction insurance.

The General Contractor's Fee includes office expenses, profit, and attendance on building sub trades, and profit on own forces work.

Exclusions

The following items are excluded from the project cost:

- Interior or exterior renovation/upgrade
- Site development
- Structural or seismic upgrade
- Separate prices
- Land acquisition costs
- Offsite costs
- Survey fees
- Financing costs
- Phasing of the work
- Out of hours working
- Project contingency
- Escalation
- GST

Documentation

The following were referred to during the preparation of the cost review:

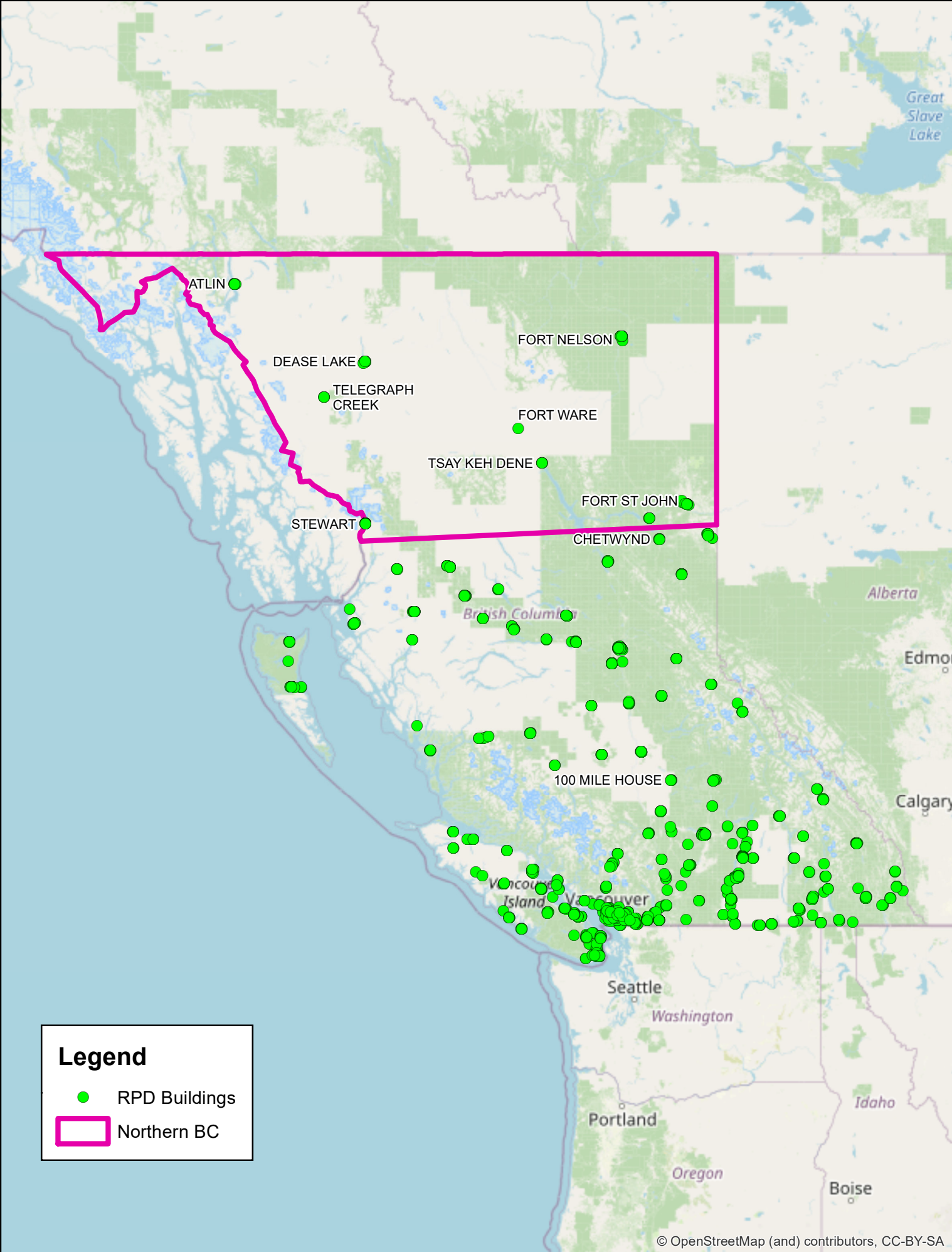
- RPD CITZ
– HazMat Rates from 2020 spreadsheet Received January 11, 2023
- MS Teams meeting on January 11, 2023
- Emails and telephone discussions with the Client during the preparation of the cost review

APPENDIX A

ESTIMATE BREAKDOWN

Type of Hazardous Materials	QUANTITY	UNIT	RATE	COST
Asbestos Abatement	10,000	sf	\$21.36	\$213,638
Remove and properly dispose of asbestos containing materials from existing building:	10,000	sf	\$12.00	\$120,000
Asbestos floor tiles				
Asbestos ceiling texture				
Asbestos drywall tape				
Asbestos insulation				
Asbestos window putty				
Asbestos boards				
Asbestos gaskets/packings				
Asbestos flashings mastic				
Z11 General Requirements		15.00%		\$18,000
Z12 Fee		13.00%		\$17,940
Z21 Design Contingency				Included
Consultant Fees & Disbursements		10.00%		\$15,594
Project Management		10.00%		\$15,594
Correlated Costs - Permits, Legal, Insurances, etc.		5.00%		\$7,797
Contingency Reserves		10.00%		\$18,713
Z22 Escalation				Excluded
GST				Excluded
Other Hazardous Materials (e.g. lead paint, other lead products, mould, ODS, PCB, etc.)	10,000	sf	\$16.02	\$160,228
Remove and properly dispose of other hazardous containing materials from existing building:	10,000	sf	\$9.00	\$90,000
Lead paint/coating				
Lead containing ceramic tiles				
Lead plumbing vents				
PCB Fluorescent Light Ballasts				
Mercury Fluorescent Light Tubes				
CFC Refrigerants				
Underground Storage Tank				
Mould				
Hantu virus				
Z11 General Requirements		15.00%		\$13,500
Z12 Fee		13.00%		\$13,455
Z21 Design Contingency				Included
Consultant Fees & Disbursements		10.00%		\$11,696
Project Management		10.00%		\$11,696
Correlated Costs - Permits, Legal, Insurances, etc.		5.00%		\$5,848
Contingency Reserves		10.00%		\$14,035
Z22 Escalation				Excluded
GST				Excluded
Combined Rate (Asbestos plus Other Hazardous Material)	10,000	sf	\$24.92	\$249,244
Remove and properly dispose of asbestos and other hazardous containing materials from existing building:	10,000	sf	\$14.00	\$140,000
Asbestos floor tiles				
Asbestos ceiling texture				
Asbestos drywall tape				
Asbestos insulation				
Asbestos window putty				
Asbestos boards				
Asbestos gaskets/packings				
Asbestos flashings mastic				
Lead paint/coating				
Lead containing ceramic tiles				

Type of Hazardous Materials	QUANTITY	UNIT	RATE	COST
Lead plumbing vents				
PCB Fluorescent Light Ballasts				
Mercury Fluorescent Light Tubes				
CFC Refrigerants				
Underground Storage Tank				
Mould				
Hantu virus				
Z11 General Requirements		15.00%		\$21,000
Z12 Fee		13.00%		\$20,930
Z21 Design Contingency				Included
Consultant Fees & Disbursements		10.00%		\$18,193
Project Management		10.00%		\$18,193
Correlated Costs - Permits, Legal, Insurances, etc.		5.00%		\$9,097
Contingency Reserves		10.00%		\$21,832
Z22 Escalation				Excluded
GST				Excluded



Legend

- RPD Buildings
- ▭ Northern BC

Hazardous Materials Rates - Used by Real Property Division CITZ

From 2020 with Feb 2023 Comparison

	2020		February 2023	
Type of Hazardous Materials	Per Square Foot	Per Square Meters	Per Square Foot	Per Square Meters
Asbestos	\$ 17.50	\$ 188.37	\$ 21.36	\$ 229.92
Other Hazardous Materials (e.g. lead paint, other lead products, mould, ODS, PCB, etc.)	\$ 12.50	\$ 134.55	\$ 16.02	\$ 172.44
Combined Rate (Asbestos plus Other HazMat)	\$ 20.00	\$ 215.28	\$ 24.92	\$ 268.23
Generic / combined rate for Owned Buildings on Leased Land (includes additional decommissioning costs)	\$ 23.23	\$ 250.00	\$ 28.94	\$ 311.49