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To: Regional Planning Committee

From: Sean Galloway, Director, Regional Planning and Electoral Area Services and  
Eric Aderneck, Senior Planner, Regional Planning and Housing Services

Date: January 5, 2021 Meeting Date: January 14, 2021

Subject: ***Metro 2040 Implementation Section Policy Review: Ideas for Exploration***

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**RECOMMENDATION**

That the Regional Planning Committee receive for information the report dated January 5, 2021, titled "*Metro 2040 Implementation Section Policy Review: Ideas for Exploration*"

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**EXECUTIVE SUMMARY**

To inform the update to the regional growth strategy, Metro Vancouver is undertaking a series of Policy Reviews, including for the Implementation Section (*Metro 2040* Section F), which considers the procedural issues with implementing, administering, and amending the regional growth strategy. Taking into account the knowledge and experience gained from administering *Metro 2040* since its adoption in 2011, as well as policy research, best practices, and input from member jurisdictions, the following are policy ideas that are being explored:

1. the effectiveness of a regional public hearing as a means for engagement for Type 2 minor amendments;
2. change the type of minor amendment from a Type 3 to a Type 2 for the conversion of Industrial to General Urban;
3. increasing MVRD Board weighted voting thresholds for minor amendment types; and
4. reviewing the provision for municipal flexibility clause.

Staff are seeking Committee feedback on each of these issue areas at the January 14, 2021 Regional Planning Committee meeting.

**PURPOSE**

To provide the Regional Planning Committee with an opportunity to discuss and provide feedback on the policy ideas stemming from the *Metro 2040* Implementation Policy Review.

**BACKGROUND**

The Implementation Policy Review is one of a series of reviews that will provide inputs into the regional growth strategy update, anticipated to be complete by mid-2022. The policy review scope of work report was received by the Regional Planning Advisory Committee (RPAC) on March 20, 2020, and the Regional Planning Committee on May 1, 2020 (Reference 1). The Policy Review's 'Policy Ideas' were discussed by RPAC at its meeting on November 20, 2020; the comments received from RPAC were limited, but have been incorporated into the options set out in this report.

Any changes to the minor amendment process of the regional growth strategy are considered a Type 1 (Major) Amendment by the *Local Government Act*, which requires the approval of all signatories.

Should the MVRD Board support any changes to the amendment provisions, given that the current regional growth strategy update is itself a Type 1 amendment, there is an opportunity to simultaneously also amend those procedures without having to initiate a separate major amendment process. This review is also an opportunity for administrative refinements to the current strategies to support clear interpretation and more effective implementation.

### **METRO 2040 IMPLEMENTATION SECTION**

The *Metro 2040's* Implementation Section (Section F, 6.1 to 6.15) outlines the process to administer and amend the regional growth strategy, and is organized as follows:

- 6.1 - Implementation Framework
- 6.2 - Regional Context Statements (including provisions for municipal flexibility)
- 6.3 - Categories of Amendments (Types 1, 2, 3)
- 6.4 - Procedures for Amendments (including notifications)
- 6.5, 6.6, 6.7 - Coordination with First Nations, TransLink, Other Governments / Agencies
- 6.8 - Coordination with Greater Vancouver Boards
- 6.9 - Sewerage Area Extensions
- 6.10 - Special Study Areas
- 6.11 - Jurisdiction
- 6.12, 6.13 - Maps, Tables / Figures, Performance Measures
- 6.14, 6.15 - Interpretation, Guidelines

### **SCOPE AND OBJECTIVES**

The purpose of the Implementation Policy Review is to identify implementation challenges and opportunities to improve administration efficiency and effectiveness. The review considers such aspects as: administrative process, clarity about steps in the regional context statement and minor amendment processes and requirements, greater protection or reasonable flexibility for some types of regional land use designation amendments, and enhanced balance / clarity of regional and local roles.

The past shared knowledge and experience of member jurisdictions and Metro Vancouver staff gained from stewarding, implementing, and amending *Metro 2040* since its adoption in 2011 is being considered, as well as research, best practices, and legislative requirements. This work explores what is working, not working, and missing, in order to more effectively implement the regional growth strategy's goals and objectives.

### **Objectives and Outcomes**

The main objective for the Implementation Policy Review is to explore improvements that are supported by the strategy's signatories, considering specifically:

- an efficient and consistent implementation process;
- clear requirements and process for amendments;
- clear and consistent definitions of terms found throughout the regional growth strategy;
- a meaningful regional public engagement process when considering amendments;
- ease of reporting and tracking changes over time;

- assess voting thresholds for, and types of, minor amendments;
- review municipal flexibility provisions;
- Sewerage Area extension provisions;
- effectiveness of Special Study Areas;
- enhanced coordination with First Nations and regional stakeholders; and
- administrative refinements.

Following the adoption of *Metro 2050*, it is anticipated that a number of updates to supporting documents will be needed to support implementation, including:

- the update of all existing Implementation Guidelines, and potentially adding new ones (Reference 2);
- the development of a new Regional Context Statement template to assist member jurisdictions and promote efficiency and consistency; and
- exploration of other possible implementation tools to support implementation.

### **Integration with Other Policy Reviews**

Some aspects of the Implementation Policy Review are based on the results of the other themed *Metro 2040* Policy Reviews, such as those associated with voting thresholds, definitions, and land use designation amendments.

### **RESEARCH FINDINGS**

*Metro 2040* includes a three-tiered amendment process to guide the administration of proposed amendments, both for policy changes and land use designation changes; generally, the more regionally-significant the amendment, the more rigorous the process.

Under the provisions of the *Local Government Act*, regional districts can include provisions for minor amendments in their respective regional growth strategy, provided that they include: criteria for determining whether a proposed amendment is minor; the means for obtaining and considering the views of affected local governments; the means for providing notice to affected local governments; and procedures for adopting a minor amendment bylaw.

Since adoption of *Metro 2040*, between 2011 and 2019 there have been 31 requested minor amendment applications, with an average processing time of 26 weeks (excluding an outlier). All municipalities have submitted, and the Board has approved Regional Context Statements (some have been updated).

### **IMPLEMENTATION POLICY REVIEW IDEAS FOR EXPLORATION**

Table 1 sets out possible policy changes, associated considerations and implications, and a question for Committee consideration. Policy ideas should be considered in the context of recommendations from other *Metro 2040* Policy Reviews.

**Table 1 – Possible Changes and Considerations / Implications for Implementation Section**

Possible Policy Change	Considerations and Implications	Question for Regional Planning Committee members
<p><b>1) Explore the effectiveness of a regional public hearing as a means for engagement for Type 2 minor amendments</b></p> <p>As reminder: Type 2 minor amendments are considered more regionally significant than Type 3 minor amendments and include changes to the Urban Containment Boundary and conversion of Agricultural, Rural or Conservation and Recreation lands. They require a bylaw passed by a two-thirds weighted vote at the MVRD Board <i>and</i> a regional public hearing. In contrast, Type 3 minor amendments require an amendment bylaw passed by a simple majority at the MVRD Board and no regional public hearing. Both require an opportunity for all member jurisdictions and other regional interests to comment.</p>	<ul style="list-style-type: none"> <li>Feedback from some Regional Planning Committee members and member jurisdiction staff have suggested that the regional public hearing for Type 2 minor amendments can become a duplication of local public hearings (i.e. same attendees with same comments), and has generally received limited participation by members of the general public.</li> <li>An alternative to a regional public hearing could be providing another means for public input, such as enhancing the amendment notifications on the Metro Vancouver website with opportunities for the public to provide written comments, which would be included in the report to the Regional Planning Committee and MVRD Board, and also delegation presentations.</li> <li>Removing the regional public hearing associated with Type 2 minor amendments would simplify the process for making decisions for things such as: Urban Containment Boundary adjustments; amendment of Agricultural, Conservation and Recreation, and Rural land use designations to Urban</li> <li>Removing the regional public hearing may be seen as limiting opportunities for public input / engagement and transparency on changes to the shared regional vision and significant regional interests.</li> </ul>	<ul style="list-style-type: none"> <li>What are your thoughts regarding the importance, efficacy, and need for a regional public hearing as a means for public engagement for Type 2 minor amendments?</li> </ul>

Possible Policy Change	Considerations and Implications	Question for Regional Planning Committee members
<p><b>2) Change the type of minor amendment from a Type 3 to a Type 2 for the redesignation of Industrial to General Urban</b></p>	<ul style="list-style-type: none"> <li>• Through the development of <i>Metro 2040</i>, the regional federation determined that the conversion of agricultural land, and the movement of the Urban Containment Boundary were significant regional issues that warranted a higher voting threshold at the regional level than other types of minor amendments such as the conversion of Industrial or Mixed Employment lands.</li> <li>• Through the development of the Regional Industrial Lands Strategy (RILS), many stakeholders recommended the voting threshold for Industrial land conversion be raised to a Type 2 minor amendment. The rationale is that the loss of industrial land in the region is a growing and significant challenge, and that the regional growth strategy is a critical and effective tool for supporting its ongoing protection.</li> <li>• The Industrial Lands Strategy Task Force identified increasing regional protection for industrial lands through the Regional Growth Strategy as the most effective and feasible priority action in the Regional Industrial Lands Strategy.</li> <li>• In this proposal, amending the regional land use designation for Industrial or ‘trade-oriented industrial’ lands would be a Type 2, rather than a Type 3 minor amendment. When presented as part of the Industrial and Mixed Employment Policy Review Recommendations, this proposal received both support and opposition. The Board directed staff to continue to explore this option.</li> </ul>	<ul style="list-style-type: none"> <li>• What are your thoughts about changing the type of minor amendment from a Type 2 to a Type 3 for Industrial lands?</li> <li>• Note: This recommendation was supported by the RILS Task Force and RILS stakeholder engagement process</li> </ul>

Possible Policy Change	Considerations and Implications	Question for Regional Planning Committee members
<b>3) Increase MVRD Board weighted voting thresholds for minor amendment types</b>	<ul style="list-style-type: none"> <li>Feedback from some member jurisdiction officials and staff have suggested that the 50%+1 weighted vote of the MVRD Board for Type 3 minor amendments may not be high enough given that this amendment type can deal with complex and sensitive issues like the conversion of lands to other designations.</li> <li>This issue could be resolved by increasing the required voting threshold for Type 3 and / or Type 2 minor amendments, or by introducing a new minor amendment type, for example by: increasing the requirement for Type 3 amendments from the current 50%+1 level (e.g. to 60%) and increasing the requirement for Type 2 amendments from the current two-thirds level (e.g. to 75%).</li> </ul>	<ul style="list-style-type: none"> <li>What are your thoughts about increasing the voting thresholds for Type 2 and Type 3 minor amendments?</li> </ul>
<b>4) Review the provision for municipal flexibility clause (<i>Metro 2040</i> Section 6.2.7)</b>  The 'Flexibility Clause' permits municipalities to make adjustments to boundaries of regional land use designations without MVRD Board approval, subject to satisfying specific criteria.	<ul style="list-style-type: none"> <li>One member jurisdiction has expressed interest in seeing additional flexibility to make 'small' adjustments (one or three hectares, depending on the case / criteria) to regional land use designations without requiring a minor amendment.</li> <li>S.6.2.7 of <i>Metro 2040</i> limits the aggregate total area of regional land uses adjusted to two percent of the jurisdiction's land. Since the regional growth strategy was adopted in 2011, the same member jurisdiction has expressed interest in 'resetting' the flexibility calculation with the adoption of <i>Metro 2050</i>.</li> <li>A consideration for 'resetting' calculation of the maximum 2 percent provision is that it would allow jurisdictions that have already taken advantage of the flexibility clause to obtain more regional land use re-designations than those that have not yet utilized it.</li> <li>This may lead to accelerated loss of regionally-important lands such as Conservation and Recreation, Agricultural, Rural, and Industrial without the scrutiny of the regional federation through the minor amendment process.</li> </ul>	<ul style="list-style-type: none"> <li>What are your thoughts about increasing municipal flexibility for minor land use designation amendments?</li> </ul>

## **ENGAGEMENT AND NEXT STEPS**

The primary stakeholders for this policy review are: member jurisdiction staff and elected officials, Metro Vancouver Regional Planning, Utilities and Legal Services staff, as well as TransLink. Informed by input from multiple sources regarding possible changes to the Implementation section of *Metro 2040*, staff are advancing this report to the Regional Planning Committee and MVRD Board, setting out policy ideas for consideration. Based on the direction received, new or amended policy language will be prepared for Section F in consultation with the Intergovernmental Advisory Committee in early 2021.

Staff in Metro Vancouver's Legal Services and Indigenous Relations Department will also provide support in the review and development of any new or amended policies for *Metro 2050*, in order to ensure compliance and consistency with the *Local Government Act*.

## **ALTERNATIVES**

This is an information report. No alternatives are presented.

## **FINANCIAL IMPLICATIONS**

There are no financial implications to the *Metro 2040* Implementation Policy Review. The *Metro 2040* Policy Reviews are all being undertaken as part of the regular work plan in the Board approved Regional Planning budget.

## **CONCLUSION**

Effective administration is a key to the successful, efficient, and consistent implementation of the regional growth strategy. The purpose of the *Metro 2040* Implementation Policy Review is to explore and identify the challenges and opportunities to improve administration, taking into account the knowledge and experience gained from stewarding, implementing, and amending *Metro 2040* since its adoption in 2011, as well as policy research, best practices, and input from member jurisdictions.

The Regional Planning Advisory Committee, Intergovernmental Advisory Committee, Regional Planning Committee and Board will have opportunities to consider and provide comments to inform the implementation section policy writing work. The identified enhancements will be brought forward for consideration in *Metro 2050* over 2021.

## **References**

1. [Metro 2040 Implementation Policy Review Scope of Work](#)
2. [Resource Webpage – Implementation Guidelines](#)
3. [Metro 2040 - 2019 Procedural Report](#)

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To: Performance and Audit Committee

From: Joe Sass, Director Financial Planning and Operations/Deputy CFO

Date: January 6, 2021 Meeting Date: January 14, 2021

Subject: **MVRD Audit Plan from BDO Canada LLP**

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### **RECOMMENDATION**

That the Performance and Audit Committee receive for information the report dated January 6, 2021, titled "MVRD Audit Plan from BDO Canada LLP".

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### **EXECUTIVE SUMMARY**

Metro Vancouver Districts and the Metro Vancouver Housing Corporation are required under provincial legislation to prepare annual financial statements, audited by a public accounting firm and approved by the Board by May 15<sup>th</sup> each year. The 2020 financial statements, will be presented to the Performance and Audit Committee at its April meeting, prior to Board approval. Attached for information is the audit planning report prepared by BDO Canada LLP, Metro Vancouver's auditors.

This report outlines the audit approach, key audit areas, auditor responsibilities and audit deliverables. In addition, the report highlights a number of upcoming accounting standards, the most significant being the Asset Retirement Obligation requirement, effective fiscal year 2023. Management has started an impact assessment for this standard and will report back to the Committee on a continuous basis throughout the project.

### **PURPOSE**

To provide the committee with our external auditor's plan for the completion of the annual external audit for the Metro Vancouver Districts' and Housing Corporation for fiscal year 2020.

### **BACKGROUND**

Under provincial legislation, an external audit is required to be undertaken annually for all Metro Vancouver Districts' and the Metro Vancouver Housing Corporation. This audit must be conducted by a public accounting firm that is licensed to conduct such audits. The results of the annual audit along with the Audited Financial Statements, covering fiscal year 2020, will be presented to this committee at its April meeting with the financial statements to be forwarded to the Board for approval. Legislation requires that the final Board approval take place on or prior to May 15, 2021.

BDO Canada LLP was approved by the Board on July 25<sup>th</sup>, 2019 as Metro Vancouver's external auditors for a five-year period. Fiscal year 2020 is the second year of that five-year period.

### **ANNUAL AUDIT PLAN**

The Audit Plan from BDO LLP for the Metro Vancouver Districts and Housing Corporation is included as an attachment to this report. The audit plan outlines the audit approach, key audit areas, auditor responsibilities and audit deliverables.



In addition, the report also highlights upcoming changes to public sector accounting standards that will impact upcoming fiscal years. It is anticipated that the most significant of these standards is the Asset Retirement Obligation Standard. Due to COVID-19, the implementation date for this standard has been delayed by one year, to fiscal 2023. This standard requires that any legal obligation associated with the retirement of a tangible capital asset be recorded as a liability upon the acquisition of the asset rather than at the retirement date, which is current practice. This enhanced reporting will allow Metro Vancouver to better understand the long term financial obligations associated with the retirement of end-of-life assets and to improve transparency around those obligations. Management is in the process of reviewing asset inventories in each of its entities to determine if such obligations exist and their impact and will report findings back to the Committee throughout the project.

#### **ALTERNATIVES**

This is an information report. No alternatives are presented.

#### **FINANCIAL IMPLICATIONS**

The completion of the annual financial statement audit fulfills a statutory requirement. The cost of the audit is included in the approved annual budget.

#### **CONCLUSION**

As prepared by BDO Canada LLP, our external auditors, the plan for the 2020 external audit of the Metro Vancouver Districts' and the Metro Vancouver Housing Corporation is presented to the committee for information.

#### **Attachments**

1. Audit Planning Report to the Performance and Audit Committee

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# METRO VANCOUVER REGIONAL DISTRICT

## AUDIT PLANNING REPORT TO THE PERFORMANCE AND AUDIT COMMITTEE

For its meeting on January 14, 2021

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## EXECUTIVE SUMMARY

We are pleased to present our audit plan for the audit of the financial statements of the Metro Vancouver Regional District (consolidated), Greater Vancouver Water District, Greater Vancouver Sewerage and Drainage District, and Metro Vancouver Housing Corporation (collectively referred to as the “Districts”) for the year ending December 31, 2020.



### Your BDO Audit Team

Brian Szabo, CPA, CA will be the lead on the engagement team, supported by Mario Piroddi, CPA, CA, as Quality Review Partner. They will draw on our subject matter experts as deemed necessary. Please refer to [Your Dedicated BDO Team](#) section of the report for contact information should you have any questions or concerns regarding the financial statement audit.



### Timeline

See the [Audit Timeline](#) section of the report for the detailed milestones.



### Significant Audit Risks

Our audit is focused on risks specific to your business and key accounts. Specifically, we have identified the following areas on which to focus:

- ▶ Management override of internal controls (risk of fraud)
- ▶ Risk of Fraudulent Revenue Recognition
- ▶ Operational impacts of COVID-19
- ▶ Landfill closure and post-closure costs
- ▶ Contaminated sites and asset retirement obligations
- ▶ Employee future benefits
- ▶ Contingent liabilities



## Materiality

Overall materiality has been determined based on prior year total revenues. For our audit work over tangible capital assets ("TCA") and other assets and liabilities related to TCA, we have set a higher materiality based on the net book value of TCA. This is to recognize the fact that the Districts have a significant value of TCA which is much larger in comparison to its operating activities.

For planning purposes, the overall materiality for the consolidated financial statements for the year ending December 31, 2020 is set at \$17.70 million (2019 - \$16.90 million). For the purposes of testing individual balances, performance materiality has been set at \$14.16 million. Please see page 9 for further details.

We will re-evaluate materiality based on current year actual results. Should expenses be significantly less than the prior year actual, we will adjust our materiality down correspondingly.



## Engagement Objectives

Our overall responsibility is to form and express an opinion on the financial statements. The performance of this audit does not relieve management or those charged with governance of their responsibilities. Please see the attached engagement letter in [Appendix C](#) for specific details regarding the scope of our work.



## Fraud Discussion

Through our planning process, and discussions with management, we have developed a preliminary understanding of your oversight processes and approach to fraud risk management.

We are not currently aware of any fraud affecting the Districts. Please see [Appendix D](#) for clarification of the auditor's responsibilities for detecting fraud.

If you are aware of specific areas of the organization that are particularly susceptible to fraud, or are aware of any instances of actual, suspected or alleged fraud affecting the Districts, we request that you provide us with this information.

## YOUR DEDICATED BDO AUDIT TEAM

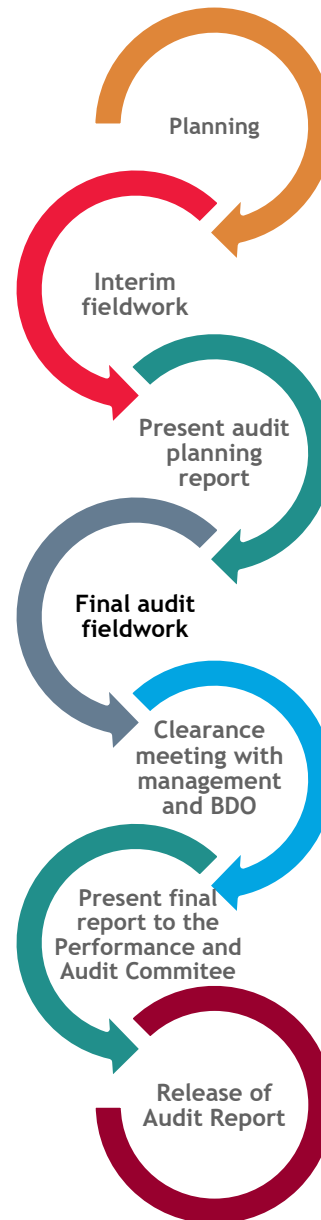
In order to ensure effective communication between the Performance and Audit Committee and BDO Canada LLP, the contact details of the engagement team are outlined below. We attempt to provide continuity of service to our clients to the greatest extent possible.

NAME	ROLE	PHONE NUMBER	EMAIL
Brian Szabo, CPA, CA	Engagement Partner	604.646.3389	bszabo@bdo.ca
Mario Piroddi, CPA, CA	Engagement Quality Review and IT Audit & Data Partner	250.372.9505	mpiroddi@bdo.ca
Darren Taylor, CPA, CA	Indirect Tax Partner	604.443.4725	dtaylor@bdo.ca
Kayan Yu, CPA, CA	Assurance Senior Manager	604.646.4417	kayu@bdo.ca

## AUDIT TIMELINE

The following schedule outlines the anticipated timing of the audit of the consolidated financial statements of the Districts.

As part of the year end Performance and Audit Committee meeting, we will provide the Performance and Audit Committee with a copy of our draft audit opinion, discuss our findings, including significant estimates utilized by management, accounting policies, financial statement disclosures, and significant transactions completed during the year. We will also report any significant internal control deficiencies identified during our audit and reconfirm our independence.



- November 2020
- November 30 - December 11, 2020
- January 14, 2021
- March 8 -26, 2021
- March 2021
- April 2021
- April 2021

## SIGNIFICANT AUDIT RISKS AND PLANNED RESPONSES

Based on our knowledge of the Districts' business, and knowledge gained from management to date, we have identified the following areas of focus and significant risks that, in our judgment, require special audit consideration.

Areas of focus arise mainly because of the complexity of the accounting rules, the extent of estimation and judgment involved in the valuation of these financial statement areas, and the existence of new accounting pronouncements that affect them. We request your input on the following areas of focus and whether there are any other areas of concern that the Performance and Audit Committee has identified.

### MANDATORY AUDIT RISKS

The following areas of focus are mandatory areas of audit consideration required for all audits conducted under Canadian Audit Standards and are not specific to the Districts. As such, we are required to document and discuss these areas of focus with you:

AREAS OF FOCUS	RISKS NOTED	AUDIT APPROACH
<b>Management Override of Internal Controls</b> (risk of fraud)	Management is generally in a unique position to perpetrate fraud because of the ability to directly or indirectly manipulate accounting records, and prepare fraudulent financial statements by overriding controls that otherwise appear to be operating effectively.	Review of transactions recorded in the various ledgers for unusual or non-recurring adjustments not addressed by other audit procedures.
<b>Risk of Fraudulent Revenue Recognition</b> ( <i>Rebuttable risk</i> )	Under Canadian auditing standards, we are required to consider whether there is a risk of material misstatement due to fraudulent revenue recognition in all audits. Based on our understanding of the Districts' significant revenue streams, we have rebutted this risk.  However, there continues to be a risk of misstatement, unrelated to fraud, with respect to revenue as accounting standards over revenue recognition are complex and subject to variation in application.	Grant funding received will be confirmed through a review of agreements, which ensures that the amounts recorded exist. We will also ensure the revenue is recorded accurately in accordance with the settlement of any stipulations.  Other revenues streams may have revenue recognition issues which will be reviewed in accordance with the latest revenue recognition standards.



**OTHER AREAS OF FOCUS**

AREAS OF FOCUS	RISKS NOTED	AUDIT APPROACH
<b>Operational Impacts of COVID-19</b>	Management has made changes to operations as a response to the global health crisis known as 'COVID-19' which has caused significant disruptions to workforces, financial markets, and the economy at large. COVID-19 has impacted virtually all organizations across the world. Due to the nature of the Districts' operations, this presents unique risks and challenges that may impact its financial reporting.	<p>We will continue to make enquiries with management relating to the impacts of COVID-19 on operations generally to date, as well as other significant or unusual transactions that have occurred as a result of COVID-19.</p> <p>We will continue to review COVID-19 reporting prepared by management to the Committee to identify any items that may have a financial reporting implication.</p> <p>We will review specific balances that may be susceptible to COVID-19 impacts such as investments, accounts receivable, and cost centers where incremental COVID-19 expenditures have been recorded.</p> <p>We will also review financial statement disclosures to ensure that the impact of COVID-19 continues to be appropriately disclosed, as required.</p>
<b>Landfill Closure and Post-Closure Costs</b>	A complex area that requires much estimation and reliance on expert reports and management assumptions and calculations.	We will enquire with management regarding any significant changes to the remaining life and associated costs of the landfill. Planned audit procedures also include evaluation of key inputs used in the valuation of the landfill post closure liability and review of calculations and disclosure prepared by management.
<b>Contaminated Sites and Asset Retirement Obligations</b>	<p>The contaminated sites standard is complex and therefore there is a risk that liabilities may not be identified and/or appropriately accounted for.</p> <p>The new standard PS 3280 Asset Retirement Obligations will be implemented by the Districts in F2023.</p>	<p>We will review management's process for identifying new potential contaminated sites, and management's assessment of whether a liability exists.</p> <p>We will also obtain an update of liabilities recorded for contaminated sites identified in prior years to determine if the accounting treatment continues to be appropriate and accurate.</p> <p>We will work with management and provide guidance as needed towards the future implementation of PS 3280.</p>

AREAS OF FOCUS	RISKS NOTED	AUDIT APPROACH
<b>Employee Future Benefits</b>	The Districts record a liability for post-retirement and post-employment liabilities. Employee future benefits is a complex area that requires much estimation and reliance on actuarial experts.	<p>We will review actuarial reports and audit the significant assumptions and data inputs provided by the Districts for completeness and accuracy. Third party confirmations will be obtained over the accuracy and valuation of plan assets.</p> <p>We will directly communicate with the external actuaries.</p>
<b>Contingent Liabilities</b>	There are various lawsuits pending against the Districts, arising in the ordinary course of business and from specific events. There is a risk that potential losses related to these lawsuits have not been appropriately accrued for, or disclosed in, the financial statements. The Districts carry insurance to minimize the overall financial impacts of adverse outcomes.	<p>We will enquire with management of ongoing litigation, and potential claims that have an impact on the Districts.</p> <p>We will obtain confirmations from external solicitors of any potential contingent liabilities.</p> <p>We will also review financial statement disclosures to ensure that disclosures are complete and in accordance with Canadian public sector accounting standards.</p>

## MATERIALITY

Misstatements, including omitted financial statement disclosures, are considered to be material if they, individually or in aggregate, could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

Judgments about materiality are made in light of surrounding circumstances and include an assessment of both quantitative and qualitative factors and can be affected by the size or nature of a misstatement, or a combination of both.

Entity	MATERIALITY	PERFORMANCE MATERIALITY	REPORTING THRESHOLD
MVRD (Consolidated)	17,700,000	14,160,000	885,000
MVRD (Non-consolidated)	15,900,000	12,744,000	795,000
GVSD	14,160,000	11,328,000	708,000
GVWD	14,160,000	11,328,000	708,000
MVHC	1,900,000	1,520,000	95,000

Our materiality calculation is based on the Districts' prior year results. In the event that actual results vary significantly from those used to calculate preliminary materiality, we will communicate these changes to the Performance and Audit Committee as part of our year end communication.

Overall materiality has been determined based on prior year total revenues. For our audit work over tangible capital assets ("TCA") and other assets and liabilities related to TCA, we have set a higher materiality based on the net book value of TCA. This is to recognize the fact that the Districts have a significant value of TCA which is much larger in comparison to its operating activities.

We will communicate all corrected and uncorrected misstatements identified during our audit to the Performance and Audit Committee, other than those which we determine to be "clearly trivial". Misstatements are considered to be clearly trivial for purposes of the audit when they are inconsequential both individually and in aggregate.

We encourage management to correct any misstatements identified throughout the audit process.

## USING THE WORK OF OTHERS

### Experts

In order for us to perform adequate audit procedures on certain financial statement areas, we will be relying on the work of, and the report prepared by, Morneau Shepell for calculations over post-retirement and post-employment liabilities. Canadian generally accepted auditing standards require us to communicate with the expert. We propose to discuss the following with Morneau Shepell:

- ▶ The objective and nature of our audit engagement and how we intend to use the expert's findings and report.
- ▶ Our assessment of the significant and risk aspects of the engagement that will affect the expert's work.
- ▶ The requirement to advise us if they have any relationship with the organization which could impair their judgment or objectivity in the conduct of their engagement.
- ▶ The nature, timing and extent of the expert's work and our planned review of it, possibly including review of their working papers.
- ▶ Confirmation that the assumptions used in their calculations are consistent with those used in the prior periods and with industry standards.
- ▶ Their obligation to advise BDO Canada LLP of any matters up to the estimated audit report date that may affect their calculations and their report.

Our scope of work assumes that the appropriate level of management reviews the data provided to Morneau Shepell and that they also review the assumptions used and results reported by the expert for reasonableness.

The landfill closure and post-closure liability is based on an assessment performed by a third party engineer engaged by the City of Vancouver. As part of our audit, we will discuss with management the significant assumptions used by the engineer and enquire of changes to the operation or status of the landfills, if any, during the year.

## APPENDICES

Appendix A: BDO Audit Strategy

Appendix B: Draft Independent Auditor's Report

Appendix C: Engagement Letter

Appendix D: Responsibilities

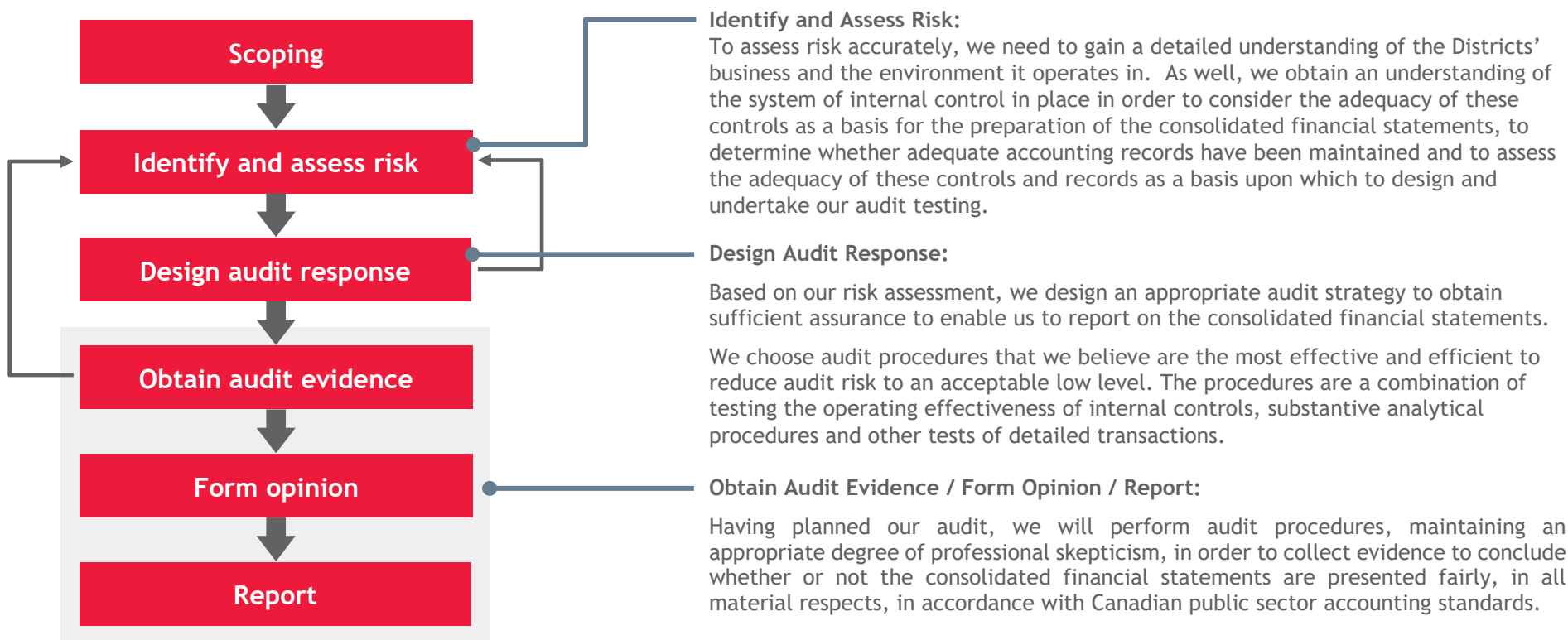
Appendix E: BDO Resources

Appendix F: Changes in Accounting Standards with Potential to Affect Your Organization

## APPENDIX A: BDO AUDIT STRATEGY

Our overall audit strategy involves extensive partner and manager involvement in all aspects of the planning and execution of the audit and is based on our overall understanding of the Districts.

We will perform a risk-based audit which allows us to focus our audit effort on higher risk areas and other areas of concern for management and the Performance and Audit Committee.



## APPENDIX B: DRAFT INDEPENDENT AUDITOR'S REPORT

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### Independent Auditor's Report

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To the Members of the Board of Directors of the Metro Vancouver Regional District

#### Opinion

We have audited the consolidated financial statements of the Metro Vancouver Regional District and its controlled entities (the "Consolidated Entity"), which comprise the consolidated Statement of Financial Position as at December 31, 2020, and the consolidated Statements of Operations, Change in Net Debt and Cash Flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Consolidated Entity as at December 31, 2020 and the results of its operations, change in net debt, and cash flows or the year then ended in accordance with Canadian public sector accounting standards.

#### Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Consolidated Entity in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Consolidated Entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Consolidated Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Consolidated Entity's financial reporting process.

#### Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Consolidated Entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Consolidated Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Consolidated Entity to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

#### **Other Matter – Supplementary Information**

We draw attention to the fact that the supplementary information included in Schedules 1 and 2 do not form part of the audited financial statements. We have not audited or reviewed this supplementary information and, accordingly, we do not express any opinion, review conclusion or any other form of assurance on this supplementary information.

Chartered Professional Accountants

Vancouver, British Columbia  
June XX, 2021



## APPENDIX C: ENGAGEMENT LETTER



Tel: 604.688.5421  
Fax: 604.688.5132  
www.bdo.ca

BDO Canada LLP  
600 Cathedral Place  
925 West Georgia Street  
Vancouver, BC  
V6C 3L2

December 18, 2019

Metro Vancouver Regional District  
Attention: Dean Rear, General Manager and Chief Financial Officer  
Metrotower III  
4730 Kingsway  
Burnaby, BC V5H 0C6

Dear Sir:

We understand that you wish for us to continue as the auditors of the following entities for their fiscal years ending December 31, 2019, and subsequent years:

- Metro Vancouver Regional District (consolidated)
- Greater Vancouver Water District
- Greater Vancouver Sewerage and Drainage District
- Metro Vancouver Housing Corporation

We are pleased to continue as your auditors subject to the terms and conditions of this Agreement, to which the attached Standard Terms and Conditions are applicable throughout this Agreement. This Agreement will remain in place and fully effective for future years until varied or replaced by another relevant written agreement.

Brian Szabo, CPA, CA, will be the Engagement Partner for the audit work we perform for you. The Engagement Partner will call upon other individuals with specialized knowledge to assist in the performance of services.

### Our Role as Auditors

We will conduct our audit(s) in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements prepared in accordance with Canadian public sector accounting standards are free from material misstatement. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. Our audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by you, as well as evaluating the overall financial statement presentation.

Because of the inherent limitations of an audit, together with the inherent limitations of internal control, there is an unavoidable risk that some material misstatements, whether by fraud or error, may not be detected, even though the audit is properly planned and performed in accordance with Canadian generally accepted auditing standards.

In making our risk assessments, we consider internal control relevant to your preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of your internal controls. However, we will communicate to you concerning any significant deficiencies in internal controls relevant to the audit of the financial statements that we have identified during the audit.



We will also communicate matters required by professional standards, to the extent that such matters come to our attention, to you, those charged with governance and/or the board of directors.

## Reporting

Our audit will be conducted on the basis that the financial statements have been prepared in accordance with Canadian public sector accounting standards.

Our independent auditor's report will be substantially in the form set out in Canadian Auditing Standard (CAS) 700. The form and content of our report may need to be amended in the light of our audit findings. If we are unable to issue or decline to issue an audit report, we will discuss the reasons with you and seek to resolve any differences of view that may exist.

## Role of Management and Those Charged with Governance

You acknowledge and understand that you have responsibility for:

- (a) the preparation and fair presentation of the financial statements in accordance with Canadian public sector accounting standards. The audit of the financial statements does not relieve you of your responsibilities;
- (b) such internal controls as you determine are necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error; and
- (c) providing us with:
  - access, in a timely manner, to all information of which you are aware that is relevant to the preparation of the financial statements such as records, documentation and other matters;
  - additional information that we may request for the purpose of the audit;
  - unrestricted access to persons within the entity from whom we determine it is necessary to obtain audit evidence;
  - financial and non-financial information (other information) that will be included in document(s) containing financial statements and our audit report thereon prior to the date of our auditor's report. If it is not possible to provide all the other information prior to the date of our auditor's report, you are responsible for provision of such other information as soon as practicable; and
  - written confirmation concerning representations made to us in connection with the audit. If appropriate and adequate written representations are not provided to us, professional standards require that we disclaim an audit opinion.

## Additional Services

We are available to provide a wide range of services beyond those outlined in this Agreement. To the extent that any additional services that we provide to you that are not provided under a separate written engagement agreement, the provisions of this Agreement will apply to the services.

**Fee Estimation**

The estimated fee for this engagement is based on our proposal to RFP No. 19-096 dated May 30, 2019 and amendment letter dated June 25, 2019.

We will notify you on a timely basis if there are any circumstances we encounter which could significantly affect our initial estimate of professional fees.

Additional information relating to our fees is provided in the Standard Terms and Conditions.

**Standard Terms and Conditions**

A copy of our Standard Terms and Conditions is attached as Appendix 1. You should ensure that you read and understand them. The Standard Terms and Conditions include clauses that limit our professional liability.

Please sign and return the attached copy of this Agreement to indicate your agreement with it. If you have any questions concerning this Agreement, please contact us before signing it.

It is a pleasure for us to be of service and we look forward to many future years of association with you.

Yours truly,

Chartered Professional Accountants

Agreement of all the terms and conditions in this Agreement is hereby acknowledged by:

A handwritten signature in black ink, appearing to be 'DR', written over a horizontal line.

Dean Rear, General Manager and Chief Financial Officer

1/24/20  
Date

cc: Board of Directors



## ***Appendix 1 - Standard Terms and Conditions***

### **1. Overview and Interpretation**

- 1.1 This Agreement sets forth the entire agreement between the parties in relation to Services and it supersedes all prior agreements, negotiations or understandings, whether oral or written, with respect to Services. To the extent that any of the provisions of the accompanying letter conflict with these Standard Terms and Conditions, these Standard Terms and Conditions shall prevail. This Agreement may not be changed, modified or waived in whole or part except by an instrument in writing signed by both parties.

- 1.2 In this Agreement, the following words and expressions have the meanings set out below:

**This Agreement** - these Standard Terms and Conditions, the letter to which they are attached, and any supporting schedules or other appendices to the letter, and any Summary of Services letters issued in future years.

**Services** - the services provided or to be provided under this Agreement

**We, us, our, BDO** - refer to BDO Canada LLP, a Canadian limited liability partnership organized under the laws of the Province of Ontario

**You, your** - the party or parties contracting with BDO under this Agreement, including the party's or parties' management and those charged with corporate governance. You and your does not include BDO, its affiliates or BDO Member Firms

**BDO Member Firm or Firms** - any firm or firms that form part of the international network of independent firms that are members of BDO International Limited

**Confidential Information** - information that contains identifying features that can be attributed to you or individual personnel

### **2. BDO Network and Sole Recourse**

- 2.1 BDO is a member of BDO International Limited, a UK company limited by guarantee, and forms part of the international network of independent member firms (i.e. BDO Member Firms), each of which is a separate legal entity.
- 2.2 We may use other BDO Member Firms or subcontractors to provide Services; however, we remain solely responsible for Services. You agree not to bring any claim or action against another BDO Member Firm (or their partners, members, directors, employees or subcontractors) or our subcontractors in respect of any liability relating to the provision of Services.
- 2.3 You agree that any of our affiliates, subcontractors, and other BDO Member Firms and any subcontractors thereof whom we directly or indirectly involve in providing Services have the right to rely on and enforce Section 2.2 above as if they were a party to this Agreement.

### **3. Respective Responsibilities**

- 3.1 We will use reasonable efforts to complete, within any agreed-upon time frame, the performance of Services.





- 3.2 You shall be responsible for your personnel's compliance with your obligations under this Agreement. We will not be responsible for any delays or other consequences arising from you not fulfilling your obligations.
4. **Working Papers and Deliverables**
- 4.1 **Ownership** - Any documents prepared by us, or for us, in connection with Services belong solely to us.
- 4.2 **Oral advice and draft deliverables** - You should not rely upon any draft deliverables or oral advice provided by us. Should you wish to rely upon something we have said to you, please let us know and, if possible, we will provide the information that you require in writing.
- 4.3 **Translated documents** - If you engage us to translate any documents, advice, opinions, reports or other work product of BDO from one language to another, you are responsible for the accuracy of the translation work.
- 4.4 **Reliance by Third Parties** - Our Services will not be planned or conducted in contemplation of or for the purpose of reliance by any party other than you and any party to whom the assurance report is addressed. Items of possible interest to a third party will not be addressed and matters may exist that would be assessed differently by a third party, possibly in connection with a specific transaction.
- 4.5 **Consent to use the Report** - Nothing in this Agreement shall be construed as consent to the use of our report in connection with a continuous disclosure document, a public or private offering document, an annual report or any other document and we expressly do not provide such consent. If you request consent for the use of our report, we will consider, at the relevant time, providing consent and any conditions that we may attach to such consent. Our consent must be in writing.
- 4.6 **Consent requests** - In order to provide consent, professional standards require that we read the other information in the related document and consider whether such information is materially inconsistent with the related financial statements. Any consent request must be made on a sufficiently timely basis to allow us to consider your identification and resolution of events occurring in the period since the date of our report, and to obtain updated written representation letters. Such procedures will be performed at your cost and will be documented in a separate engagement letter.
5. **Confidentiality**
- 5.1 We agree to use Confidential Information provided by you only in relation to the Services in connection with which the information is provided and we will not disclose the information, except where required by law, regulation or professional obligation. We may however, give Confidential Information to other BDO Member Firms or other subcontractors assisting us in providing Services. Any party to whom we subcontract work will be required to keep Confidential Information confidential either by professional obligation or contract with us. Any BDO Member Firms or other subcontractors we use will be bound by the same confidentiality obligations.
- 5.2 BDO shall be entitled to include a description of the work we render to or for you in marketing and research materials and disclose such information to third parties, provided that all such information will be made anonymous and not associated with you. Additionally, we may analyze information on an industry or sector basis for internal



purposes or to provide industry/sector wide information to our clients or potential clients. You consent to our using information obtained from you in this way provided that the outputs therefrom will not contain any identifying features that can be attributed to you.

## **6. Independence**

- 6.1 Professional and certain regulatory standards require us to be independent, in both fact and appearance, with respect to our clients in the performance of our Services. We will communicate to you any relationships between BDO (including its related entities) and you that, in our professional judgment, may reasonably be thought to bear on our independence.

## **7. Offers of Employment**

- 7.1 Any discussions that you, or any party acting on your behalf, have with professional personnel of our Firm regarding employment could pose a threat to our independence. Your recruitment of an engagement team member from the current or prior year's engagement may compromise our independence and our ability to render agreed Services to you. Engagement team members may include current and former partners and staff of BDO, other BDO Member Firms and other firms who work under our direction. Therefore, you agree to inform us prior to any such discussions so that you and we can implement appropriate safeguards to maintain our independence.

## **8. Professional and Regulatory Oversight**

- 8.1 As required by legal, regulatory, or professional authorities (both in Canada and abroad) and by BDO policy, our client files must periodically be reviewed by practice inspectors to ensure that we are adhering to professional and BDO standards. It is understood that by entering into this Agreement, you provide your consent to us providing our files relating to your engagement to the practice inspectors for the sole purpose of their inspection.
- 8.2 Certain regulatory bodies may also have the right to conduct investigations of you, including the Services provided by us. To the extent practicable and permitted by law, we will advise you of any such investigation request or order prior to providing our working papers.
- 8.3 You agree to reimburse us for our time and expenses, including reasonable legal fees, incurred in responding to any investigation that is requested or authorized by you or investigations of you undertaken under government regulation or authority, court order or other legal process.

## **9. Privacy and Consents**

- 9.1 You agree we will have access to all personal information in your custody that we require to complete our engagement. We may collect, use, transfer, store, or process such information disclosed by you of a personal nature (personal information). Our Services are provided on the understanding that:
- (a) you have obtained any consents for collection, use and disclosure to us of personal information required under all applicable privacy legislation; and
  - (b) we will hold all personal information in compliance with our Privacy Statement.



## **10. Electronic Communications**

- 10.1 Both parties recognize and accept the security risks associated with email communications, including but not limited to the lack of security, unreliability of delivery and possible loss of confidentiality and privilege. Unless you request in writing that we do not communicate by internet email, you assume all responsibility and liability in respect of risk associated with its use.
- 10.2 By signing this agreement, you provide BDO with express consent to communicate with you and your employees, as applicable, electronically, including sending BDO newsletters, publications, announcements, invitations and other news and alerts that may be of interest to you. You and your employees may withdraw such consent at any time by contacting BDO at [www.bdo.ca/unsubscribe](http://www.bdo.ca/unsubscribe).

## **11. Limitation of Liability**

- 11.1 In any dispute, action, claim, demand for losses or damages arising out of the Services performed by BDO pursuant to this Agreement, BDO shall only be liable for its proportionate share of the total liability based on degree of fault as determined by a court of competent jurisdiction or by an independent arbitrator as a result of the dispute resolution procedures, notwithstanding the provisions of any statute or rule of common law which create, or purport to create, joint and several liability.
- 11.2 Our liability shall be restricted to damages of a direct and compensatory nature and shall not include indirect, consequential, aggravated or punitive damages, or damages for loss of profits or expected tax savings, whether or not the likelihood of such loss or damage was contemplated.
- 11.3 You agree that BDO shall in no event be liable to you for any actions, damages, claims, liabilities, costs, expenses, or losses in any way arising out of or relating to the Services performed hereunder for an aggregate amount of more than the higher of:
- (a) three times the fees paid by you to BDO in the twelve months preceding the incident giving rise to the claim; and
  - (b) \$25,000.
- 11.4 No exclusion or limitation on the liability of other responsible persons imposed or agreed at any time shall affect any assessment of our proportionate liability hereunder, nor shall settlement of or difficulty enforcing any claim, or the death, dissolution or insolvency of any such other responsible persons or their ceasing to be liable for the loss or damage or any portion thereof, affect any such assessment.
- 11.5 You agree claims or actions relating to the delivery of Services shall be brought against us alone, and not against any individual. Where our individuals are described as partners, they are acting as one of our members.

## **12. Indemnity**

- 12.1 To the fullest extent permitted by applicable law and professional regulations, you agree to indemnify and hold harmless BDO from and against all losses, costs (including solicitors' fees), damages, expenses, claims, demands or liabilities arising out of or in consequence of:



- (a) a misrepresentation by a member of your management or board of directors, regardless of whether such person was acting in your interest;
- (b) the Services performed by BDO pursuant to this Agreement, unless, and to the extent that, such losses, costs, damages and expenses are found by a court of competent jurisdiction to have been due to the gross negligence of BDO. In the event that the matter is settled out of court, we will mutually agree on the extent of the indemnification to be provided by you, failing which, the matter may be referred to dispute resolution in accordance with the terms of this Agreement.

### **13. Alternative Dispute Resolution**

- 13.1 Both parties agree that they will first attempt to settle any dispute arising out of or relating to this Agreement or the Services provided hereunder through good faith negotiations.
- 13.2 In the event that the parties are unable to settle or resolve their dispute through negotiation, such dispute shall be subject to mediation pursuant to the National Mediation rules of the ADR Institute of Canada Inc. All disputes remaining unsettled for more than 60 days following the parties first meeting with a mediator or such longer period as the parties mutually agree upon shall be subject to arbitration pursuant to the National Arbitration Rules of the ADR Institute of Canada Inc. Such arbitration shall be final, conclusive and binding upon the parties, and the parties shall have no right of appeal or judicial review of the decision. The parties hereby waive any such right of appeal which may otherwise be provided for in any provincial arbitration statute made applicable under the National Arbitration Rules.

### **14. Limitation Period**

- 14.1 You shall make any claim relating to Services or otherwise under this Agreement no later than one year after you became aware or ought reasonably to have become aware of the facts giving rise to any such claim.
- 14.2 You shall in no event make any claim relating to the Services or otherwise under this Agreement later than two years after the completion of the Services under this Agreement.
- 14.3 To the extent permitted by law, the parties to this Agreement agree that the limitation periods established in this Agreement replace any limitation periods under any limitations act and/or any other applicable legislation and any limitation periods under any limitations act and/or any other applicable legislation shall not alter the limitation periods specified in this Agreement.

### **15. Québec Personnel**

- 15.1 We may sometimes have individual partners and employees performing Services within the Province of Québec who are members of the Ordre des comptables professionnels agréés du Québec. Any such members performing professional services hereunder assumes full personal civil liability arising from the practice of their profession, regardless of their status within our partnership. They may not invoke the liability of our partnership as grounds for excluding or limiting their own liability. The provisions in Sections 11 (Limitation of Liability) and 14 (Limitation Period) shall therefore not apply to limit the personal civil liability of partners and employees who are members of the Ordre des comptables professionnels agréés du Québec.



**16. Termination**

- 16.1 This Agreement applies to Services whenever performed (including before the date of this Agreement).
- 16.2 You or we may terminate this Agreement at any time upon written notice of such termination to the other party. We will not be liable for any loss, cost or expense arising from such termination. You agree to pay us for all Services performed up to the date of termination, including Services performed, work-in-progress and expenses incurred by us up to and including the effective date of the termination of this Agreement.

**17. Fees and Billings**

- 17.1 Our estimated fee is based on an assumed level of quality of your accounting records, the agreed upon level of preparation and assistance from your personnel and adherence to the agreed-upon timetable. Our estimated fee also assumes that your financial statements are in accordance with the applicable financial reporting framework and that there are no significant new or changed accounting policies or issues or internal control or other reporting issues. We will inform you on a timely basis if these factors are not in place.
- 17.2 Should our assumptions with respect to the quality of your accounting records be incorrect or should the conditions of the records, degree of cooperation, results of audit procedures, or other matters beyond our reasonable control require additional commitments by us beyond those upon which our estimated fees are based, we may adjust our fees and planned completion dates.
- 17.3 Our professional fees will be based on our billing rates which depend on the means by which and by whom our Services are provided. We also will bill you for our out-of-pocket expenses, our administrative charge (described below), and applicable Goods and Services Sales Tax, Harmonized Sales Tax, Quebec Sales Tax and Provincial Sales Tax.
- 17.4 Removed.
- 17.5 Our accounts are due when rendered and invoiced amounts are deemed to be earned when paid. BDO may suspend the performance of Services in the event that you fail to pay an invoice when it is due. Interest may be charged at the rate of 12% per annum on all accounts outstanding for more than 30 days.

**18. Governing Laws**

- 18.1 The terms of our engagement shall remain operative until amended, terminated, or superseded in writing. They shall be interpreted according to the laws of the province or territory in which BDO's principal Canadian office performing the engagement is located, without regard to such province/territory's rules on conflicts of law.

**19. Entire Agreement and Survival**

- 19.1 This Agreement sets forth the entire agreement between the parties with respect to the subject matter herein, superseding all prior agreements, negotiations or understandings, whether oral or written, with respect to such subject matter. It is understood that this Agreement will not be superseded by any contract with us for other specific services that are not of the same scope as the Services contemplated in this Agreement, unless the other contract explicitly references this Agreement and an intent to supersede it.



19.2 The provisions of this Agreement that give either of us rights or obligations beyond its termination shall continue indefinitely following the termination of this Agreement. Any clause that is meant to continue to apply after termination of this Agreement will do so.

**20. Force Majeure**

20.1 We will not be liable for any delays or failures in performance or breach of contract due to events or circumstances beyond our reasonable control, including acts of God, war, acts by governments and regulators, acts of terrorism, accident, fire, flood or storm or civil disturbance.

**21. Assignment**

21.1 No party may assign, transfer or delegate any of the rights or obligations hereunder without the written consent of the other party or parties. BDO may engage independent contractors and BDO Member Firms to assist us in performing the Services in this Agreement without your consent.

**22. Severability**

22.1 If a court or regulator with proper jurisdiction determines that a provision of this Agreement is invalid, then the provision will be interpreted in a way that is valid under applicable law or regulation. If any provision is invalid, the rest of this Agreement will remain effective.

Version: 201909

## APPENDIX D: RESPONSIBILITIES

It is important for the Performance and Audit Committee to understand the responsibilities that rest with the Districts and its management, those that rest with the external auditor, and the responsibilities of those charged with governance. Our responsibilities are outlined below and within the annual engagement letter attached as [Appendix C](#) to this letter. The oversight and financial reporting responsibilities of management and the Audit Committee are also summarized below.

### AUDITOR'S ENGAGEMENT OBJECTIVES

Our overall objective is to express an opinion as to whether the consolidated financial statements present fairly, in all material respects, the financial position, financial performance and cash flows of the Districts in accordance with Canadian public sector accounting standards .

Year-End Audit Work	Other Information
<ul style="list-style-type: none"> <li>▶ Work with management towards the timely issuance of consolidated financial statements.</li> <li>▶ Provide timely and constructive management letters. This will include deficiencies in internal control identified during our audit.</li> <li>▶ Present significant findings to the Performance and Audit Committee including key audit and accounting issues, any significant deficiencies in internal control and any other significant matters arising from our work.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Read the other information included in the Districts' Annual Report to identify material inconsistencies, if any, with the audited consolidated financial statements.</li> </ul>
	Year-Round Communications
	<ul style="list-style-type: none"> <li>▶ Consult regarding accounting, income tax and reporting matters as requested throughout the year.</li> </ul>

## AUDITOR'S RESPONSIBILITIES FOR DETECTING FRAUD

We are responsible for planning and performing the audit to obtain reasonable assurance that the consolidated financial statements are free of material misstatements, whether caused by error or fraud, by:

- ▶ Identifying and assessing the risks of material misstatement due to fraud;
- ▶ Obtaining sufficient and appropriate audit evidence regarding the assessed risks of material misstatement due to fraud, through designing and implementing appropriate responses; and
- ▶ Responding appropriately to fraud or suspected fraud identified during the audit.

The likelihood of not detecting a material misstatement resulting from fraud is higher than the likelihood of not detecting a material misstatement resulting from error because fraud may involve collusion as well as sophisticated and carefully organized schemes designed to conceal it.

### Fraud Risk Assessment Procedures

- ▶ Management's assessment of the risk that the consolidated financial statements may be materially misstated due to fraud, including the nature, extent and frequency of such assessments;
- ▶ Management's process for identifying and responding to the risks of fraud in the Districts, including any specific risks of fraud that management has identified or that have been brought to its attention, or classes of transactions, account balances, or disclosures for which a risk of fraud is likely to exist;
- ▶ Management's communication, if any, to those charged with governance regarding its processes for identifying and responding to the risks of fraud in the Districts; and
- ▶ Management's communication, if any, to employees regarding its view on business practices and ethical behaviour.



### Response to Assessed Fraud Risks

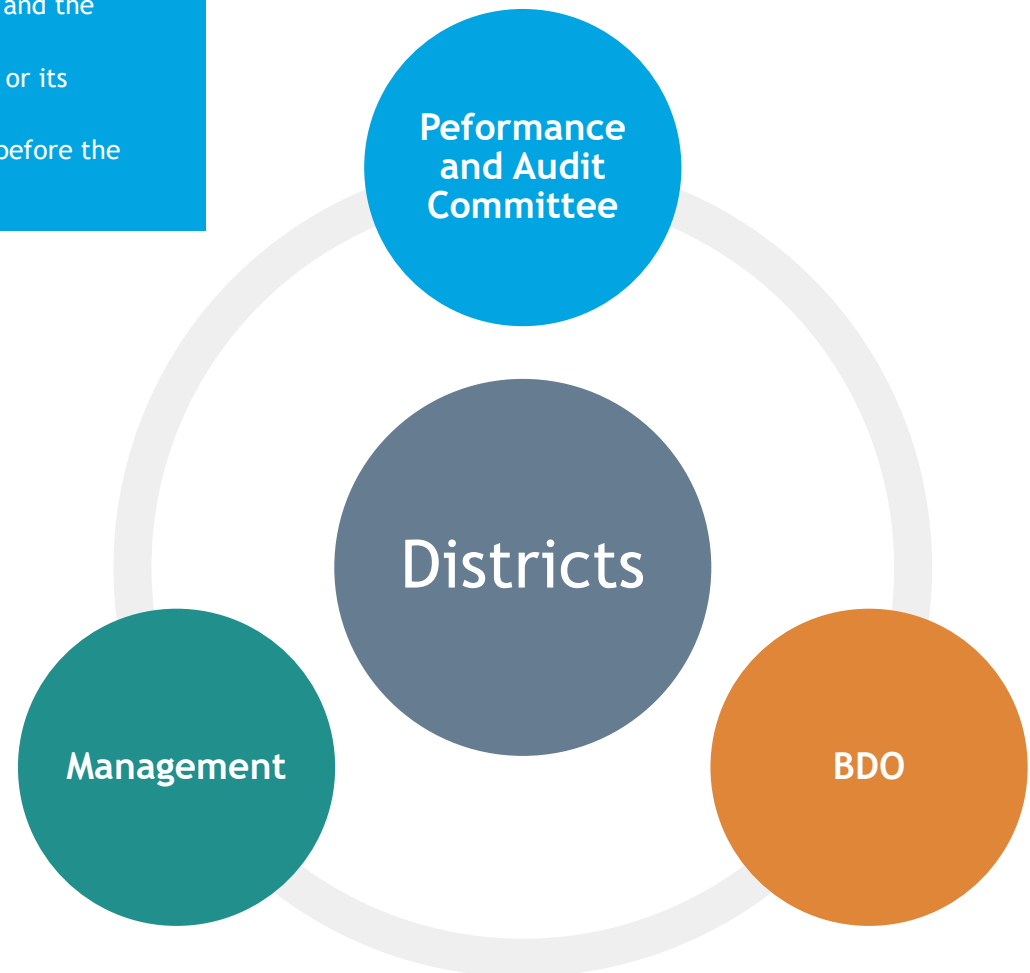
- ▶ Inquire of management, the Performance and Audit Committee, and others related to any knowledge of fraud, suspected fraud or alleged fraud;
- ▶ Perform disaggregated analytical procedures and consider unusual or unexpected relationships identified in the planning of our audit;
- ▶ Incorporate an element of unpredictability in the selection of the nature, timing and extent of our audit procedures; and
- ▶ Perform additional required procedures to address the risk of management's override of controls including:
  - Testing internal controls designed to prevent and detect fraud;
  - Testing the appropriateness of a sample of adjusting journal entries and other adjustments for evidence of the possibility of material misstatement due to fraud;
  - Reviewing accounting estimates for biases that could result in material misstatements due to fraud, including a retrospective review of significant prior years' estimates; and
  - Evaluating the business rationale for significant unusual transactions.

## RESPONSIBILITIES OF THOSE CHARGED WITH GOVERNANCE

- ▶ Oversee the work of the external auditor engaged for the purpose of issuing an independent auditor's report.
- ▶ Facilitate the resolution of disagreements between management and the external auditor regarding financial reporting matters.
- ▶ Pre-approve all non-audit services to be provided to the Districts or its subsidiaries by the external auditor.
- ▶ Review the consolidated financial statements and annual report before the Districts publicly discloses this information.

## MANAGEMENT RESPONSIBILITIES

- ▶ Maintain adequate accounting records and maintain an appropriate system of internal control for the Districts.
- ▶ Select and consistently apply appropriate accounting policies.
- ▶ Prepare the annual consolidated financial statements in accordance with Canadian public sector accounting standards.
- ▶ Safeguard the Districts' assets and take reasonable steps for the prevention and detection of fraud and other irregularities.
- ▶ Make available to us, as and when required, all of the Districts' accounting records and related financial information.



## APPENDIX E: BDO RESOURCES

BDO is a leading provider of professional services to clients of all sizes in virtually all business sectors. Our team delivers a comprehensive range of assurance, accounting, tax, and advisory services, complemented by a deep industry knowledge gained from nearly 100 years of working within local communities. As part of the global BDO network, we are able to provide seamless and consistent cross-border services to clients with global needs. Commitment to knowledge and best practice sharing ensures that expertise is easily shared across our global network and common methodologies and information technology ensures efficient and effective service delivery to our clients.

### PUBLIC SECTOR RESOURCE CENTRE

BDO Canada has created the Public Sector Resource Centre to assist our clients in navigating the risks and opportunities facing the industry. With topics ranging from governance to CRM systems, from strategic planning to fraud prevention, and from crisis management to commodity taxes, our Resource Centre is available to assist management and boards of Public Sector organizations of all sizes.

Specific resources and articles include “Cloud Priorities and COVID Wave 2”, “Cyber Security for Home Networks” and “How You Can Help Manage Your People As Their Anxieties Rise Amid A Second Wave?”

Please access the Public Sector Resource Centre at the following link:

<https://www.bdo.ca/en-ca/industries/public-sector/overview/>

### BDO INSIGHTS

BDO Canada has curated articles on a number of topics and across industries in our BDO Insights page ( <https://www.bdo.ca/en-ca/insights/> ). Articles can be filtered by industry or service area. In particular the following topical articles have been added for our public sector clients in relation to the current environment:

- [COVID-19: Financial Reporting Implications for the Public Sector](#)
- [Business Not As Usual: Resuming the Public Sector in the New Normal](#)

Please follow the above links to access the articles.

## APPENDIX F: CHANGES IN ACCOUNTING STANDARDS WITH POTENTIAL TO AFFECT YOUR ORGANIZATION

*The following summarizes the status of new standards and the changes to existing standards as of the fall of 2020. The Appendix also reviews Exposure Drafts, Statements of Principles, Projects and Post Implementation Reviews that provide information on the future direction of CPA Public Sector Accounting Handbook.*

### NEW STANDARDS NOT YET IN EFFECT

#### Section PS 3400 Revenue

**(effective years beginning on or after April 1, 2023 - date revised due to COVID)**

This section is related to revenue recognition principles that apply to revenues of governments and government organizations other than government transfers and tax revenue.

The Public Sector Accounting Handbook has two Sections that address two major sources of government revenues, government transfers and tax revenue. Revenues are defined in Section PS 1000, Financial Statement Concepts. Recognition and disclosure of revenues are described in general terms in Section PS 1201, Financial Statement Presentation.

This section addresses recognition, measurement and presentation of revenues that are common in the public sector. It is less complex than the comparable new IFRS standard, although generally consistent in philosophy.

This new Section will be effective for fiscal years beginning on or after April 1, 2023. Earlier adoption is permitted.

#### Section PS 3280, Asset Retirement Obligations

**(effective years beginning on or after April 1, 2022 - date revised due to COVID)**

This new Section establishes standards on how to account for and report a liability for asset retirement obligations. The main features of the new Section are:

- An asset retirement obligation is a legal obligation associated with the retirement of a tangible capital asset.
- Asset retirement costs associated with a tangible capital asset controlled by the entity increase the carrying amount of the related tangible capital asset (or a component thereof) and are expensed in a rational and systematic manner.
- Asset retirement costs associated with an asset no longer in productive use are expensed.
- Measurement of a liability for an asset retirement obligation should result in the best estimate of the amount required to retire a tangible capital asset (or a component thereof) at the financial statement date.

- Subsequent measurement of the liability can result in either a change in the carrying amount of the related tangible capital asset (or a component thereof), or an expense, depending on the nature of the re-measurement and whether the asset remains in productive use.
- A present value technique is often the best method with which to estimate the liability.
- As a consequence of the issuance of Section PS 3280:
  - editorial changes have been made to other standards; and
  - Section PS 3270, Solid Waste Landfill Closure and Post-Closure Liability has been withdrawn.

This Section applies to fiscal years beginning on or after April 1, 2022. Earlier adoption is permitted.

Section PS 3270 will remain in effect until the adoption of Section PS 3280 for fiscal periods beginning on or after April 1, 2022, unless a public sector entity elects earlier adoption.

This is one of the most significant new standards in years and will require considerable staff time in most entities to prepare for compliance. BDO has tools and resources to assist in this regard including our ARO Implementation Checklist.

### **Financial Instruments Narrow Scope Amendments (effective years beginning on or after April 1, 2022 - date revised due to COVID)**

As the name implies, these amendments are quite narrow in scope and will not impact many entities.

The amendments are intended to:

- clarify how to deal with financial instruments intended to maintain orderly conditions for the circulation of the Canadian dollar (will impact Federal Government only)
- change treatment of bond repurchases such that will not always be an immediate extinguishment of debt
- clarifies and simplifies certain transitional provisions

An Exposure Draft was issued in January 2019 and a Final Standard was issued in March 2020.

## **EXPOSURE DRAFTS PENDING**

### **Purchased Intangibles: Narrow Scope Amendments**

This project came together quickly as a result of a submission to the Public Sector Accounting Discussion Group. An Exposure Draft was issued in November 2019 and comments closed January 31, 2020. It is expected that PSAB will approve the amendments in fall 2020.

The main features of these amendments will be to:

- remove the recognition prohibition on purchased intangibles from Section PS 1000;
- remove the disclosure requirements from Section PS 1201 relating to purchased intangibles not recognized; and thus,
- allow for the recognition of purchased intangibles in public sector financial statements.



## Public Private Partnerships

This project has been underway since 2014 and is nearing completion. PSAB is currently deliberating feedback received on the exposure draft which closed at the end of February 2020.

The exposure draft recommends the following:

- an asset would be recorded when the public sector entity controls:
  - the purpose and use of the infrastructure;
  - access to the infrastructure; and
  - any significant interest accumulated in the infrastructure when the public private partnership's term ends.
- asset to be recorded at cost/fair value -- usually based on present value of future payments related to construction/acquisition of asset
- record liability at same amount as asset
- liability a financial liability when cash/asset consideration, but if non-financial consideration may be:
  - a non-financial liability such as unearned revenue
  - or if no performance obligations may be immediate recognition of proceeds from grants of rights for use
- where a liability is recorded, it should be reduced as performance obligations are settled
- fairly detailed disclosure requirements

## Concepts Underlying Financial Performance

This project includes both the "Conceptual Framework" and "Reporting Model" related to it. It is also nearing completion with an Exposure Draft expected in January 2021.

The existing Conceptual Framework found in Sections PS 1000, Financial Statement Concepts and PS 1100, Financial Statement Objectives will be replaced by 10 new chapters. Because the Conceptual Framework is used to develop generally accepted accounting principles (GAAP) but is not considered GAAP itself, there is not expected to be immediate impact from the introduction of the Conceptual Framework. It will, however, influence future Standards development so it is important that the concepts and principles be understood and considered.

Further a new Reporting Model will come along to amend and/or replace PS 1201, Financial Statement Presentation. It is expected that the new Reporting Model will allow better flexibility for application of PSAS to financial statements of government organizations and general improvements to aid understanding of financial statements. In particular, potential options for presentation of endowment investments and related fund balances.

## **CONSULTATION PAPERS AND INVITATIONS TO COMMENT**

### **Review of International Strategy**

On May 5, 2020, PSAB voted to approve “Option 2 - Adapt IPSAS principles when developing future standards,” as described in Consultation Paper 2, “Reviewing PSAB’s Approach to International Public Sector Accounting Standards.” This decision resulted from extensive consultation with Canadian stakeholders. The Board initiated the project through its 2017-2021 Strategic Plan, “Review of PSAB’s Approach to International Public Sector Accounting Standards.”

Option II: Adapt IPSAS principles when developing future standards. PSAB would continue to develop PSAS, but future standards would be based on principles in existing individual IPSAS as each is considered by PSAB. The Board would establish a “Criteria for Modifying Principles” document to provide guidance on when departures from IPSAS principles in a standard under consideration are permitted. The Board’s conceptual framework and financial reporting model would continue as the foundation for Canadian public sector generally accepted accounting principle (GAAP). So, a departure from principles in an individual IPSAS would be required if they conflict with the Board’s framework or model. Changes to GAAP under this option would occur prospectively, and the Board’s due process would be modified to incorporate the Criteria for Modifying Principles. Given that future PSAS would be based on principles in existing individual IPSAS, there would be an increased focus toward influencing the principles under development for new IPSAS.

### **Government Not-for-Profit Strategy**

When government not-for-profits were brought into the PSA Handbook they were given the option of applying PSAS standards or PSAS standards in conjunction with the “4200 Series” of standards that mirror Part III of the CPA Handbook. It was always recognized that the 4200 Series was likely a stop-gap measure with additional NPO-specific standards being brought into the “regular” PSA Handbook. The need to review the GNFPO strategy become more urgent with several provinces mandating that their organizations not use the 4200 series.

This is a difficult area because of the fact that many GNFPOs operate quite differently than governments do and therefore do not fit well into a government financial reporting model. Moreover, not-for-profit organizations that are not government controlled follow different standards than GNFPOs do (particularly those GNFPOs that do not use 4200 series) which makes comparisons between some entities difficult.

PSAB has recognized the issues facing the GNFPO sector and has created a GNFPO Strategy Committee to guide it through a process of developing improved guidance for GNFPOs. Retired BDO partner Bill Cox is the Chair of this committee. The committee issued its first Consultation Paper in May 2019 which was mostly fact-finding. A second consultation paper will be issued in January 2021 which will include options and a recommended strategy. The recommendation will be for GNFPOs to go “full PSAS” but that as part of this process the existing PS 4200 standards will be reviewed on a standard by standard basis. Each existing 4200 standard will either be brought in to amend or supplement PSA standards or be discarded.

## Employment Benefits

The existing Employee Benefits standards in PS 3250, Retirement Benefits and PS 3255, Post-employment Benefits are some of the older standards currently existing in the PSA Handbook. Quite frankly, they have not kept pace with the changes that have occurred in the industry. New concepts such as "Target-Benefit Plans" and "Shared-Risk Plans" do not fit in neatly to existing standards.

In recognition of the wide scope of review required to modernize these standards, PSAB had broken initial review into three different sections:

- Deferral Provisions (Invitation to Comment issued in November 2016)
- Discount Rate Guidance (Invitation to Comment issued in November 2017)
- Non-Traditional Pension Plans (Invitation to Comment issued in October 2018)

However, in late 2019 all projects in this area were curtailed for re-evaluation.

In mid-2020 the project was rebooted with a revised approach. The revised approach focuses on addressing the previously identified key issues using a multi-release strategy. Given the reboot, it is too early to predict where this project might be headed.



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To: Performance and Audit Committee

From: Dean Rear, General Manager, Financial Services/Chief Financial Officer

Date: January 5, 2021 Meeting Date: January 14, 2021

Subject: **Project Delivery Best Practice Response - Project Estimating Framework**

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**RECOMMENDATION**

That the Performance and Audit Committee receive for information the report dated January 5, 2021, titled "Project Delivery Best Practice Response – Project Estimating Framework".

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The attached report titled "Project Delivery Best Practice Response – Project Estimating Framework" was considered by the Finance and Intergovernment Committee at its meeting of November 6, 2020, and is presented here to the Performance and Audit committee for its information.

**Attachment:**

1. Finance and Intergovernment Committee Report titled "Project Delivery Best Practice Response – Project Estimating Framework", dated November 6, 2020

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To: Finance and Intergovernment Committee

From: Cheryl Nelms, General Manager, Project Delivery

Date: November 6, 2020 Meeting Date: November 18, 2020

Subject: **Project Delivery Best Practice Response – Project Estimating Framework**

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**RECOMMENDATION**

That the GVWD/GVS&DD Board receive for information the report dated November 6, 2020, titled “Project Delivery Best Practice Response – Project Estimating Framework”.

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**EXECUTIVE SUMMARY**

In February 2020, Metro Vancouver formed the Project Delivery Department to respond to the complex challenges presented by the unprecedented scale of capital projects, the layers of complexity, and market influences. A high level review of Metro Vancouver practices related to project delivery was undertaken shortly thereafter by an independent consultant and a group of experts with expertise in reviewing and constructing multibillion dollar projects. They identified strategic areas of opportunities within the areas of leadership, governance, commerce, stakeholder engagement, and technical knowledge.

- The first update on Project Delivery Best Practice Response was presented to the Board on April 15, 2020 (Attachment 1);
- A second update on initial Best Practice Response activities undertaken by the Project Delivery Department was presented to the Board on October 2, 2020 including a focus on governance (Attachment 2);
- This third update to the Board will provide information regarding Best Practice Response in the area of project cost estimating and control.

**PURPOSE**

To provide an update on the work of the Project Delivery Department regarding the development and deployment of Project Delivery Best Practice in the area of project cost estimating.

**BACKGROUND**

Cost estimating is the prediction of the costs of the project, beginning at inception through to project completion. These estimated costs are used to guide decision makers in advancing the project through its various stages. Without a strong cost estimating framework, projects tend to experience cost overrun and scope creep, significant budget revisions during execution, inability to reconcile budget changes over time, and overall poorly informed decision making.

To initiate the development of the cost estimating processes and guidelines, the Project Delivery Department commissioned Deloitte to develop a *Project Estimating Framework* that would:

- Reflect industry leading practices for large capital projects;
- Improve decision making as a project is advanced through its various stages; and
- Improve cost certainty and cost management.

The new framework is expected to be further developed and implemented by a newly created Project Control Group within the Project Delivery Department.

### BEST PRACTICE RESPONSE – PROJECT ESTIMATING FRAMEWORK

The newly developed *Project Estimating Framework* is built on four key pillars:

- **Standardized cost categorization:** To lower the risk of poor estimate quality and insufficient contingencies and increase levels of consistency across projects;
- **Consistent guidelines throughout the project lifecycle:** To limit the need for subsequent restructuring of the estimate, improve the traceability of budget revisions and dramatically improve the effectiveness of historical data analysis;
- **Formalized cost and scope stage gate process:** To increase the effectiveness of an estimate review and the documented estimating assumptions, simplify the identification of scope changes, and improve the overall change process by providing traceability and transparency;
- **Internal database used for benchmarking and knowledge transfer:** To improve the overall estimate quality by limiting the uncertainty of cost elements based on a structured analysis of past projects that provide insight into the delivery of the current projects.

#### 1) Standardized Cost Categorization

The following cost breakdown structure was recommended by Deloitte:

**Table 1 – Cost breakdown structure**

	Cost Category	Cost Category Description
+	Base Design & Construction Costs	<ul style="list-style-type: none"> <li>- Design &amp; construction cost estimate</li> <li>- Separate contingency for estimate uncertainty based on level of project definition, estimate class and project characteristics</li> </ul>
+	Owners' Costs	<ul style="list-style-type: none"> <li>- Owner oversight, MV staff and owners' advisors</li> <li>- Site acquisition, permitting, procurement and legal costs</li> <li>- Separate contingency for estimate uncertainty based on level of project definition, estimate class and project characteristics</li> </ul>
+	Escalation	<ul style="list-style-type: none"> <li>- Time/inflation based cost increases estimated using project specific construction indices to project schedule</li> </ul>
+	Risk Reserve	<ul style="list-style-type: none"> <li>- Specific reserve to account for risks retained by Metro Vancouver (eg. geotechnical risk)</li> <li>- Based on standardized risk review process</li> </ul>
	<b>Total Cost Estimate</b>	

In addition to providing a common structure to develop and manage project costs effectively, the new framework also adopts a multi-level, targeted use of contingencies to improve consistency of contingency estimating practices and reduces contingency misuse:

- The base design and construction cost estimate includes a segregated line item for estimating uncertainty contingency, which allows for design refinement and estimating assumptions as the scope becomes further defined throughout the lifecycle. This allows for consideration to be given to the level of scope definition, complexity of the project, and novelty of the scope of work or delivery model;
- The owner cost estimate also includes a segregated line item for estimating uncertainty contingency, which allows for estimating assumptions as the site and oversight model becomes further defined through the lifecycle;
- A separate risk reserve accounts for risks retained by Metro Vancouver, which are identified, managed and quantified according to a standardized risk review process. Having a separate risk reserve encourages thorough consideration of systemic and project specific risks, and can be utilized when assessing procurement model and risk allocation.

## 2) Consistent Guidelines Throughout the Project Lifecycle

Deloitte also developed estimating guidelines across the different phases of a project lifecycle for each category of cost. These guidelines are summarized below.

**Table 2 – Estimating guidelines by phase**

PHASE	DEFINITION		DESIGN		CONSTRUCTION	CLOSEOUT
	IDENTIFICATION	DEFINITION	PRELIMINARY DESIGN	DETAILED DESIGN		
Level of Development	<ul style="list-style-type: none"> <li>Need identified</li> <li>Screening Level Business Case</li> </ul>	<ul style="list-style-type: none"> <li>Conceptual Design</li> <li>Options analysis</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary Design</li> <li>Bottom-up estimate</li> </ul>	<ul style="list-style-type: none"> <li>Detailed Design</li> <li>90% design drawings and specs</li> </ul>	<ul style="list-style-type: none"> <li>Execution of construction</li> </ul>	<ul style="list-style-type: none"> <li>Completion of Contractual Obligations</li> </ul>
Estimate Guidelines	Base Estimate D&C	<ul style="list-style-type: none"> <li>Project estimate <b>Class 4</b></li> <li>Top-down estimate</li> <li>Equipment Factored or Parametric Models</li> </ul>	<ul style="list-style-type: none"> <li>Project estimate <b>Class 3</b></li> <li>Bottom-up estimate</li> <li>Semi-Detailed Unit Costs with Line Items</li> </ul>	<ul style="list-style-type: none"> <li>Project estimate <b>Class 3/2</b></li> <li>Bottom-up estimate</li> <li>Detailed Unit Cost with Detailed Take-Off</li> </ul>	<ul style="list-style-type: none"> <li>Project estimate <b>Class 2/1</b></li> <li>Bottom-up estimate</li> <li>Based on contractual commitments and incurred cost, as applicable</li> </ul>	<ul style="list-style-type: none"> <li>Actual Cost analysis</li> </ul>
	Owner Cost	<ul style="list-style-type: none"> <li>Top-down estimate</li> <li><b>Class 5</b> project estimate (Capacity Factored, Parametric Models, Judgment, or Analogy)</li> <li>Consideration given to Owner Cost, Escalation and Risk Reserve</li> <li><b>Note:</b> Detailed estimate for cost of <b>DEFINITION</b> phase with indication of overall project cost</li> </ul>	<ul style="list-style-type: none"> <li>Actual cost for site acquisition, market based estimate for remaining acquisitions</li> <li>% of Base Estimate Design and construction</li> <li>Historical owner cost review, including permitting and legal</li> </ul>	<ul style="list-style-type: none"> <li>Actual cost for site acquisition</li> <li>Consultant contract values</li> <li>Owner organizational chart and payroll</li> <li>Permitting estimate based on federal, provincial and municipal permit requirements</li> </ul>	<ul style="list-style-type: none"> <li>Actual cost for site acquisition</li> <li>Consultant contract values</li> <li>Owner organizational chart and payroll</li> <li>Actual cost for permits</li> </ul>	<ul style="list-style-type: none"> <li>Actual Cost analysis</li> </ul>
	Escalation	<ul style="list-style-type: none"> <li>Construction escalation indices</li> </ul>	<ul style="list-style-type: none"> <li>Construction escalation indices</li> <li>Executed contracts based on contractual escalation</li> </ul>	<ul style="list-style-type: none"> <li>Construction escalation indices</li> <li>Executed contracts based on contractual escalation</li> </ul>	<ul style="list-style-type: none"> <li>Contractual escalation parameters</li> </ul>	<ul style="list-style-type: none"> <li>Actual Cost analysis</li> </ul>
	Risk Reserve	<ul style="list-style-type: none"> <li>% of Base Estimate Design and construction and Qualitative Risk Analysis</li> </ul>	<ul style="list-style-type: none"> <li>Based on Quantitative Risk Analysis (QRA) at 80% Confidence Level (CL)</li> <li>Additional reserve as req'd</li> </ul>	<ul style="list-style-type: none"> <li>Based on QRA at 80% CL</li> <li>Additional reserve as req'd</li> </ul>	<ul style="list-style-type: none"> <li>Based on QRA at 80% CL</li> <li>Additional reserve as req'd</li> </ul>	<ul style="list-style-type: none"> <li>Actual Cost analysis</li> </ul>

Each phase of the framework corresponds to an evolution of project development from the identification of a business need, all the way to the completion of the contractual obligations and closeout of the project (typically a period of over 10 years). Associated with this evolution of project development is an evolution of the estimating guidelines: as the scope of the project becomes progressively more defined, the estimating guidelines and methods become more detailed and sophisticated, making use of the additional project definition available. As the estimating guidelines become more rigorous, there is an associated narrowing of the uncertainty with respect to the project cost.

The guidelines described above have been developed using the Association for the Advancement of Cost Engineering International's (AACEi) estimate classification system. The classification system includes five estimate classes from Class 5, which corresponds to the lowest project definition, to Class 1, which corresponds to the highest project definition.

### 3) Formalized Cost and Scope Stage Gate Process

The breakdown structure and estimating guidelines would then be integrated into Metro Vancouver's existing stage gate process for project approvals. Specific project estimating deliverables and review process (such as value engineering at the preliminary design stage) would then be required from project teams in order to progress to the next stage of project development.

**Table 3 – Stage Gate Process**

PHASE	DEFINITION		DESIGN		CONSTRUCTION	CLOSEOUT
	IDENTIFICATION	DEFINITION	PRELIMINARY DESIGN	DETAILED DESIGN		
Level of Development	<ul style="list-style-type: none"> <li>Need identified</li> <li>Screening Level Business Case</li> </ul>	<ul style="list-style-type: none"> <li>Conceptual Design</li> <li>Options analysis</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary Design</li> <li>Bottom-up estimate</li> </ul>	<ul style="list-style-type: none"> <li>Detailed Design</li> <li>90% design drawings and specifications</li> </ul>	<ul style="list-style-type: none"> <li>Execution of construction</li> </ul>	<ul style="list-style-type: none"> <li>Completion of Contractual Obligations</li> </ul>
Key Project Estimating Deliverables	<ul style="list-style-type: none"> <li>Screening Level Business Case</li> <li>Project estimate Class 5</li> <li>Authorization for expenditure (Definition)</li> <li>Project added to 10 year rolling capital plan</li> </ul>	<ul style="list-style-type: none"> <li>Project estimate Class 4</li> <li>Authorization for expenditure (Prelim Design)</li> <li>10 year rolling capital plan updated</li> </ul>	<ul style="list-style-type: none"> <li>Project estimate Class 3</li> <li>Authorization for expenditure (Detailed Design)</li> <li>10 year rolling capital plan updated</li> </ul>	<ul style="list-style-type: none"> <li>Project estimate (Class 3/2)</li> <li>Independent cost estimate review and reconciliation</li> <li>Authorization for expenditure (Full Project / Final Investment Decision)</li> <li>10 year rolling capital plan updated</li> </ul>	<ul style="list-style-type: none"> <li>Class 2/1 estimates for key contracts, as req'd</li> </ul>	<ul style="list-style-type: none"> <li>Preparation &amp; Issue of Project Completion Report</li> <li>Close authorization for expenditure</li> </ul>

### ALTERNATIVES

This is an information report. No alternatives are presented.

### FINANCIAL IMPLICATIONS

The Project Estimating Framework will improve cost estimating results for large Metro Vancouver capital projects, resulting in stabilized household impact forecasts.

### CONCLUSION

Metro Vancouver has identified four pillars to developing a best practice cost estimating framework. As part of the development and deployment of the new framework, the Project Delivery Department will form a Project Control Group, overseeing, amongst other activities, the deployment of the cost estimating framework to Metro Vancouver's large capital projects. The new group will formalize internal practice and guidelines, and develop training for project estimation. Once the new framework is in use for all large capital projects, the group will develop an internal database used for benchmarking and knowledge transfer—the fourth and final pillar of the framework.

### Attachments:

1. Report dated March 31, 2020, titled "Capital Projects and Project Delivery" (Doc# 38102324)
2. Report dated September 18, 2020, titled "Capital Infrastructure Project Governance" (Doc# 41391246)

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To: Performance and Audit Committee

From: Roy Moulder, Director, Purchasing and Risk Management  
Financial Services Department

Date: January 4, 2021 Meeting Date: January 14, 2021

Subject: **Tender/Contract Award Information – September 2020 to November 2020**

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### RECOMMENDATION

That the Performance and Audit Committee receive for information the report dated January 4, 2021 titled “Tender/Contract Award Information – September 2020 to November 2020”.

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### EXECUTIVE SUMMARY

During the period September 1, 2020 and November 30, 2020, the Purchasing and Risk Management Division issued sixteen (16) new contracts, each with a value in excess of \$500,000 (exclusive of taxes). In addition, there were seven (7) existing contracts requiring contract amendments which necessitate further reporting to the Performance and Audit Committee. All awards and amendments were issued in accordance with the “*Officers and Delegation Bylaws 1208, 284 and 247 – 2014*” and the “*Procurement and Real Property Contracting Authority Policy*”.

### PURPOSE

To provide the Performance and Audit Committee information with regard to contracts, handled through the Purchasing and Risk Management Division, with a total anticipated value at or in excess of \$500,000 (exclusive of taxes).

### BACKGROUND

The Purchasing and Risk Management Division of Metro Vancouver awards contracts for goods, services and construction in accordance with the “*Officers and Delegation Bylaws 1208, 284 and 247 – 2014*” (*Bylaws*), and the “*Procurement and Real Property Contracting Authority Policy*” (*Policy*) adopted by the Board of Directors on July 11, 2014, effective September 1, 2014. These *Bylaws* and *Policy* outline thresholds for competitive bidding and contracting authorities. Contracts in excess of \$500,000 will be reported to the Performance and Audit Committee to align with the thresholds outlined in the Policy.

Capital projects may result in the awarding of one or more contracts to complete the project. All contracts are always within budget authority.

### NEW CONTRACTS - \$500,000 to \$5,000,000

The following contracts were **awarded** during the months of *September 2020 to November 2020* (Details attached as **APPENDIX A**):

		(Exclusive of taxes)	
1.	WSP Canada Group Limited, Associated Engineering (BC) Ltd., Brown and Caldwell Consultants Canada Ltd. RFP No. 20-055 <i>Consulting Engineering Services for Five (5) Wastewater Treatment Plants</i>	\$3,000,000	GVS&DD
2.	Net Zero Waste Eastgate Ltd. SRFEOI NO. 15-096 <i>Creating and Distributing a Compost Containing Metro Vancouver Biosolids</i>	\$4,630,800	GVS&DD
3.	Ausenco Engineering Canada Inc., AECOM Canada Ltd., Tetra Tech Canada Inc., WSP Canada Group Limited RFP No. 20-034 <i>Consulting Engineering Services for Water Operating Projects</i>	\$4,500,000	GVWD
4.	Clearway Construction Inc. Tender No. 20-122 <i>Construction - Douglas Road Main No. 2 - Still Creek Section North Open Cut</i>	\$4,286,155	GVWD
5.	Sanderson Concrete Inc. RFP No. 19-323 <i>Supply and Install Washroom Buildings and/or Picnic Tables for Metro Vancouver Regional Parks</i>	\$627,600	MVRD
6.	AECOM Canada Ltd., Kerr Wood Leidal Associates Ltd., Parsons Inc., Stantec Consulting Ltd., WSP Canada Group Limited RFP No. 20-049 <i>Consulting Engineering Services for Liquid Waste Services Minor Projects</i>	\$5,000,000	GVS&DD
7.	Comcor Environmental Limited RFP No. 19-344 <i>Coquitlam Landfill - Landfill Gas Collection System - Operations, Maintenance, Monitoring and Reporting</i>	\$1,533,167	GVS&DD
8.	Local Practice Architecture + Design Ltd. RFP No. 20-171 <i>Architect and Design Services for Heather Place B Multi-Family Residential Development</i>	\$1,722,502	MVHC

9.	Maple Leaf Disposal Ltd. RFP No. 20-108 <i>Waste, Organics, and Recycling Collection Services</i>	\$3,448,881	MVHC
10.	Brenntag Canada Inc. RFP No. 20-174 <i>Supply and Delivery of Sodium Hydroxide Solution (25 wt% CSO)</i>	\$823,200	GVS&DD
11.	BEL Contracting, A Division of BelPacific Excavating & Shoring Limited Partnership RFP No. 20-085 <i>Installation of Ocean Park Trunk Sewer Crescent Section – Rehabilitation/Replacement</i>	\$1,938,889	GVS&DD
12.	Brown and Caldwell Consultants Canada, Ltd. RFP No. 20-307 <i>Remote Inspection and Reporting Services for Sewer Manholes and Chambers</i>	\$579,000	GVS&DD
13.	Tervita Corporation RFP No. 20-300 <i>Supply, Installation, and Disposal of Granulated Active Carbon at the Annacis Island Wastewater Treatment Plant's South Cogeneration Facility</i>	\$1,181,740	GVS&DD

#### NEW CONTRACTS – BOARD APPROVED

The following contracts were **authorized for execution** by the GVS&DD and GVWD Boards of Directors during the months of *September 2020 to November 2020* (as such no further information is included in this report):

(Exclusive of taxes)

1.	McMillen Jacobs Associates RFP No. 20-097 <i>Construction Management Services for Capilano Main No. 5 (South Shaft to Chilco) – Stanley Park Water Supply Tunnel – Phase 1</i>	\$483,062	GVWD
2.	Colliers Project Leaders Inc. RFP No. 20-098 <i>Water Design &amp; Construction Projects – Project Management Services (2020)</i>	\$6,236,880	GVWD
3.	Sylvis Environmental Services Inc. SRFEOI No. 19-283 <i>Biosolids Management at OK Ranch</i>	\$7,548,000	GVS&DD

## AMENDED CONTRACT

The following '**not previously reported**' contract was **amended** during the months of *September 2020 to November 2020* (Details attached as **APPENDIX B**):

	<u>Value of Amendments</u>	<u>Total Amended Value of Contract</u>
1. Mott MacDonald Canada Limited RFP No. 18-086 <i>Iona Island Wastewater Treatment Plant Project Definition - Procurement Advisor Services</i>	\$90,557	\$581,407

The following **previously reported** contracts were **amended** during the months of *September 2020 to November 2020* (Details attached as **APPENDIX C**):

	<u>Value of Amendments</u>	<u>Total Amended Value of Contract</u>
1. Local Practice Architecture + Design Ltd. RFP No. 19-153 <i>Architect and Design Services for Welcher Avenue Multi-Family Residential Development</i>	\$559,702	\$1,680,508
2. AECOM Canada Ltd. and CH2M HILL Canada Limited RFP No. 18-043 <i>Consulting Engineering Services for Iona Island Wastewater Treatment Plant Project Definition</i>	\$599,625	\$5,137,706
3. Ausenco Engineering Canada Inc. RFP No. 16-097 <i>Consulting Engineering Services - Detailed Design and Construction for the Fleetwood Reservoir</i>	\$699,560	\$2,796,796
4. Stuart Olson Construction Ltd. RFP No. 18-240 <i>General Construction – Coquitlam Transfer Station</i>	\$6,717,747	\$69,156,482
5. The Miller Hull Partnership, LLP RFP No. 18-044 <i>Architectural and Community Integration Services for Iona Island Wastewater Treatment Plant Project Definition</i>	\$797,558	\$3,355,318
6. Ward and Burke Microtunnelling Ltd. RFP No. 18-042 <i>Construction of Douglas Trunk Sewer</i>	\$1,744,659	\$15,664,543

**COMPETITIVE SELECTION PACKAGES - anticipated to be greater than \$500,000 (Issued but not awarded)** (Details attached as **APPENDIX D**).

**ALTERNATIVES**

This is an information report. No alternatives are presented.

**FINANCIAL IMPLICATIONS**

The contract approval process includes a review of available budget. The contracts presented herein are consistent with budget authority provided by the respective Boards.

**CONCLUSION**

The contracts presented herein were awarded in accordance with the *“Officers and Delegation Bylaws 1208, 284 and 247 – 2014” (Bylaws)* and the *“Procurement and Real Property Contracting Authority Policy” (Policy)* and comply with competitive bidding laws and applicable legislation.

Further, the competitive selection packages were carefully crafted by teams of subject matter experts resulting in the award of contracts that are fiscally responsible, and balance risk, economic, ethical and legal obligations.

**Attachments**

**APPENDIX A:** Information with regard to newly awarded contracts - \$500,000 to \$5,000,000.

**APPENDIX B:** Contract amended to a value of more than \$500,000 but not previously reported to the Performance and Audit Committee.

**APPENDIX C:** Previously reported contracts that have been amended.

**APPENDIX D:** Competitive Selection Packages anticipated to be greater than \$500,000 (Issued but not awarded).

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AWARD OF CONTRACT

RFP No. 20-055

1. A contract was awarded, September 1, 2020 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***WSP Canada Group Limited, Associated Engineering (BC) Ltd., Brown and Caldwell Consultants Canada Ltd.***

in the anticipated amount of up to **\$3,000,000** (exclusive of taxes) for Consulting Engineering Services for Five (5) Wastewater Treatment Plants over a three (3) year period.

Award to the three (3) highest ranked consulting engineering firms to perform a wide breath of engineering disciplines for Liquid Waste Services Wastewater Treatment Plants. Projects of less than \$250,000 will be made rotationally and negotiated. Projects exceeding \$250,000 and up to no greater than \$500,000 will attract competition from up to the three (3) selected engineering firms.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on February 27, 2020.

Closing Date: April 2, 2020

3. Proposals received (exclusive of taxes):

Eaase Management Inc.	\$435,650
Tetra Tech Canada Inc.	\$702,980
CWA Engineers Inc.	\$732,614
<b>WSP Canada Group Limited</b>	<b>\$736,530</b>
Stantec Consulting Ltd.	\$754,330
<b>Associated Engineering (B.C.) Ltd.</b>	<b>\$760,520</b>
<b>Brown and Caldwell Consultants Canada Ltd.</b>	<b>\$764,640</b>
McElhanney Ltd.	\$835,100
AECOM Canada Ltd.	\$872,600
GHD Limited	\$897,250

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the three highest ranked proponent based on the evaluation criteria established in the RFP.

AWARD OF CONTRACT

SRFEOI NO. 15-096

1. A contract was awarded, September 15, 2020 for the **Greater Vancouver Sewerage and Drainage District**

To: ***Net Zero Waste Eastgate Ltd.***

in the anticipated amount of up to **\$4,630,800** (exclusive of taxes) for Creating and Distributing a Compost Containing Metro Vancouver Biosolids over a Five (5) year period, with option to extend for Two (2) additional years.

The Standing Request for Expressions of Interest invited responses (via the MV & BC Bid websites) regarding the management and beneficial use of Class A and/or B biosolids generated by the Annacis Island Wastewater Treatment Plant (Annacis), Lions Gate Wastewater Treatment Plant (Lions Gate), Iona Island Wastewater Treatment Plant (Iona), and Lulu Island Wastewater Treatment Plant (Lulu). Negotiations were held with Respondents that provide attractive solutions.

The contract price is within the overall budget.

2. Response received (exclusive of taxes):

Net Zero Waste Eastgate Ltd.	\$4,630,800
------------------------------	-------------

3. Response reviewed by:

Contractual: Purchasing and Risk Management Division Staff/Legal Staff

Technical: Liquid Waste Services Department Staff

4. This SRFEOI remains on Metro Vancouver and BC Bid websites perpetually to solicit viable biosolids projects which offer good value to the Corporation. Negotiations were held with one such Respondent who provided an attractive solution.

# AWARD OF CONTRACT

RFP No. 20-034

1. A contract was awarded, October 7, 2020 for the **Greater Vancouver Water District**.

To: ***Ausenco Engineering Canada Inc., AECOM Canada Ltd., Tetra Tech Canada Inc., WSP Canada Group Limited***

in the anticipated amount of up to **\$4,500,000** (exclusive of taxes) for Consulting Engineering Water Operating Projects over a three (3) year period.

Award to the four (4) highest ranked consulting engineering firms to perform a wide breath of engineering disciplines for Water Services Engineering and Construction Division operating projects. Projects of less than \$250,000 will be made rotationally and negotiated. Values exceeding 250K up to \$500K will attract competition from up to the four (4) selected consulting engineering firms.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on April 20, 2020.

Closing Date: May 14, 2020

3. Proposals received (exclusive of taxes):

Eaase Management Inc.	\$553,450
MidSea Engineering Ltd.	\$780,000
RAM Engineering Ltd.	\$819,000
<b>Ausenco Engineering Canada Inc.</b>	<b>\$827,250</b>
<b>Tetra Tech Canada Inc.</b>	<b>\$920,630</b>
<b>WSP Canada Group Limited</b>	<b>\$936,550</b>
R.F. Binnie & Associates Ltd.	\$962,700
CWA Engineers Inc.	\$963,390
Northwest Hydraulic Consultants Ltd.	\$983,250
GHD Limited	\$1,023,250
<b>AECOM Canada Ltd.</b>	<b>\$1,091,285</b>

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Water Services Department Staff

5. Award was made to the four highest ranked proponents based on the evaluation criteria established in the RFP.



AWARD OF CONTRACT

TENDER No. 20-122

1. A contract was awarded, October 7, 2020 for the **Greater Vancouver Water District**.

To: ***Clearway Construction Inc.***

in the amount of **\$4,286,155** (exclusive of taxes) for Construction - Douglas Road Main No. 2  
- Still Creek Section North Open Cut.

The contract price is within the overall budget.

2. Six (6) firms were shortlisted as a result of RFQ No. 19-372 (publicly advertised on Metro Vancouver's and BC Bid websites) and invited to bid on ITT No. 20-122 on July 31, 2020.

Closing Date: September 17, 2020

3. Tenders received (exclusive of taxes):

Clearway Construction Inc.	\$4,286,155
Matcon Civil Constructors Inc.	\$4,938,850
JJM Construction Ltd.	\$5,347,170
Sandpiper Contracting LLP	\$6,385,730

4. Tenders reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Water Services Department Staff

5. Award was made to the lowest compliant bidder.

AWARD OF CONTRACT

RFP No. 19-323

1. A contract was awarded, October 14, 2020 for **Metro Vancouver Regional District**.

To: ***Sanderson Concrete Inc.***

in the anticipated amount of up to **\$627,600** (exclusive of taxes) for Supply and Install Washroom Buildings and/or Picnic Tables for Metro Vancouver Regional Parks over a three (3) year period.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on May 8, 2020.

Closing Date: May 29, 2020

3. Proposals received (exclusive of taxes):

Sanderson Concrete Inc.	\$627,600
Ken Mackay & Sons Concrete Forming Ltd.	\$696,420

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Parks and Environment Department Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP.

## AWARD OF CONTRACT

RFP No. 20-049

1. A contract was awarded, October 23, 2020 for the **Greater Vancouver Sewerage and Drainage District.**

To: ***AECOM Canada Ltd., Kerr Wood Leidal Associates Ltd., Parsons Inc., Stantec Consulting Ltd., WSP Canada Group Limited***

in the anticipated amount of up to **\$5,000,000** (exclusive of taxes) for Consulting Engineering Services for Liquid Waste Services Minor Projects over a three (3) year period.

Award to the five (5) highest ranked consulting engineering firms to perform a wide breath of engineering disciplines for Liquid Waste Services Minor Projects. Projects of less than \$250,000 will be made rotationally and negotiated. Values exceeding 250K up to \$500K may attract competition from up to the five (5) selected.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on May 27, 2020.

Closing Date: June 30, 2020

3. Proposals received (exclusive of taxes):

<b>Kerr Wood Leidal Associates Ltd.</b>	<b>\$936,832</b>
<b>Parsons Inc.</b>	<b>\$938,300</b>
<b>WSP Canada Group Limited</b>	<b>\$952,100</b>
Wood Canada Limited	\$956,500
<b>Stantec Consulting Ltd.</b>	<b>\$957,530</b>
R.F. Binnie & Associates Ltd.	\$958,900
Associated Engineering (B.C.) Ltd.	\$968,250
Brown and Caldwell Consultants Canada Ltd.	\$999,100
ISL Engineering and Land Services Ltd.	\$1,029,375
Tetra Tech Canada Inc.	\$1,060,700
<b>AECOM Canada Ltd.</b>	<b>\$1,076,000</b>
GHD Limited	\$1,165,500

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the five highest ranked proponent based on the evaluation criteria established in the RFP.

AWARD OF CONTRACT

RFP No. 19-344

1. A contract was awarded, November 12, 2020 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Comcor Environmental Limited***

in the anticipated amount of up to **\$1,533,167** (exclusive of taxes) for Coquitlam Landfill - Landfill Gas Collection System - Operations, Maintenance, Monitoring and Reporting over a five (5) year period.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on December 17, 2019.

Closing Date: January 28, 2020

3. Proposals received (exclusive of taxes):

Comcor Environmental Limited	\$1,533,167
CH2M HILL Canada Limited	\$1,542,180
SCS Engineers	\$2,278,206

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Solid Waste Services Department Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP.

AWARD OF CONTRACT

RFP No. 20-171

1. A contract was awarded, November 20, 2020 for the **Metro Vancouver Housing Corporation**.

To: ***Local Practice Architecture + Design Ltd.***

in the anticipated amount of up to **\$1,722,502** (exclusive of taxes) for Architect and Design Services for Heather Place B Multi-Family Residential Development. The anticipated amount is a combination of the successful consultants' proposed price of \$1,574,792 (exclusive of taxes) and an additional \$147,710 (exclusive of taxes) to account for issues identified during negotiations as allowed for in the RFP. The initial award is limited to Phases A/B – Schematic Design and Design Development at a cost of \$475,909 (exclusive of taxes) and subsequent phases of the work will be awarded subject to mutual agreement.

The contract price is within the overall budget.

2. Four (4) firms were shortlisted as a result of RFQ No. 20-068 (publicly advertised on Metro Vancouver's and BC Bid websites) and invited to bid on RFP No. 20-171 on May 14, 2020.

Closing Date: June 4, 2020

3. Proposals received (exclusive of taxes):

Merrick Architecture - Borowski Sakumoto McIntyre Webb Ltd.	\$1,462,917
Local Practice Architecture + Design Ltd.	\$1,574,792
Integra Architecture Inc.	\$1,599,786
VIA Architecture Inc.	\$1,620,167

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Housing Services Division Staff

5. Although the fees proposed by Local Practice Architecture + Design Ltd. (Local Practice) exceeded those of the lowest financial proponent by \$111,875, they demonstrated a thorough understanding of the project and provided a detailed work plan outlining the Integrated Design Process (IDP) as requested in the RFP and would provide the best overall value to the Corporation. Additionally, Local Practice has gained valuable superior experience in designing and constructing high-performance multi-family residential buildings in recent years with their work on SFU Parcel 21, and the Zero Energy Building Learning House at BCIT.

AWARD OF CONTRACT

RFP No. 20-108

1. A contract was awarded, November 20, 2020 for the **Metro Vancouver Housing Corporation**.

To: ***Maple Leaf Disposal Ltd.***

in the anticipated amount of up to **\$3,448,881** (exclusive of taxes) for Waste Collection at Metro Vancouver Housing Corporation's 45 sites plus Organics and Recycling Collection Services at select sites and hauling of associated referenced material to Metro Vancouver licensed facilities for a three (3) year term with a possibility of two (2), two (2) year extension options, subject to successful performance by the Contractor, and mutual agreement by the parties.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on August 28, 2020.

Closing Date: September 30, 2020.

3. Proposals received (exclusive of taxes):

Maple Leaf Disposal Ltd.	\$3,448,881
GFL Environmental Inc.	\$4,701,572
Halton Recycling Ltd. dba. Emterra Environmental	\$8,477,185
Waste Connections of Canada Inc.	\$11,081,643

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Housing Services Division Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP.

AWARD OF CONTRACT

RFP No. 20-174

1. A contract was awarded, November 20, 2020 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Brenntag Canada Inc.***

in the anticipated amount of up to **\$823,200** (exclusive of taxes) for Supply and Delivery of Sodium Hydroxide Solution (25 wt% CSO) over a five (5) year period. The initial award is for an anticipated amount of up to \$463,680 (exclusive of taxes) for a three (3) year period with an option to extend the contract for an additional two (2) year period upon mutual agreement.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on May 28, 2020.

Closing Date: June 23, 2020.

3. Proposal received (exclusive of taxes):

Brenntag Canada Inc.	\$823,200
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4. Proposal reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the only compliant bidder.

AWARD OF CONTRACT

RFP No. 20-085

1. A contract was awarded, November 27, 2020 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***BEL Contracting, A Division of BelPacific Excavating & Shoring Limited Partnership***

in the anticipated amount of up to **\$1,938,889** (exclusive of taxes) for Installation of Ocean Park Trunk Sewer Crescent Section – Rehabilitation/Replacement over a one (1) year period.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on June 23, 2020.

Closing Date: July 24, 2020

3. Proposals received (exclusive of taxes):

BEL Contracting, A Division of BelPacific Excavating & Shoring Limited Partnership	\$1,938,889
Targa Contracting (2013) Ltd.	\$1,961,100
Springline Construction Services Ltd.	\$2,415,770
TYBO Contracting Ltd.	\$2,498,770
Complete Utility Contractors Ltd.	\$2,748,036

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP.



AWARD OF CONTRACT

RFP No. 20-307

1. A contract was awarded, November 27, 2020 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Brown and Caldwell Consultants Canada, Ltd.***

in the anticipated amount of up to **\$579,000** (exclusive of taxes) for Remote Inspection and Reporting Services for Sewer Manholes and Chambers over a five (5) year period. The initial award of \$154,000 is for fiscal year 2020, with an option to extend for four (4) additional one-year periods upon mutual agreement by both parties.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on September 28, 2020.

Closing Date: October 19, 2020

3. Proposals received (exclusive of taxes):

Brown and Caldwell Consultants Canada, Ltd.	\$579,000
Victoria Drain Services	\$977,532
Superior City Services Ltd.	\$1,015,130

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP.

AWARD OF CONTRACT

RFP No. 20-300

1. A contract was awarded, November 27, 2020 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Tervita Corporation***

in the anticipated amount of up to **\$1,181,740** (exclusive of taxes) for Supply, Installation, and Disposal of Granulated Active Carbon at the Annacis Island Wastewater Treatment Plant's South Cogeneration Facility over a five (5) year period. The initial award of \$709,045 is for three (3) years with an option to extend for two (2) additional years upon mutual agreement by both parties.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on September 24, 2020.

Closing Date: October 14, 2020.

3. Proposals received (exclusive of taxes):

Sumas Environmental Services	\$1,067,200
Tervita Corporation	\$1,181,741
Brenntag Canada Inc.	\$1,425,448

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the highest ranked Proponent based on the evaluation criteria established in the RFP. Although the highest ranked was not the lowest cost; their technical evaluation was superior to the lowest cost submission and as such, their score reflected the higher technical score and deemed best overall value for the Corporation.

CONTRACTS AMENDED TO A VALUE OF  
MORE THAN \$500,000  
BUT NOT PREVIOUSLY REPORTED TO THE  
PERFORMANCE AND AUDIT COMMITTEE

RFP No. 18-086  
PURCHASE ORDER No. 607938

Mott MacDonald Canada Limited

Iona Island Wastewater Treatment Plant Project Definition - Procurement Advisor Services  
for the **Greater Vancouver Sewerage and Drainage District**

- |    |  |           |
|----|--|-----------|
| 1. | Original Value of Contract (exclusive of taxes):         | \$490,850 |
| 2. | Amendment Value (exclusive of taxes):                    | \$90,557  |
| 3. | Amendment Number:  | 01        |
| 4. | Total Amended Value of Contract<br>(exclusive of taxes): | \$581,407 |
| 5. | Budget Status:   |           |

This contract is funded within the capital budget for this project.

6. Reasons for Amendment to Contract:

This Amendment No. 01 is for project control and reporting to align the actual schedule of the Project Definition Phase with the timeline originally planned in the RFP. It was established that the timeline for the Project Definition was extended beyond the 18 months initially anticipated to 27 months (11 additional months). This requires additional project management time for the Procurement Consultant. Also, business case analysis of solids management alternatives for the new Iona Island Wastewater Treatment Plant. This analysis will support internal decision making on the capital investment required for solids management at the future plant which is a critical element in the design and necessary for completion of the Project Definition Phase.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 19-153  
PURCHASE ORDER No. 624254

Architect and Design Services for Welcher Avenue Multi-Family Residential Development  
for the **Metro Vancouver Housing Corporation**

- |    |   |   |
|----|---|---|
| 1. | Name of Contractor:   | Local Practice Architecture + Design Ltd. |
| 2. | Date Contract Reported:   | <b>January 2020</b>                       |
| 3. | Original Anticipated Reported Value of Contract (exclusive of taxes):     | \$1,120,806                               |
| 4. | Amendment Number:   | 01  |
| 5. | Value of Amendment (exclusive of taxes):                                  | \$559,702                                 |
| 6. | Amendment Type:   | Additional Services                       |
| 7. | Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$1,680,508                               |
| 8. | Budget Status:  |   |

This contract is funded within the capital budget for this program.

9. Amendment No. 01 is the result of additional schematic and design development drawings required for Phases C, D and E, and documents for the addition of a fifth storey. The original project plan consisted of a new four-storey wood-framed structure containing 50 units. During the design process and in collaboration with the City of Port Coquitlam staff, mayor and council, and the design team, it was determined that a five-storey structure with 63 units would be feasible to construct on the site.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 18-043  
PURCHASE ORDER No. 608136

Consulting Engineering Services for Iona Island Wastewater Treatment Plant Project Definition  
for the **Greater Vancouver Sewerage and Drainage District**

- |    |  |   |
|----|--|---|
| 1. | Name of Contractor:  | AECOM Canada Ltd. and CH2M HILL<br>Canada Limited |
| 2. | Date Contract Reported:  | <b>October 2018</b>                               |
| 3. | Original Anticipated Reported Value of Contract<br>(exclusive of taxes):     | \$4,538,081                                       |
| 4. | Amendment Number:  | 01  |
| 5. | Value of Amendment (exclusive of taxes):                                     | \$599,625   |
| 6. | Amendment Type:  | Additional Services                               |
| 7. | Total Revised Anticipated Amended Value of Contract<br>(exclusive of taxes): | \$5,137,706                                       |
| 8. | Budget Status:   |   |

This contract is funded within the capital budget for this program.

9. Amendment No. 01 is the result of a technical investigation of aerobic granular sludge (AGS) technology, additional modeling to characterize the site and assist in the geotechnical design, condition assessments of the existing facility to determine suitability and costs of reusing assets, development of additional design concepts to integrate existing and new facility, and an analysis of solids treatment options and operational impacts. In addition, as a result of these scope additions, design and support activities were required to modify and enhance process and mechanical design, construction sequencing, project schedule, cost estimates.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 16-097  
PURCHASE ORDER No. 140737

Consulting Engineering Services - Detailed Design and Construction for the Fleetwood Reservoir  
for the **Greater Vancouver Water District**

- |    |   |                                 |
|----|---|---------------------------------|
| 1. | Name of Contractor:   | Ausenco Engineering Canada Inc. |
| 2. | Date Contract Reported:   | <b>October 2016</b>             |
| 3. | Original Anticipated Reported Value of Contract (exclusive of taxes):     | \$2,097,236                     |
| 4. | Amendment Number:   | 01                              |
| 5. | Value of Amendment (exclusive of taxes):                                  | \$699,560                       |
| 6. | Amendment Type:   | Additional Services             |
| 7. | Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$2,796,796                     |
| 8. | Budget Status:  |                                 |

This contract is funded within the capital budget for the Greater Vancouver Water District capital program.

9. Amendment No. 01 is the sum of seven (7) change orders totaling \$411,060 and an increase of \$258,500 to Phase B Construction/Post-Construction services over the originally proposed fee for Phase B. The most recent change order, totaling \$207,743 is the result of placing the project on hold for over two (2) years at the request of the City. Additional effort was required to restart the project and update the design to meet the building code requirements.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 18-240  
PURCHASE ORDER No. 613756

General Construction – Coquitlam Transfer Station  
for the **Greater Vancouver Sewerage and Drainage District**

- |    |   |                                |
|----|---|--------------------------------|
| 1. | Name of Contractor:   | Stuart Olson Construction Ltd. |
| 2. | Date Contract Reported:   | <b>January 2019</b>            |
| 3. | Original Anticipated Reported Value of Contract (exclusive of taxes):     | \$62,438,735                   |
| 4. | Amendment Number:   | 01                             |
| 5. | Value of Amendment (exclusive of taxes):                                  | \$6,717,747                    |
| 6. | Amendment Type:   | Additional Services            |
| 7. | Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$69,156,482                   |
| 8. | Budget Status:  |                                |

This contract is funded within the capital budget for this program.

9. Amendment No. 01 is the result of changes that fall into four categories, as described below:

- Off-site Works

The building permit was obtained following execution of the construction contract. As part of the permitting process, the City required subdivision of the landfill site to create three distinct properties: the transfer station site, the EagleQuest golf course, and “Lot 3” which is slated for future development. As a result, it was necessary to make the three properties independent by separating their civil services and to complete improvements of the United Boulevard frontage.

- Materials Management

Due to geotechnical or environmental characteristics of sub-surface materials encountered on the landfill site, it has been necessary to modify excavation and fill plans in several instances. This has been particularly challenging, as it is necessary to retain all materials on site and incorporate into the finished project. Handling of materials and modifications to design have resulted in additional costs.

- Metal Building Design

The final design of the transfer building structure (a “pre-engineered metal building”) is completed by the supplier in collaboration with the structural designer responsible for the concrete foundation design. This is an iterative process that occurs following execution of the construction contract. Once the design was finalized, several changes to the concrete structure and reinforcing were required.

- Design Modifications

Over the course of construction several updates to the design were required. These updates are based on new or changed functional requirements from Metro Vancouver or discovery of inconsistent design elements.



AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 18-044  
PURCHASE ORDER No. 609490

Architectural and Community Integration Services for Iona Island  
Wastewater Treatment Plant Project Definition  
for the **Greater Vancouver Sewerage and Drainage District**

- |    |   |                                  |
|----|---|----------------------------------|
| 1. | Name of Contractor:   | The Miller Hull Partnership, LLP |
| 2. | Date Contract Reported:   | <b>October 2018</b>              |
| 3. | Original Anticipated Reported Value of Contract (exclusive of taxes):     | \$2,557,760                      |
| 4. | Amendment Number:   | 01                               |
| 5. | Value of Amendment (exclusive of taxes):                                  | \$797,558                        |
| 6. | Amendment Type:   | Additional Services              |
| 7. | Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$3,355,318                      |
| 8. | Budget Status:  |                                  |

This contract is funded within the capital budget for this program.

9. Amendment No. 01 is the result of additional project management and coordination costs beyond the budget amount the Architectural and Community Integration consultant due to contract end extension to December 31, 2020. Also, additional services to support the engineering on climate change adaptation and mitigation, support Community Engagement for public and stakeholder workshops, explore value-added partnership opportunities for ecological and community enhancement, lead feasibility analysis of community enhancement opportunities and sustainability performance, and development of additional architectural and landscape concepts to facilitate integration of the existing and new plant design.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 18-042  
PURCHASE ORDER No. 609156

Construction of Douglas Trunk Sewer  
for the **Greater Vancouver Sewerage and Drainage District**

- |    |   |                                     |
|----|---|-------------------------------------|
| 1. | Name of Contractor:   | Ward and Burke Microtunnelling Ltd. |
| 2. | Date Contract Reported:   | <b>October 2018</b>                 |
| 3. | Original Anticipated Reported Value of Contract (exclusive of taxes):     | \$13,919,884                        |
| 4. | Amendment Number:   | 01                                  |
| 5. | Value of Amendment (exclusive of taxes):                                  | \$1,744,659                         |
| 6. | Amendment Type:   | Additional Services                 |
| 7. | Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$15,664,543                        |
| 8. | Budget Status:  |                                     |

This contract is funded within the capital budget for this program.

9. Amendment No. 01 is the result of twelve (12) change orders related to design modifications, separation plant relocation to mitigate community impact, existing utilities conflicts and addressing municipal concerns..

## Appendix D

January 4, 2021

### Competitive Selection Packages Anticipated to be greater than \$500,000 (Issued but not awarded)

*Note: All contracts listed below are within the project budgets approved by the Board of Directors*

<b>Tender/RFP</b>	<b>Closing Date</b>
RFP No. 19-284 <i>Supply and Delivery of a Trickling Filter Spare Pump</i>	March 10, 2020
RFP No. 19-065 <i>Supply and Delivery of Biofiltration Odour Control System for Gilbert Trunk Sewer Twinning</i>	June 16, 2020
RFP No. 20-042 <i>Design and Supply of South Surrey Interceptor - Delta Air Management Facility</i>	June 11, 2020
RFP No. 19-355 <i>Consulting Engineering Services for Marshend Pump Station Upgrade</i>	June 23, 2020
RFP No. 20-072 <i>Supply and Delivery of Two Dynamic Voltage Restorers (DVR) at Lulu Island Wastewater Treatment Plant</i>	July 8, 2020
Tender No. 20-018 <i>Construction of a Concrete Pad for Iona Island Wastewater Treatment Plant Sludge Lagoons Dewatering Facility</i>	August 13, 2020
RFP No. 20-237 <i>Consulting Engineering Services for Design of Iona Island Wastewater Treatment Plant (IIWWTP) Influent Pump Station (IPS) CDACS I/O Upgrade</i>	September 30, 2020
RFP No. 20-200 <i>Cleveland Dam Lower Outlet Fixed Cone Valves Replacement Project</i>	September 24, 2020
RFP No. 20-305 <i>Supply, Delivery, Installation and Support of a Portable Gas Detection System – Revised</i>	September 22, 2020
RFP No. 20-070 <i>Pre-Selection of Screenings Equipment for the Northwest Langley Wastewater Treatment Plant Upgrade</i>	September 21, 2020

RFP No. 20-131 <i>Installation of Gilbert Trunk Sewer No. 2 Gilbert Road South Section</i>	September 3, 2020
RFP No. 20-165 <i>Pre-Selection of Grit Management Equipment for the Northwest Langley Wastewater Treatment Plant Upgrade</i>	October 27, 2020
Tender No. 20-172 <i>Supply, Fabrication, Testing and Commissioning of a Pilot Digestion Optimization Facility at Lulu Island Wastewater Treatment Plant</i>	October 8, 2020
RFP No. 20-284 <i>Supply and Delivery of Liquid Oxygen to the Coquitlam Water Treatment Plant</i>	October 1, 2020
Tender No. 20-371 <i>Construction Services for the Roof Renewal Project at 2751 Production Way, Burnaby, BC</i>	November 26, 2020
Tender No. 20-295 <i>Evergreen Downs – Building Envelope Rehabilitation</i>	November 20, 2020
Tender No. 20-202 <i>Annacis Island Wastewater Treatment Plant Gates and Hydraulic System for the Influent Control Chamber Channel</i>	November 13, 2020
Tender No. 20-260 <i>Construction Services for the Pipeline Road Remediation Project</i>	November 3, 2020
Tender No: 20-206 <i>Crippen Building and Service Yard (Bowen Island)</i>	November 2, 2020
RFP No. 20-075 <i>Pre-Selection of Liquid Train Odour Control Equipment for the Northwest Langley Wastewater Treatment Plant Upgrade</i>	December 16, 2020
RFP No. 20-359 <i>Supply of Desktop &amp; Laptop Computers and Servers</i>	December 4, 2020
RFP No. 20-381 <i>Helicopter Services</i>	January 15, 2021
RFP No. 20-358 <i>Engineering Services for Annacis Island Wastewater Treatment Plant Stage 5 Expansion Trickling Filter Pump Station and Trickling Filters</i>	January 14, 2021

RFP No. 20-241 <i>Construction Upgrade - Coquitlam Landfill West Leachate Pump Station</i>	January 12, 2021
RFP No. 20-308 <i>Liquid Waste Services Design and Construction Projects - Project Management Services</i>	January 12, 2021
RFP No. 20-235 <i>Solid Waste Weigh Scale Software Replacement</i>	January 7, 2021



To: Metro Vancouver Climate Action Committee

Summary of presentation January 15, 2021

Subject: Átl'ka7tsem/Howe Sound Biosphere Region nomination endorsed by the Canadian Commission for UNESCO.

The [Howe Sound Biosphere Region Initiative Society](#) is pleased to confirm the submission of Átl'ka7tsem/Howe Sound to become Canada's 19th UNESCO Biosphere Region.

Confirmation from the Sébastien Goupil, Secretary-General of the [Canadian Commission for UNESCO](#) (CCUNESCO) was received in early September:

*"On behalf of the Canadian Commission for UNESCO, I am pleased to confirm submission of the nomination dossier for the proposed Átl'ka7tsem/Howe Sound Biosphere Region to UNESCO for consideration. I would like to congratulate you on this important milestone in your efforts to achieve the prestigious UNESCO designation."*

The nomination package has now been sent to UNESCO in Paris for review by the International Advisory Committee. The recommendations from this review panel will be known in April/May 2021. All being well, formal designation would be announced in the fall/winter of 2021.

[Download the Executive Summary here.](#)

Metro Vancouver endorsed the nomination November 2019.

**Click here for latest news [About the Howe Sound Biosphere Region Initiative Society's programs and initiatives.](#)**

The Howe Sound Biosphere Region Initiative is a collaboration with Squamish Nation and engages locally to set an example globally of finding balance between environmental conservation and economic development.

Biosphere Reserves are regions of global ecological significance that make an ongoing commitment to the United Nations to strive for sustainability. They are not parks, and

they have no legal authority. They are places where people are inspired to find ways to live, and work in harmony with nature.

The framework of UNESCO Biosphere Reserve program aligns with the overarching objectives of communities around the region that are striving for a low carbon future, while balancing livability, resilience and prosperity. A UNESCO designation recognizes the best practices implemented in the region towards management of biodiversity and sustainable development.

Howe Sound's glass sponge reefs are of global ecological significance. While individual glass sponges are found worldwide, glass sponge reefs have only been found in the Northeast Pacific. Scientists have likened the discovery of glass sponge reefs in B.C. to discovering a herd of dinosaurs on land. They provide habitat for 84+ species of fish and invertebrates and according to Fisheries and Oceans Canada, Howe Sound reefs are some of the most biologically productive found to date. They provide essential services for Howe Sound by filtering 17+ billion litres (6,800 Olympic swimming pools) of water every day. It would take the reefs just two hours to pump the equivalent of Metro Vancouver's daily wastewater volume and they remove 436 kg of total organic carbon from the water each day.

A UNESCO designation would bring pride to those collaborating towards being an outstanding model of sustainability and ecological health, now and in the future.

For media inquiries contact:

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[www.howesoundbri.org](http://www.howesoundbri.org)