TOWN COUNCIL AGENDA - SPECIAL BUDGET MEETING
April 21, 2020
7:00 p.m.

Call to Order

1 Approval of Agenda

2 Staff Reports

4.1 Staff Report to Council – Strategic Plan Annual Review (deferred from February 27)
4.2 Staff Report to Council – Strategic Communications Contract 2019-20
4.3 Staff Report to Council – 2020 Municipal Elections
4.4 Staff Report to Council – Draft GHG Reduction Action Plan
4.5 Staff Report to Council – Transportation Plan Estimates
4.6 Staff Report to Council – 2020-21 Project Budget Estimates

3 Closed Session

5.1 MGA 22(2) – (e) Contract Negotiations

Adjournment

Town of Mahone Bay
Staff Report
RE: Strategic Plan Annual Review
February 27, 2020

General Overview:

The purpose of this report is to provide Council with an annual review update on the implementation of Council's Strategic Plan and associated Action Plan for 2019-20.

Background:

The Council reviewed and amended the Strategic Plan in March of 2019 (see attached Town of Mahone Bay Strategic Plan 2018-21), prior to approving the 2019-20 annual budget. At that time Council confirmed its intent to complete an annual review of the plan prior to the 2020-21 budget process:

> "The Town Council has a mandate to review the plan and make recommendations for amendments. As well, the Chief Administrative Officer (CAO) will provide to the Council at regular intervals an update on the progress made on the goals and action plans. On an annual basis, the agenda of the Town Council will include time to review the strategic plan and discuss the progress and status of action plans approved within the strategic plan."
> - *Excerpt from Town of Mahone Bay Strategic Plan 2018-21, page 6.*

Analysis:

To support Council's review, staff have provided the 2018-2021 Strategic Plan Action Plan Annual Review Update (see attached).

Financial Analysis:

Costs associated with amendment of the 2018-21 Strategic Plan will be reflected in the 2020-21 budget process.

Links to Strategic Plan:

See above reference to strategic plan annual review process.

Recommendation:

It is recommended:

> THAT Council schedule a special meeting to conduct the annual review of the 2018-21 Strategic Plan (potential dates include March 4 and 5, 2020).

Attached for Council Review:

- Town of Mahone Bay Strategic Plan 2018-21
- 2018-2021 Strategic Plan Action Plan Annual Review Update

Respectfully Submitted,

Dylan Heide
Town of Mahone Bay CAO

Town of Mahone Bay

Corporate Strategic Plan

2018-2021

Approved by Council February 13, 2018
Amended by Council March 12, 2019

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Town of Mahone Bay
www.townofmahonebay.ca

Message from the Mayor

I am pleased to present the Town of Mahone Bay Corporate Strategic Plan for 2017 - 2021. This plan has been produced through consultation with the members of council and the support of our senior management staff. The plan takes into account our past successes and recognizes the challenges our town will face in the future.

The strategic plan is the foundation that provides rationale for implementing the strategic direction of the town through this Council's tenure. It is critical to define our strategic mandate accurately to ensure expectations are realistic. The strategic plan must be responsive to external sources that impact the potential to satisfy those expectations. It must also address the resources or constraints that may enable or prevent council from implementing the plan.

This strategic plan is not carved in stone. It is a document that lives in the life of the town. It is designed to be flexible and responsive to changes in strategic direction when external forces on the town necessitate such a change. The strategic plan does not exist in a vacuum. It is shaped by:

- Our corporate mission, vision and core values
- The way that our town government is structured and operates each day
- The services that the town commits to provide to the citizens

The competent, dedicated town staff collaborate to provide the services that you receive throughout the year. Their efforts are augmented by many volunteers working through a variety of different groups in Mahone Bay. These citizens are critical to the success of the Town of Mahone. Bay. I look forward to working with council, staff, volunteers and residents to ensure Mahone Bay is successful in achieving our goals for the future.

David W. DeVenne
Mayor, Town of Mahone Bay

PO Box 530 Mahone Bay, N.S. B0J 2E0 PHONE (902) 624-8327 FAX (902) 624-8069 clerk@townofmahonebay.ca

2. Mission, Vision, and Core Values

Our Mission is to provide high quality services to our vibrant and thriving community, through efficient and accessible government.

Our Vision is a sustainable community where individuals, groups and businesses "make things happen".

Our Core Values are our shared beliefs, behaviours and attitudes that guide Town Councillors and employees in the delivery of services to our community.

We are:

- Honest
- Accountable
- Fair
- Transparent
- Responsive

3. Key Strategic Initiatives and Core Activities

In order to achieve our vision and mission we intend to focus on the following areas:

3.1 ***21st Century Infrastructure***

- Facilities Management
- Asset Management
- Optimize efficiency of Utilities
- Provide safe streets and sidewalks
- Meet and exceed standards for water and wastewater
- Implement Federal and Provincial Accessibility legislation
- Foster inter-municipal shared services
- Optimize operations structure for efficient delivery of services

3.2 ***Economic and Community Development***

- Define the framework for an economic development strategy
- Ensure that Town policies, procedures, by-laws and other regulations foster growth and development
- Ensure that town infrastructure is in place to support development plans
- Collaborate with organizations that are involved in economic development activities
- Encourage a range of housing options
- Optimize value and use of our heritage, harbour and green spaces in economic development decisions
- Enhance recreation and open space opportunities
- Encourage diversity in community

3.3 ***Governance and Public Engagement***

- Optimize governance structure for effective decision-making
- Develop a policy and framework to engage the public in Council activities and decision making
- Improve communications and share information with the public in a manner consistent with their needs
- Create opportunities for public engagement

3.4 ***Environmental Sustainability***

- Pursue Climate Mitigation strategies (reducing Town carbon footprint)
- Undertake Climate Adaptation initiatives (implement further phases of the Harbour Development Plan)
- Expand Green Energy Generation (continued development of Alternate Resource Energy Authority)

4. Our Continuous Improvement Plan

The Strategic Plan must contain a formal annual review process. It outlines the roles and responsibilities of the Town Council to carry out a regular review of the plan, and to ensure its success and continuance. It is important to recognize that this document is a three-year plan and is flexible enough that amendments can be made by the Town Council as required.

The strategic plan is an important document for the Council, committees, and staff. Too often, organizations have invested resources in developing a strategic plan, only over a short period of time to have it lose its importance on the future direction of the organization. To prevent this, Town staff reference the strategic plan in all staff reports to Council, linking recommendations to the priorities expressed herein.

The Town Council has a mandate to review the plan and make recommendations for amendments. As well, the Chief Administrative Officer (CAO) will provide to the Council at regular intervals an update on the progress made on the goals and action plans. On an annual basis, the agenda of the Town Council will include time to review the strategic plan and discuss the progress and status of action plans approved within the strategic plan.

2018-2021 Strategic Plan Action Plan - Annual Review Update

The following is the year-end annual status update on implementation of the Council's Strategic Plan and associated Action Plan for 2019-20, presented to Council Feb 27, 2020 (incorporating the Action Plan update from the Feb 27, 2020 Council Report). In addition to current and projected status updates, notes are included below concerning potential amendments to the Plan, for Council's consideration.

Strategic Plan - Action Plan 2018-2021 - Feb 27, 2020 Update

21st Century Infrastructure

			2018/19 Year 2				2019/20 Year 3				2020/21 Year 4			
General Action	**Specific Action**	**Responsible**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
	Public Engagement Process	Council/Consultant					*	*						
		Skysail contracted to assist with campaign to inform residents of facility condition / fire station plans. Open House / Info Session held Nov 26, 2019, report to Council Dec 10, 2019.												
		Status: Completed in 2019-20.												

Facilities Management	Council makes decision and authorizes staff to prepare RFP(s)	Council	*
		Dec 10, 2019 Council directed staff to issue RFP for Fire Station project management / engineering assistance with the preparation of design-build tender documents. RFP closed Jan 21; six proposals received. Proposal awarded to Vigilant Management Inc. Feb 11, 2020. Council will review preliminary designs with consultant in March. Design / build tender under development for April, 2020	
		Status (projected): On track to be completed by Q1, 2020-21 (move target).	
Additional Notes: All actions relate to Fire Station project (complete or to be completed) - consider retitle or addition of actions re Town Hall / PW in 2020-21			

Asset Management	Condition Assessments of Town Infrastructure	CAO/DOO	Ongoing
		FCM MAMP funding application resubmitted Jan 17, 2020 (decision anticipated in February 2020). PCAP progress report anticipated in March 2020.	
		Status: Ongoing, no 2020-21 targets.	
	Public Engagement Process	CAO and Council	Ongoing
		AIM Cohort participation complete Nov 2019; Cohort 2.0 proposal on Council Feb 27, 2020 agenda. Town AM Committee meeting monthly with regular agenda item re public engagement / education.	
		Status: Ongoing, no 2020-21 targets.	
	Adopt Asset Management Plan	Council	*
		AM Committee working toward draft AM plan by Q2 2020; for recommendation to Council.	
		Status (projected): On track to be completed by Q3 2020-21 target.	

	Prepare annual 10 year capital budget	Council/Staff	* *
		Council capital planning workshops held Oct 29th and Nov 26th, 2019, approved 5 year capital investment plan. Staff will develop draft 10 year capital budget based on 5 year plan, for consideration in Council's 2020-21 budget process, beginning in March, 2020.	
		Status (projected): On track to be completed in 2019-20.	
Additional Notes: None.			

Provide safe streets and sidewalks	Request and implement traffic authority recommendations	CAO/Consultant	Ongoing
		Transportation Plan underway, will inform Traffic Authority re standards and best practices moving forward.	
		Status: Ongoing, no 2020-21 targets.	
	Speed Signs Deployment Plan	CAO/DOO	*
		Deployment plan approved by Council.	
		Status: Completed in 2019-20.	
	Active Transportation Plan	CAO/DOO	*
		Funding application submitted to provincial Connect2 Program, approval communicated to Town, Dec 2020. RFP issued Dec 20, closed Jan 16; contract awarded to CBCL Ltd.. Draft Plan to Council in late March, 2020.	
		Status (projected): On track to be completed by Q1, 2020-21 (move target).	
Additional Notes: None.			

Meet and exceed standards for water and wastewater	Ensure water pumps have a backup emergency generator	DOO					*							
		In early January 2020, the new back-up generator at the Pumphouse was commissioned and is now operational.												
		Status: Completed in 2019-20.												
	Establish gate valve replacement program	DOO	*				*				*			
		A "Gate Valve Exerciser" program has been incorporated into our bi-annual Water Main Flushing Program, thus reducing dirty water complaints; 2021 infrastructure replacement program will include the replacement of many gate valves.												
		Status: Ongoing (remove targets).												
	Straight pipe study follow-up	CAO/DOO								*				*
		Status updated in Nov 26 report to Council; ICIP funding not approved. Will be included in 2020-21 budget discussions.												
		Status: Incomplete and presently unlikely to be achieved on target, requires additional allocation of funds or Council consideration for amendment.												
Additional Notes: Consider addition of action re wastewater effluent.														

Implement	Establish Lunenburg County Accessibility Advisory Committee	Council					*							
		Lunenburg County Accessibility Advisory Committee members appointed. Official first meeting held Jan 21, 2020; meeting monthly.												
		Status: Completed in 2019-20.												

Federal and Provincial Accessibility Legislation	Develop an Accessibility Plan in accordance with provincial legislation	CAO and Council	*
		County-wide Accessibility Plan to be developed by Lunenburg County Accessibility Advisory Committee; development of Mahone Bay Operational Plan appendix to be included in 2020-21 budget discussions.	
		Status (projected): On track to be completed by Q4, 2020-21 (move target).	
Additional Notes: None.			

Foster inter-municipal cooperation	Report on existing shared services and explore opportunities for additional cooperation with other units.	CAO	Ongoing
		Shared Building & Fire Permits pilot year proceeding well. Shared HR services also proceeding well; Mahone Bay participating in performance management initiative. Shared procurement and safety being pursued through MJSB. Shared recreation infrastucture being discussed between Lunenburg County units.	
		Status: Ongoing.	
Additional Notes: None.			

Optimize operations structure for efficient delivery of services	CAO to make recommendations to Council for optimal operations structure, including succession planning	CAO	Ongoing
		Status: Ongoing.	
	Implement an updated records management system	CAO	* *
		Priority in 2019-20 business plan.	
		Status (projected): Incomplete but on track to be completed in 2020-21 (move target to Q4, 2020-21).	
	Explore enhanced customer service opportunities, including maximization of technology	CAO	Ongoing
		Status: Ongoing.	
Additional Notes: None.			

Section Notes: Consider addition of goal re Emergency Service with potential actions relating to REMO, Fire Service and Community Resiliency.

Economic and Community Development

			2018/19 Year 2				2019/20 Year 3				2020/21 Year 4			
General Action	**Specific Action**	**Responsible**	**Q 1**	**Q 2**	**Q 3**	**Q 4**	**Q 1**	**Q 2**	**Q 3**	**Q 4**	**Q 1**	**Q 2**	**Q 3**	**Q 4**
Define the framework for an economic development strategy	Engage community partners in identifying potential areas of economic development in Mahone Bay	Council/Econ. Dev Committee							*					
		Economic Development Committee held workshop session with Bob Cervelli from Centre for Local Prosperity Nov 19, 2019; local stakeholder participants discussed several potential joint initiatives (will be considered at March Committee meeting).												
		Status: Ongoing (remove targets).												
	Discussion with all partners as to the role of each in economic development to identify gaps in service	Council/Econ. Dev Committee									*			
		Status: Ongoing (remove targets).												
	Adopt Economic Development Strategy	Council											*	
		To be considered in 2020-21 budget process.												
		Status: Incomplete and presently unlikely to be achieved on target, requires additional allocation of funds or Council consideration for amendment.												

Additional Notes: Consider removing goal if funds are not committed to contract external consultants to complete Economic Development Strategy.			
Ensure that Town policies, practices, bylaws and other regulations foster growth and development	Staff to review existing and proposed bylaws and policies and make recommendations to Council	CAO	Ongoing
		Status: Ongoing.	
	Planning Advsory Committee to review MPS and LUB - including overseeing a public engagement process - and make recommendations to Council	PAC/Consultant	* * * * * *
		Council approved issuance of RFP Feb 11, 2020. RFP to be issued in February, closing in March. It is anticipated that public engagement process will begin in April, 2020.	
		Status (projected): In progress, on track to be completed by 2021-22 (revise targets).	
Additional Notes: None.			

Ensure that Town infrastructure is in place to support development plans	Work with the Mahone Bay and Area Tourism and Chamber of Commerce to identify opportunties for tourism-supporting infrastructure (wifi, signage, etc.)	CAO/Econ. Dev Committee	Ongoing
		Staff working with MBTCC and other events stakeholders on Mahone Bay Events Coordination Steering Committee; next (final) meeting March 5, 2020. Letters from Mahone Bay Tourism and Chamber of Commerce on Council's Feb 27 Agenda.	
		Status: Ongoing.	
Additional Notes: None.			

Collaborate with organizations that are involved in economic	Regular meetings with Mahone Bay Tourism and Chamber of Commerce	CAO	Ongoing
		Status: Ongoing.	
	MBTCC participation on Economic Development Committee	Econ. Dev Committee	Ongoing
		Status: Ongoing.	

development activities	Engage with other Lunenburg County units via Lunenburg County Economic Development group	CAO / Deputy CAO	Ongoing
		Status: Ongoing.	
Additional Notes: None.			

Encourage a	Explore Affordable Housing Opportunities through various housing groups and agencies	Council	Ongoing
		Status: Ongoing.	

range of housing options	Review permitted uses in the Land Use Bylaw re Housing Mix / Investigate viability of tiny homes in the Town of Mahone Bay	PAC						*	*	*				
		Special meeting of Council re housing held Jan 7, 2020 in advance of 2020-21 strategic plan review in Feb/Mar 2020.												
		Status: Incomplete, requires Council consideration for amendment (discussed Jan 7, 2020).												
Additonal Notes: Consider removing, pending Council discussion of housing actions.														

Preserve and enhance the community value and use of our heritage, harbour and	Continue to pursue opportunities for Harbour Management	Council	Ongoing
		Staff in contact with NS Lands Adminstration / Dept. of Municipal Affairs harbour jurisdiction / Submerged Land Lease for Harbour Bed.	
		Status: Ongoing.	
	Consult with Marina Operators and MBTCC for economic opportunities utilizing the Harbour and waterfront	Econ. Dev Committee	Ongoing
		Status: Ongoing.	

green spaces through economic development decisions	Monitor water quality in Harbour	BCAF/MODL	*
		In discussion with BCAF concerning testing; MODL role TBD. To be considered in 2020-21 Budget process.	
		Status: Incomplete and presently unlikely to be achieved on target, requires additional allocation of funds or Council consideration for amendment.	
	Continue to preserve and protect natural and heritage resources	HAC/PAC	Ongoing
		Status: Ongoing.	
Additional Notes: None.			

Enhance recreation and	Seek out opportunities to increase utilization of existing facilities by groups of all ages and physical abilities	DOO/MODL	Ongoing
		Transportation Plan contract awarded to CBCL Ltd., draft to be completed by late March, 2020.	
		Status: Ongoing.	

open space opportunities	Update website to increase awareness of recreation opportunities within the Town	CAO					*	*						
		Skysail contracted to assist with update of website.												
		Status: On track to be completed Q1, 2020 (move targets).												
Additional Notes: None.														

Encourage diversity in the community	Create a welcoming environment in the Town for persons from diverse communities	Council	Ongoing
		Status: Ongoing.	
Additional Notes: None.			

Section Notes: None.

Governance and Public Engagement

			2018/19 Year 2				2019/20 Year 3				2020/21 Year 4			
General Action	**Specific Action**	**Responsible**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Optimize governance structure for effective decision-making	Participate in Council Governance training annually or as appropriate	Council				*				*				*
		Staff in contact with Municipal Affairs re training (audit) / post-election Council training.												
		Status: Ongoing (remove targets).												
	Engage in discussions regarding governance / electoral systems	Council								*				
		Staff following HRM e-voting tender. Report on 2020 election anticipated in March, 2020.												
		Status (projected): To be completed in 2019-20.												
Additional Notes: None.														

Develop a policy and framework to engage the public in Council activities and decision making	Adopt Public Engagement Policy	Council							*					
		Status (projected): To be completed in Q1, 2020-21 (move target).												
Additional Notes: None.														

Improve communication and share information with the public in a manner consistent with their needs	Explore opportunities to share information via Town website and other methods	CAO/Council	Ongoing
		Status: Ongoing.	
Additional Notes: None.			

Create opportunities for public engagement	Utilize newsletter, website, public meetings, etc. to increase public engagement	CAO/Council	Ongoing
		Status: Ongoing.	
Additional Notes: None.			

Section Notes - Consider adding goal (or action(s)) relating to Transparency.

Environmental Sustainability

			2018/19 Year 2				2019/20 Year 3				2020/21 Year 4			
General Action	**Specific Action**	**Responsible**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Pursue Climate Mitigation Strategies (reducing Town carbon footprint)	Establish Baseline Emissions Data	CAO/Consultant						*						
		Transition 2050 preliminary data collection complete, awaiting SSG report by end of March, 2020. Low Carbon Communities funding announced Feb 24, 2020. Climate and Energy Outreach Coordinator (Katherine Dorey) hired, baseline data collection survey launched. Report to Council anticipated in March, 2020.												
		Status (projected): On track to be completed in Q1, 2020-21 (move target).												
	Adopt Targets and Develop Plan	Council/Consultant							*	*				
		Katherine Dorey currently working to develop recommended targets (lit review, etc.) as well as opportunities for reduction; draft Plan to be provided to Council by late March, 2020.												
		Status (projected): On track to be completed in Q1, 2020-21 (move target).												
	Implement Plan	CAO/DOO									*	*	*	*
		Status (projected): On track as planned for 2020-21.												
Additional Notes: None.														

Undertake Climate Adaptation initiatives (implement further phases of the Harbour Development Plan)	Engage with waterfront property owners on Edgewater St.	CAO				*									
		Status: Edgewater shoreline project incomplete and presently unlikely to be achieved on target, requires additional allocation of funds or Council consideration for amendment. If project will not proceed in 2020-21, consider removing action.													
	Monitor and pursue funding opportunities for a storm surge abatement plan	CAO	Ongoing												
		Pursuing Investing in Canada Infrastructure Funding (Small Communities Component). Council received proposal from Stevens Solutions for 3D interactive modeling of Edgewater project area; referred to 2020-21 budget process.													
		Status: Ongoing.													
	Public engagement process	Council/Consultant					*	*							
		Public and stakeholder engagement process (inform and consult) anticipated for Apr - May 2020.													
		Status: Edgewater shoreline project incomplete and presently unlikely to be achieved on target, requires additional allocation of funds or Council consideration for amendment. If project will not proceed in 2020-21, consider removing action.													

	Council makes decision and authorizes staff to prepare RFP(s)	Council	*
		Funding not received. To be considered in 2020-21 budget process.	
		Status: Edgewater shoreline project incomplete and presently unlikely to be achieved on target, requires additional allocation of funds or Council consideration for amendment. If project will not proceed in 2020-21, consider removing action.	
Additional Notes: Consider alternative actions such as educational / awareness raising activities (potentially 3D interactive modelling).			

Expand Green Energy Generation (continued development of Alternate Resource Energy Authority)	Work with AREA to conclude agreements and contracts supporting Town energy objectives	CAO	Ongoing
		Positive NSUARB decision on 2020 imports received. BUTU applications through 2026 submitted to NSPI.	
		Status: Ongoing.	
	Continue to explore new renewable generation opportunities with AREA	CAO	Ongoing
		Proceeding with solar garden feasibility work under Low-Carbon Communities Program. Approval conveyed on NRCAN EV charger funding application. Considering opportunities to expand Ellershouse windfarm on approved license.	
		Status: Ongoing.	
Additional Notes: Consider specifying renewables goals - solar project, etc. in actions.			

Section Notes: None.

Town of Mahone Bay
Staff Report
RE: Strategic Communications Contract 2019-20
April 21st, 2020

General Overview:

This report is intended to provide Council with an update concerning the first 6 months of the current Strategic Communications Contract and allocation of costs for 2019-20.

Background:

The current Strategic Communications Contract was awarded to Skysail Brand Marketing & Design on September 12, 2019. The contract runs for 12 months and is intended to provide strategic communications services in relation to the following projects:

- Website
- Fire Station
- Asset Management
- Centennial
- Transportation Plan
- GHG Reduction
- Municipal Plan Review
- Shoreline Adaptation
- ICIP Water/Wastewater

Financial Analysis:

Contract costs are $5000 +HST monthly for 12 months ($30,000 in each 2019-20 and 2020-21) for an estimated 924 hours. Skysail's monthly statements of work account for 327 hours in 2019-20; there is an expectation that the remaining estimated 597 hours would be worked in 2020-21 and staff will continue to coordinate this work with Skysail.

The $30,000 budget for 2019-20 is allocated as follows, on the basis of actual hours worked per project (costs for strategy and brand development – as costs common to all projects – are split between all projects):

Project	**Allocation**
Website	$2,691.13
Fire Station	$3,792.05

Asset Management	$6,911.31
Centennial	$5,076.45
Transportation Plan	$2,599.39
GHG Reduction	$3,750.00
Other	$5,179.66
Total	**$30,000.00**

Note: Municipal Plan Review, Shoreline Adaptation and ICIP Water/Wastewater did not begin in 2019-20.

This allocation will be reflected in the 2019-20 YTD unaudited column of the 2020-21 budget documents. Two areas of variance from earlier estimates are the Fire Station project which came in lower than anticipated, where communications associated with the design phase are anticipated in 2020-21, and the Centennial project where communications came in higher than anticipated but the project was under budget overall. Other miscellaneous communication services ($5,179.66) incurred under this contract have been allocated as an admin cost.

Strategic Plan:

3.3 Governance and Public Engagement

- Improve communications and share information with the public in a manner consistent with their needs

Recommendation:

It is recommended,

THAT Council accept this report for information.

Attached for Council Review:

None

Respectfully Submitted,

Dylan Heide
Town of Mahone Bay CAO

Town of Mahone Bay
Staff Report
RE: 2020 Municipal Elections
April 21st, 2020

General Overview:

This report is intended to provide Council with updates and recommendations concerning the 2020 Municipal Election.

Background:

Municipal elections in Nova Scotia are currently scheduled for October 17, 2020. The Town is required to appoint a Returning Officer (RO) to administer the election; this RO can be an existing Town staff person or a contract hire.

Analysis:

As a consequence of the imposition of Covid-19 precautions, discussions are currently ongoing between the Nova Scotia Federation of Municipalities (NSFM) and the Province of Nova Scotia concerning whether the scheduled municipal elections will take place or whether they will be postponed. If the Province determines that the elections will take place, it is probable that they will take place under atypical circumstances.

Direction from the Province in this regard is anticipated in the coming weeks; in the meantime an existing Town staff person – Deputy CAO / Town Clerk Maureen Hughes – can be appointed as RO with Council revisiting the subject no later than the regular Council meeting of June 9th, 2020. This allows Council to adapt to changes in the date or circumstances of the election as they occur, hiring an external returning officer as needed or making provisions to accommodate the staff time commitments entailed with having an in-house returning officer as election responsibilities increase, and instituting alternative voting methods if necessary.

Staff are researching alternative voting methods including electronic voting as particularly applicable to the atypical circumstances of this election, should it proceed on October 17th as scheduled. HRM Council approved e-voting for advanced polls at their regular meeting on April 14th. Staff are currently following up concerning the possibility that other municipal units can take advantage of pricing offered to HRM.

Financial Analysis:

Staff are preparing draft 2020-21 budget documents on the understanding that Council will revisit the subject of the municipal election by the regular Council meeting of June 9th, once direction has been received from the Province. The proposed budget of $15,000, reflected in the draft 2020-21 budget documents, should be sufficient to adapt to circumstances as outlined above.

Strategic Plan:

3.3 Governance and Public Engagement

- Improve communications and share information with the public in a manner consistent with their needs

Recommendation:

It is recommended,

THAT Council appoint Town Clerk Maureen Hughes as Returning Officer for the Town of Mahone Bay 2020 Municipal Election.

Attached for Council Review:

None

Respectfully Submitted,

Dylan Heide
Town of Mahone Bay CAO

Town of Mahone Bay
Staff Report
RE: Draft GHG Reduction Action Plan
April 21st, 2020

General Overview:

This report is intended to provide Council with a preview of the draft GHG Reduction Action Plan currently under development and to provide associated recommendations to the 2020-21 budget process.

Background:

On March 12th, 2019 the Mahone Bay Town Council approved an amended 2018-2021 Strategic Plan including a commitment to pursue climate mitigation strategies through the completion of a community emissions baseline and the development of a GHG Reduction Action Plan. Council's 2019-20 operating budget included $25,000 for GHG reduction initiatives and $15,000 for the development of a Transportation Plan; matching funding from the Department of Energy and Mines ($40,000 through the Low Carbon Communities (LCC) Program) was announced on February 24th, 2020.

Analysis:

It is anticipated that the Transportation Plan will be completed by June while the final draft GHG Reduction Action Plan should be completed by September. This schedule aligns with the timeline for the FCM's Transition 2050 Initiative which is supporting the development of our GHG Reduction Action Plan by contracting SSG Consultants to assist with the development of an initial community emissions baseline; FCM is also anticipated as an external funding partner in implementing recommended Plan actions.

Staff have provided the current draft GHG Reduction Action Plan (attached as Appendix A to this report). This report is provided for information at this time, to provide additional context for discussions in the 2020-21 budget process.

Financial Analysis:

The current LCC Program-supported project to develop GHG Reduction Action Plan and Transportation Plan will be completed by September 2020. This project is expected to come in on its $80,000 budget ($25,000 Gas Tax, $15,000 Operating Reserve, $40,000 External (LCC)).

The proposed new 2020-21 GHG Reduction & Energy Initiatives project below ($30,000 split between Town and utility supported by additional 50% external

funding (projected)) would take us from Council's adoption of the GHG Reduction Action Plan in September until year-end at March 31st, encompassing all staff time and related costs to implement the recommended actions detailed in the attached draft Plan. Staff anticipate the Low Carbon Communities Program – the likely external funder for this project – will open an application window shortly.

Capital recommendations included in the draft Plan are also reflected below.

Strategic Plan:

3.4 Environmental Sustainability

- Pursue Climate Mitigation Strategies (reducing Town carbon footprint)

Recommendation:

It is recommended,

THAT Council refer the following to the 2020-21 Budget process:

Operating	
2020-21 GHG Reduction & Energy Initiatives	$30,000 (cost split between Town and utility supported by additional 50% external funding (projected))
Capital	
Home Heating Programs (Financing)	$50,000 (cost split between Town and utility supported by additional 50% external funding (projected) and repaid by residents)
EV Chargers	$30,000 (anticipated utility cost, supported by additional 50% external funding (confirmed))
EV Carshare Pilot Project	$30,000 (town cost, supported by additional 80% external funding (projected))
Solar Garden Development	$703,000 (Town cost, supported by additional 73% external funding (projected) and further defrayed by resident investment)

Attached for Council Review:

- Draft GHG Reduction Action Plan (Apr 21, 2020)

Respectfully Submitted,

Katherine Dorey
Town of Mahone Bay Climate and Energy Outreach Coordinator

Appendix A

TOWN OF Mahone Bay

Draft GHG Reduction Action Plan

(April 21, 2020)

Contents

1.0 Introduction

The Intergovernmental Panel on Climate Change (IPCC) has issued a special report on the impacts of global warming and the importance of keeping global temperatures within 1.5 °C above pre- industrial levels. The IPCC report sets out foreseeable and preventable climate-change related outcomes of grave importance to coastal communities. The Town of Mahone Bay aims to take effective action to mitigate and take into consideration climate change at each part of the decision-making process.

The Town of Mahone Bay is a small coastal community located on the South Shore of Nova Scotia and home to a population of approximately 1100. The Town recognizes its vulnerability in the face of climate change and on February 12th, 2019, the Town recognized the Climate Change Emergency by resolution of Council. As a result, the Town amended its Strategic Plan to include priorities for climate change mitigation and to implement initiatives to reduce the Town's corporate and community greenhouse gas (GHG) emissions.

To further build upon previous policies and plans developed such as the Municipal Climate Change Action Plan, the Flood Prevention and Shoreline Enhancement Report and the Integrated Community Sustainability Plan, this GHG Reduction Action Plan defines overarching goals for emissions reduction through a strategy of electrification and decarbonization of town operations and community uses.

The Town is in a fairly unique situation, along with three other Nova Scotia municipalities, of owning and operating a municipal electric utility which can offer greater flexibility and control over the source of electricity provided to customers. By targeting 100% of electricity supplied by own source and imported renewable energy, the Town can effectively decarbonize the electrical grid. Further actions to electrify home heating and vehicle use will realize substantial GHG emission reductions by reducing the use of fossil fuels and increasing use of the grid's renewably produced electricity. This strategy can also benefit the utility and ratepayers.

The Town of Mahone Bay has partnered with the non-profit organization Clean Nova Scotia to participate in the Federation of Canadian Municipalities (FCM) Transition 2050 Program. This program offers training and support to municipalities to foster emissions reduction through peer learning, strategic planning, and operational implementation. Municipalities involved have been working together to develop long-term GHG reduction plans to transition to low carbon by 2050 aligning with global, federal and provincial targets:

- The Paris Agreement – Limit global temperatures below 1.5 °C by reducing GHGs by 45% below 2010 levels by 2030.
- The Pan-Canadian Framework (PCF) – reduce GHGs to 30% below 2005 levels by 2030.
- Nova Scotia's Climate Change Action Plan – reduce GHGs 10% below 1990 levels by 2020.

The FCM states that Canadian Municipalities have influence over roughly 50% of our nation's GHG emissions and by implementing actions aimed to reduce emissions, together, we can improve the quality of life in our communities, save operational and energy costs and work towards healing our environment.

The Town of Mahone Bay is also a participating member of The Partners for Climate Protection (PCP) Program offered by FCM and ICLEI – Local Governments for Sustainability Canada. As a member of this program and the Transition 2050 Program the Town of Mahone Bay aims to meet the following milestones over the next 10-years to successfully transition to low carbon by 2050:

Milestone 1: Create a Baseline Emissions Inventory and Forecast
Milestone 2: Set Emissions Reduction Targets
Milestone 3: Develop a Local Action Plan
Milestone 4: Implement the Local Action Plan
Milestone 5: Monitor Progress and Report Results

A final GHG Reduction Action Plan will state the achievements of Milestone's #1 and #2 and aim to meet Milestone #3 while setting out a clear path to further attain Milestones #4 and #5. The Transition 2050 Program timelines currently anticipates that participating units will finalize local action plans in 2020-21 as baseline data and projections become available.

2.0 Statement from Town Council

The final plan will contain a statement from the Town Council regarding the Town's commitment to climate mitigation.

3.0 Plan Overview

This is a draft GHG Reduction Action Plan that aims to describe how the Town of Mahone Bay will continue to work towards, and meet, the five referenced PCP milestones to effectively reduce GHGs and transition to a low carbon community by 2050.

As a participating municipality of the Transition 2050 Initiative, Clean Nova Scotia and SSG Consultants are working to provide the Town with a baseline emissions inventory from 2016. This inventory will be important moving forward so actions can be quantified and allow the Town to clearly observe if target reductions are being met.

The baseline emissions inventory will capture community, municipal and land use GHGs from every sector to determine a detailed tonnage of CO2 equivalent (CO2e) emitted in 2016. CO2 equivalent is used as a standard unit to express the warming capabilities of all GHGs including methane, nitrous oxide, ozone, halocarbons and other less prominent gases.

The baseline emissions inventory from SSG Consultants is anticipated to be completed by September along with a Business as Usual Forecast providing total emissions of the Town if no mitigation or action was taken by 2030.

This draft plan is presented in an effort to continue forward on the Town's commitment to mitigate climate change and reduce corporate and community emissions while staff continue to develop the final plan. Knowing that the Town must act now, Staff are working towards the first three Milestones simultaneously. A Final GHG Reduction Action Plan is anticipated to be completed in September 2020 once the inventory data is obtained.

To achieve IPCC targets, the Town must reach a reduction of 45% below 2010 GHG levels by 2030. Though the Town is awaiting detailed data on its own baseline emissions scenario, regardless of what the data states, the Town must take action to meet the targets set by the IPCC.

We are currently following what the PCP Program refers to as a top-down approach, working backwards from the IPCC recommendations. With the completion of the emissions baseline we will be able to complement this with

a bottom-up approach, quantifying each action and its contribution to community GHG reduction.

4.0 Community Engagement

Town staff in collaboration with AREA have and will continue to host various engagement events to gather resident comments and concerns in relation to climate and energy projects to reduce GHGs. The following engagement activities have occurred to date and will continue as this Plan is developed.

Focus Groups

Town Staff working with AREA and Thinkwell Shift hosted focus groups within the Town to gather thoughts from two groups of 5-6 residents: environmentally minded individuals, and the representative Mahone Bay resident. Residents were asked their opinions on three different topics including community solar gardens and investments options, electric vehicles and how to facilitate community uptake, and a rental or financing program to facilitate home heating retrofits and upgrades. This feedback has informed actions presented in this plan.

Public Engagement and Surveys

A GHG Emissions Survey has also been distributed to Town residents to collect information to further detail the Town's emissions baseline and asked questions about home heating, vehicle use, and sustainable living. Respondents were also prompted to provide comments and suggestions about Projects and initiatives the Town should pursue. This survey was launched in February 2020 and has received 68 responses as of April 11th. The survey is an ongoing project that aims to reach every Town resident and business which will contribute to the baseline inventory being completed by Clean NS and SSG consultants. Receiving responses from the entire community could further contribute to a highly detailed and accurate 2020 baseline inventory of emissions and to inform refinement and targeting of actions. Survey responses can also be analyzed using Geographical Information Systems (GIS) to map progress throughout the Town and to better target and launch educational campaigns and enrollment in future mitigation projects.

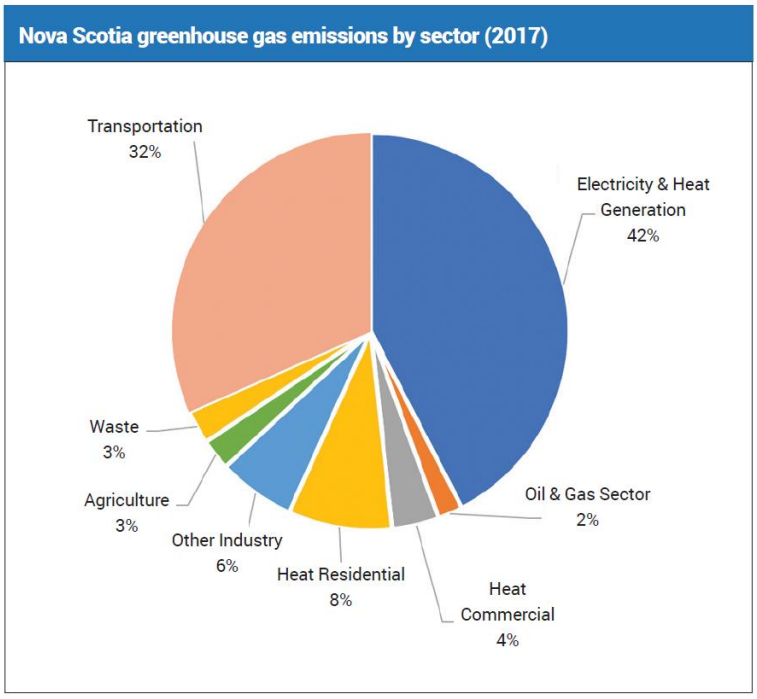
To facilitate community outreach and the implementation of campaigns and data collection, the Town of Mahone Bay has also been approved for a Clean Leadership Internship with the Clean Foundation, providing a student with

valuable work experience while helping the Town implement GHG mitigation efforts. Outreach activities will be modified while Covid-19 precautions are in effect; staff are working to develop alternative methods and techniques.

5.0 Emissions Inventory and Forecast

An emissions baseline inventory is currently being compiled to produce a baseline emissions scenario for 2016 and a Business as Usual Forecast to meet Milestone #1 and #2. As the Town awaits this data to better inform decisions moving forward, there is no doubt that Mahone Bay will need to implement programs to stay on track with IPCC targets and continue on its path of commitment to mitigating climate change.

In the meantime, this Plan will rely on provincial GHG emissions data in presenting recommended actions. Nova Scotia's GHG emissions in 2010 were 20.7 megatonnes of CO2e and in 2016 were 15.9 megatonnes (MT) of carbon dioxide equivalent. In 2016, as a population of 923,598 residents, an average per capita emission was estimated at 17.2 tonnes CO2e. This is approximately a 13% decline in emissions. Figure 1 demonstrates the emissions breakdown by sector.



Sources: National Inventory Report 2019: Greenhouse Gas Sources and Sinks in Canada, and Nova Scotia Environment, 2019.

Figure 1: Provincial GHG emissions by sector

In 2016, the population of Mahone Bay was 1036, so it is estimated that Mahone Bay accounts for 0.11% of these emissions and therefore has a 2010 emissions baseline of 22,770 tonnes and 2016 emission levels of 18,920 tonnes of CO_2e (18.3 tonnes per capita). To achieve IPCC targets of a 45% reduction in emissions from 2010 levels by 2030, the Town of Mahone Bay must have a total emissions profile of 12,524 tonnes of CO_2e (12.1 tonnes per capita). Though 2016 observed reductions in emissions, a further reduction of 6,397 tonnes of CO_2e (6.2 tonnes per capita) is required by 2030.

Province-wide electricity and heat generation is the largest contributor to GHG emissions. This information is provided from the Nova Scotia Power grid and the Town has since sourced more renewable energy and will notice large GHG emissions reductions in this sector as we update our baseline.

The Town also has three larger commercial and industrial facilities including a manufacturing plant, a school, and a local independent grocery store which require more intensive operations contributing approximately 6% of emissions.

The transportation sector presents the second highest source of GHG emissions which is thought to be consistent in Mahone Bay where we observe a significant influx of vehicle traffic during tourist season, have residents averaging 2 cars per household and large transport trucks moving through Town.

Solid waste makes up a 3% portion of the province's GHG emissions and is likely similar to Mahone Bay's scenario. In 2016, waste going to landfill was approximately 380kg per capita – approximately 25% above the provincial target set in the Environmental Goals and Sustainable Prosperity Act. Additionally, despite ambitious targets and education surrounding solid waste, per capita waste to landfill has actually increased by ~20kg.

The baseline emissions inventory will further detail the breakdown of emissions by sector, however, with the current information proposed action items have been identified in the following section to realize GHG emissions reductions in each of these sectors.

6.0 Actions to Reduce Emissions

Mahone Bay's GHG inventory along with community engagement will better inform the Town on action items to effectively reduce overall emissions from corporate operations and community use.

These actions align with an overall strategy for the Town and the utility, one that results in 100% of it's electricity sourced from renewable (and increasingly local) sources and electrifying all municipal operations and community uses including electric home heat and electric vehicles. In addition, each home, business and municipal operation will use energy efficiently and at optimal times for the utility.

Supplementing this central strategy, this Plan aims to foster additional trees and green spaces, highlighting our beautiful scenery and healthy, clean air. To create a community that walks, and bikes, because active transportation is safe and convenient and residents can source their products locally, reducing emissions by supporting local businesses to grow and become sustainable throughout the entire year.

Table 1 outlines recommended actions that will help the Town achieve a 45% or a 6,397 tonne reduction in emissions by 2030 and it's ultimate vision for a healthier, cleaner environment and community. Until a detailed emissions inventory allows for more specific classification anticipated emissions reductions are anticipated as minor, medium, and major.

Table 1: Recommended Actions by Sector

7.1 Heat & Building Efficiency – **2,732 tonnes CO2e**		Emissions Reduction	Est. Town Cost
Home heating and an efficient building envelop are a considerable source of GHG emissions. This draft GHG Reduction Action Plan aims to electrify municipal operations, homes, and business to use cleaner renewable energy and reduce the GHGs associated with fossil fuel based heating and operational systems. Mahone Bay has a considerable amount of older homes and updates to the building envelop (windows, doors, insulation etc.) create a significant opportunity to reduce overall energy use to heat homes.			
1	New buildings standards	Medium	Staff Time
2	Energy efficient retrofits for ~~existing~~ municipal buildings	Medium	Staff Time
3	Electrification and energy efficient retrofits for the private sector	Major	Staff Time
4	Electrification of home heating systems and residential retrofits	Major	$100,000 / 2 Fiscal Years
7.2 Electricity Supply – **9,563 tonnes CO2e**			
The electricity strategy ensures energy supply is 100% renewable through own-source and imported sources effectively decarbonizing the grid. Until additional own-source renewables are developed this Plan recommends			

importing to reach a 100% renewable supply as soon as possible (current supply is over 60% renewable).			
5	Develop Community Solar gardens	Major	$703,000 / 2 Fiscal Years
7.3 Transportation – **7,286 tonnes Co2e**			
The transportation strategy involves actions to eliminate vehicle congestion via the development of the Town's Transportation Plan, incentivizing a reduction in the number of personal vehicles through an EV CarShare program, and to support the electrification of personal and municipal fleets via the installation of electric vehicle charging stations. Reducing congestion effectively reduces GHG emissions from idled vehicles and using electric vehicles offers a clean alternative with the high mix of renewable energy on Mahone Bay's grid.			
6	Implement Transportation Plan (TP) and encourage active transportation	Major	See TP; plus Staff Time
7	Assess community transit and shuttle options	Minor	Staff Time
8	Install electric vehicle chargers within Town	Medium	$30,000
9	Implement an Electric Vehicle CarShare and encourage vehicle electrification	Major	$60,000 / 2 Fiscal Years
10	Implement shop local campaign	Minor	Staff Time
7.4 Agriculture – **683 tonnes CO2e**			
Though Mahone Bay does not have an agriculture land base, the community can reduce GHG emissions through their food choices and reducing demand for high GHG associated products whether it is from unsustainable land use, high inputs, or transportation over long distances.			
11	Implement eating for our environment campaign	Minor	Staff Time
7.5 Solid Waste – **683 tonnes CO2e**			
Reducing the amount of waste our community produces has positive impacts throughout a lifecycle analysis. By using less and wasting less, demand for that manufacturing is decreased reducing GHG emissions in the manufacturing process for waste collection and end of life processing.			
12	Implement a waste reduction campaign	Minor	Staff Time
7.6 Green Land Use – **Temporary Carbon Sink**			
In this context, Green Land Use is considered a carbon sink that is beneficial for removing GHG's, specifically CO2, from our environment. Developing more green spaces within Town can offset some GHGs. Though green spaces are not a permanent fix, they can temporarily help to meet goals and facilitate cleaner air and wildlife habitat.			

13	Foster trees, gardens and greenspaces on municipal and private properties	Minor	Staff Time
7.7 Policy & Governance – **Decision-making**			
Successful implementation of the GHG Reduction Action Plan will require integration of climate mitigation considerations into Town decision-making. Appointment of a Climate Action Advisory Committee and development / amendment of policies to reference climate mitigation will help to ensure the Town stays on track to meet GHG reduction targets.			
14	Establish Climate Action Advisory Committee	Minor	Staff Time
15	Policies and Policy Amendments	Medium	Staff Time

7.0 Action Implementation Pathway

7.1 Heating & Building Efficiency

Action #1

New buildings standards.

2030 Target:
100% of newly constructed buildings Net Zero Ready by 2030

Mahone Bay's Approach:
The new 2020 National Energy Code for Buildings supports municipalities by introducing a tiered approach encouraging new construction to be Net Zero Energy Ready (NZER) through building and HVAC efficiencies. Municipalities looking to implement energy efficiency and carbon reduction strategies can prescribe or encourage tiers for new construction that align with the knowledge and capacity of their community.

Tier 1: 2020 Building Code

Tier 2: 10% improved energy performance

Tier 3: 20 % improved energy performance from 2020

Tier 4: 40% improved energy performance from 2020

Tier 5: 70% improved energy performance from 2020

The 2020 Building Code has an ~ 15% better energy ratings than what was enforced in 2015 which was already 10% better than what was enforced in 2015. 2020 Building Code standards can be enhanced via development regulations, which could potentially also impose heat source requirements on new construction (as is being done in some other Canadian jurisdictions).

Resources:
The Town of Mahone is responsible for development services which are provided by the Municipality of the District of Chester under contract. This action will require additional staff time to explore and coordinate proposed regulatory changes and support related public processes / consultations.

Action #2

Energy efficient retrofits for municipal buildings.

2030 Target:
100% electrification of municipal building operations

Mahone Bay's Approach:
As the Town completes upgrades to, and constructs new municipal buildings, electrification and energy efficiency options will be considered in the decision-making process. Prior to major renovations or retrofits, an energy audit may be completed to better inform upgrades to maximize efficiency. Further retrofits to electrify heating systems will reduce GHGs associated with fossil fuels to make use of a cleaner electrical grid.

Resources:
To ensure electrification and energy efficiency is considered in retrofits and new construction, staff time will be needed to coordinate with energy auditors and project contractors. Costs associated with electrification and efficiency options for municipal buildings will be factored into capital project costs.

Action #3

Electrification and energy efficient retrofits for the private sector.

2030 Target:
100% electrification of private sector building operations

Mahone Bay's Approach:
Work with Efficiency Nova Scotia, Nova Scotia Business Inc, and other organizations to provide coordinating and external financial assistance to the owners of commercial and industrial buildings for engineering and feasibility studies for larger case-by-case energy retrofits. Smaller businesses may be able to access residential programs.

Efficiency Nova Scotia offers a $15,000 rebate to eligible customers to conduct a feasibility study by a third-party consultant. The feasibility study will highlight recommendations to retrofit equipment and building envelopes to increase efficiency.

Resources:
Town Staff can work with interested local businesses to access these programs and provide resources to help work through applications and secure reputable consultants.

Action #4

Electrification of home heating systems and residential retrofits.

2030 Target:
100% electrification of residential buildings

Mahone Bay's Approach:
With the ability to ensure a 100% renewable supply, the electrification of home heating systems contributes significantly to community GHG reductions.

Approximately 50% of Mahone Bay homes and buildings were built prior to 1980 and supporting the retrofits of these homes to improve efficiencies will realize GHG reductions, more specifically from fossil fuel heated homes.

<u>Heat Pump and Energy Thermal Storage Financing Program</u>
In collaboration with AREA and Saint John Energy, the Town of Mahone Bay and electric utility plans to implement financing programs for home heating equipment such as ductless heat pumps and thermal energy storage units. These programs will support residents to heat their homes more efficiently, with a cleaner source of electricity compared to oil, propane or wood heat and reduce the upfront costs to homeowners, making the equipment more accessible. Private financing may be utilized to avoid the Town carrying debts and staff are currently investigating the recently announced FCM Community Efficiency Financing which may support homeowners with 50% grant funding.

Neothermal Pilot Project

Neothermal Energy Solutions presented to Council on January 14th about conducting a pilot project with ~10 Mahone Bay residents. While currently only in the pilot stage, Neothermal's energy storage solutions allow homeowners to use 50-80% less oil fuel to heat their homes and switch a portion of their heating needs to electric using the time of day rates and charging the units throughout the night. If 10 residents pursue this heating upgrade about 16,600 litres of oil per year will be avoided equally a reduction of 28 tonnes of CO2e per year. Additional GHG savings can also be realized if the ETS units are charged with excess renewable energy through the night when demand is normally low.

These units can be included in a financing program such as referenced above and staff are investigating other options to support this pilot project. This option will be particularly useful for homeowners who have sunk costs in fossil fuel burning systems to use the remaining life of the systems more efficiently.

Efficiency Nova Scotia

Efficiency Nova Scotia (ENS) offers a Home Energy Assessment (HEA) Program which has an auditor assess homes to provide and energy efficiency roadmap. The Assessment cost is $99 + HST and includes a follow-up audit. This fee can also be waived for income-qualifying homeowners through the HomeWarming Program. If homeowners choose to make the efficiency upgrade, the follow-up will determine which rebates they are eligible for.

Resources:

Staff time will be required to develop and implement financing options and programs as well as to coordinate with and maximize homeowner access to external resources such as ENS.

Capital funding of $100,000 over two fiscal years beginning in 2020-21 is recommended to be leveraged against FCM Community Efficiency Financing for an additional $100,000 in external funding, though private financing to homeowners will continue to be explored as an alternative. The $100,000 would be repayable by residents, secured against their properties.

7.2 Electricity Supply

Action #5

Develop Community Solar gardens

2030 Target:
Provide 100% renewable electricity to utility customers by 2022;

Provide 50% own-source renewable electricity to utility customers by 2023

Mahone Bay's Approach:
The Town of Mahone Bay, in collaboration with AREA, are seeking new opportunities to expand renewable energy generation to the Mahone Bay Electric Utility (with resident investment), including a community solar garden project and the expansion of the Ellershouse Windfarm.

AREA has received responses from the Request for Expression of Interest for expertise in solar development which closed on January 10th, 2020. Solar resource assessment, engineering and geotechnical investigations to complete solar garden feasibility work are ongoing.

The community solar garden will include a community investment opportunity that will be structured to best fit Mahone Bay and its residents.

The solar garden project is predicated on external funding support through the Investing in Canada Infrastructure Program which is anticipated to provide 73% funding to the project with the remaining $703,000 coming from the Town, defrayed by resident investment. This level of funding would support a solar garden producing 7-12% of the electricity required by the town.

On confirmation of external funding, public engagement on the project and investment opportunity will take place in the fall of 2020 with construction anticipated for early 2021 and full operations by the following summer.

Resources:
Significant staff time will be required to support this project through to full operations.

Capital funding of $703,000 over two fiscal years beginning in 2020-21 is recommended to be leveraged against FCM Community Efficiency Financing for an additional $1,600,703 in external funding. Town capital funding to be

defrayed by resident investment, potentially resulting in very quick payback on borrowing as investments are received and applied against debenture.

7.3 Transportation

Action #6

Implement Transportation Plan (TP) and encourage active transportation.

2030 Target:
10% increase in active transportation choices by residents

Mahone Bay's Approach:
The Town of Mahone Bay has contracted CBCL Ltd. to develop a Transportation Plan to address transportation needs in town including but not limited to, pedestrian safety, active transportation routes, parking, and more efficient intersections. There are numerous occasions throughout the year that parking becomes an issue increasing the amount of congestion, idling and driving around to find parking which adds to GHG emissions.

The Transportation Plan will outline recommendations the Town can implement to encourage active transportation choices by residents and to optimize the flow of traffic throughout town to reduce unnecessary emissions during events.

Resources:
Significant staff time may be required to support this action, depending on the recommendations implemented. Staff time will also be used encourage active transportation choices by residents.

Capital funding will be needed to implement recommendations as stipulated in the Transportation Plan and Town funding can likely be leveraged for at least 50% external funding support. Recommendations are likely to be focused on roads, sidewalks, crosswalks, and associated signage.

Action #7

Assess transit and shuttle options

2030 Target:
Support viable transit options

Mahone Bay's Approach:
Citizens for Public Transportation have presented to Town Council and have completed considerable work on a proposed fixed-route transit plan for Mahone Bay and surrounding area. Community engagement has also supported the idea of a shuttle service during tourist seasons. These options will continue to be assessed with further work needed to find a viable option for Mahone Bay.

Resources:
Staff time required to assess feasible options. If a viable option for the Town is identified in the future, further financial resources may be required to implement such a service.

Action #8

Install electric vehicle chargers within Town

2030 Target:
Install charging stations

Mahone Bay's Approach:
Saint John Energy on behalf of all Atlantic Canada municipal electric utilities, submitted an application to the Zero-Emission Vehicle Infrastructure Program offered through NRCan in September 2019. This funding has been awarded and will cover 50% of the costs to install 104 chargers across all municipalities, eight of which will be located in Mahone Bay.

Chargers are anticipated to be installed by the fall of 2020.

Resources:
Financial resources contributed from the utility to make up the additional 50% of costs; estimated at $30,000. Additional utility staff time will be needed to install and maintain the chargers.

Action #9

Implement an Electric Vehicle CarShare and encourage vehicle electrification

2030 Target:
20% EV adoption;

5% reduction in household vehicle ownership

Mahone Bay's Approach:
Staff is exploring options for obtaining an Electric Vehicle for municipal operations and to provide educational and awareness opportunities for community members. Additionally, staff have been discussing options to expand electric vehicle usage in town and propose "Electric Avenue" events to showcase different EV models.

The Town is further exploring the feasibility of an Electric Vehicle Carshare Pilot Program with Department of Energy and FCM. Such a program could support early EV adoption in Mahone Bay by making EVs more available and accessible for town residents. An expansion of the single-vehicle option above, this program would allow residents to be a member of the CarShare and use the vehicles as needed while simultaneously making EVs more accessible to test drive different models and familiarize residents with the technology which isn't always available at car dealerships across the Province.

These educational events and the opportunity residents have with a CarShare program aims to facilitate greater EV uptake in town effectively increasing the electrical load and switching vehicles requiring fuel to a cleaner electrical source.

The CarShare program also aims to reduce the number of personal vehicles in town and having fewer trips with combustion engines.

Resources:
This action is scalable on confirmation of external funding support, from a single EV, test drives and education campaigns to a multi-vehicle CarShare program providing a true alternative to residents. Depending on scale significant staff time will be required to support this project.

Recommended project funding of $60,000 over two fiscal years beginning in 2020-21 can support a single-vehicle option with educational activities (partially defrayed by corporate savings on mileage reimbursals) or can potentially be leveraged for up to 80% additional external funding ($240,000) through FCM / provincial sources.

Action #10

Implement Shop Local Campaign

2030 Target:
10% increase in local shopping by residents

Mahone Bay's Approach
A shop local campaign is an action under transportation as it minimizes the number of residents and business ordering products online that require shipping, it also reduces the amount of vehicle trips to locations of greater distance away. Shopping local not only reduces the demand for transportation of goods but also supports Mahone Bay's local businesses.

Though local businesses may still be receiving shipments from other locations we can considerably reduce emissions associated with the transportation sector if, for example, 20 people shopped at a local store for an item rather than have a delivery truck deliver that item to 20 different residents.

Resources:
This action would require staff time to create and implement the educational awareness campaign through newsletters, events, and social media content. Staff can also work with residents and businesses to determine items that have demand but no local source and work with businesses to find ways to offer these products or services.

7.4 Agriculture

Action #11

Implement an eating for our environment campaign

2030 Target:
10% reduction in estimated emissions from dietary sources

Mahone Bay's Approach:
Small changes in the way we choose our food can have an impact on GHG emissions. Certain foods are grown unsustainably, degrading soils and changing land use. Some food categories are energy and water intensive to raise crops and livestock while outputs from others produce significant GHG emissions, like methane from the beef industry. Processing, transport, retail and packaging are all part of our foods' life cycle that should be considered when choosing what we eat.

Eating for our environment does not mean never consuming these foods if it is something you enjoy, but simply being mindful of foods and where they come from and looking for more sustainable products or reducing consumption.

For example, if families chose one day a week and do not consume meat products, could notice small GHG impacts which could lead to cumulative emissions reductions across the community.

Resources:
Implementing this campaign would require Town staff to develop educational awareness material and to promote a pledge-based commitment.

7.5 Solid Waste

Action #12

Implement a waste reduction campaign

2030 Target:
10% reduction in annual landfill and recyclable tonnage

Mahone Bay's Approach:
In recent years the Province of Nova Scotia has noticed an increase in the amount waste per capita being sent to landfills.

This action aims to reduce the use of single use items and find sustainable solutions for municipal operations and to support education and awareness for community residents and businesses.

The Town aims to provide more education on lifecycle analysis of the products consumers toss. Each item has a manufacturing and transport process with associated GHGs before making its way to a consumer. Further, Once and item reaches the end of its life there are transportation emissions to pick-up and deliver waste and additional emissions associated with the process of filling landfills and recycling products.

Finding sustainable products that we can use over again begins to reduce the lifecycle GHG emissions of single use products.

Resources:
Staff time is required to create and implement an educational awareness campaign and to coordinate and host workshops with Region 6.

7.6 Green Land Use

Action #13

Foster trees, gardens and greenspaces on municipal and private properties

2030 Target:
Retain or increase community tree coverage;

Support designation of municipal property as parkland where viable

Mahone Bay's Approach:
Designating green areas within Town provides opportunities to grow the Town's natural assets which create carbon sinks by sequestering GHGs from our environment. Tree planting and urban gardens, whether it be vegetable gardens, wildflower gardens, or flower beds, make use of space to offset GHG emissions and also create wildlife habitat while being visually pleasing.

This action item draws from inspiration provided by Bayview students who created bee hotels out of recycled materials. Flower gardens offer bees and other insects a source of nectar. Gardens can include species preferred by our native endangered species such as milkweed for the monarch butterflies.

The Town has many natural assets that act as a carbon sink sequestering CO2 from our environment. Though they do not offer a permanent solution as carbon is then released as material decays or is burnt, natural assets such as forests, gardens, and other vegetation offer a temporary solution to help mitigate a small percentage of Mahone Bay's emissions.

During Mahone Bay's centennial year celebration a successful tree planting and donation campaign resulted in over 100 new trees being planted. Including municipal and privately owned lands, approximately 57% or the Town of Mahone Bay's land base is currently forested. The Town aims to maintain and protect these assets and manage them in a sustainable manner. Residents can also be educated and encouraged to be stewards of their privately owned land as well.

Resources:
Town staff time will be required to encourage planting and to assess potential parklands, public planting locations and gardens within the community, coordinating with local schools and non-profit organizations to identify opportunities.

7.7 Policy & Governance

Action #14

Establish Climate Action Advisory Committee

2030 Target:
Committee established in 2020-21.

Mahone Bay's Approach:
A Climate Action Advisory Committee will be formed as the overseeing body of this Plan. As more information is compiled and as Town circumstances are altered in the face of Climate Change, action items can be fluid. The Committee will advise Council on prioritizing, adjusting, and adding action items as needed and will review staff progress reports. The Committee would be established by amendment of the Town's Committees Policy, after the final draft Plan is approved by Council (anticipating September). [moved from above]

Resources:
Staff time to support committee.

Action #15

Policies and Policy Amendments

2030 Target:
Policies and policy amendments to support Plan implementation

Mahone Bay's Approach:
The Climate Action Advisory Committee will work to develop and recommend a GHG Reduction Policy to Council. Further amendments will be made to current policies such as the Asset Management Policy, to ensure that climate change mitigation is considered in every part of the decision making and procurement process.

Resources:
Staff time to draft policies and policy amendments.

8.0 GHG Reduction Forecast

By September 2020, the final GHG Reduction Action Plan will include the Town of Mahone Bay's 2016 emissions inventory supplemented with additional data from community consultation. In the final Plan this section will demonstrate Mahone Bay's GHG reduction trajectory should these actions be implemented successfully and will provide a comparison to the Business as Usual base case.

9.0 Monitoring & Reporting

To achieve Milestone #5 the GHG Reduction Action Plan must be monitored for progress. An annual progress report will be provided to Council including the following:

- A status update of each action item
- Any changes made to actions or implementation pathways and reasoning
- GHG reductions noticed to date
- Remaining GHG reductions needed to stay on target
- Priority actions for the following year

10.0 Concluding Statement

The Town of Mahone Bay has recognized the current Climate Emergency and commits to mitigating climate change and to working toward emissions reductions in line with IPCC recommendations (emissions 45% below 2010 levels by 2030, an reduction of 6,397 tonnes of CO_2e, approximately 6.2 tonnes per capita).

This Draft GHG Reduction Action Plan recommends action items to reduce GHGs in the Town of Mahone Bay using current knowledge from provincial data. A final Plan will be completed by September 2020 once Staff have received a baseline emissions inventory specific for the Town. The final plan will state detailed GHG tonnage from community uses and municipal operations to quantify the reductions anticipated from each action as they are implemented.

The successful implementation of this Plan will require cooperation across municipal staff, council, and community members. Only by acting now can we protect our community and mitigate further harmful impacts of climate change.

Town of Mahone Bay
Staff Report
RE: Transportation Plan Estimates
April 21st, 2020

General Overview:

This report is intended to provide Council with a preview of estimates relating to the draft Transportation Plan currently under development by CBCL Ltd., as well as a recommendation for transportation projects in the draft 2020-21 Capital Budget.

Background:

Council has engaged CBCL Ltd. to provide their qualified expertise to assist the Town with the development of a Transportation Plan to address various transportation issues in our community which have been raised by residents in recent years. This work is funded in part by the Low Carbon Communities Program of the NS Dept. of Energy and Mines as it also supports the Town's climate mitigation objectives.

Prior to the presentation of a draft Plan to Council CBCL Ltd. has undertaken a series of consultations intended to gather residents' ideas and suggestions as well as feedback on the ideas and suggestions shared by other residents. It is anticipated that CBCL will present this report and the draft Transportation Plan to Council at the regular meeting of Council on May 12th. Once the draft Plan has been received by Council the Town will solicit additional public feedback on the Plan prior to approval, ensuring the views of all residents have the opportunity to be heard.

Analysis:

The initial public consultation hosted by CBCL Ltd. in the Abriel Room at the Mahone Bay Centre on February 20th and the follow-up survey to this consultation were used to collect suggestions and ideas from residents, which were then developed into concepts for the second consultation which is currently ongoing (online due to Covid-19 precautions). Feedback from the second consultation will be used to develop the draft Transportation Plan, informing CBCL's recommendations to Council. To support the Town's 2020-21 budget process CBCL has provided Order of Magnitude Cost Estimates (memo attached as Appendix A to this report) for all concepts currently

subject to consultation, which may form the basis of CBCL's recommendations in the draft Plan.

Financial Analysis:

Council now has the order of magnitude costs for all concepts currently under consideration for the draft Transportation Plan, as well as the Bicycle NS Concept Design Report presented to Council October 8, 2019. While these various transportation infrastructure recommendations will eventually be reconciled in the final Transportation Plan, it is too early in the process for Council to make these determinations in the 2020-21 budget.

Staff have been in contact with the NS Dept. of Energy and Mines regarding the 2020-21 Connect2 Program, which in prior years has supported municipal transportation infrastructure improvements with 50% funding up to $100,000 per year. In consideration of the above, staff do not recommend reflecting any of the concepts currently under consideration on the draft 2020-21 Capital Budget, instead using "Transportation Project 2020-21" with a proposed budget of $200,000 ($100,000 being anticipated from the Connect2 Program) as a temporary placeholder in the draft budget for any transportation improvements Council may be inclined to pursue in 2020-21 from the concepts provided by CBCL Ltd. and Bicycle NS. Staff anticipates Council direction in this regard in the 2020-21 budget process and will amend the Capital Budget accordingly in the final draft budget documents.

Strategic Plan:

3.1 21st Century Infrastructure

- Provide safe streets and sidewalks

Recommendation:

It is recommended,

THAT Council refer the following to the 2020-21 Budget process:

Capital	
Transportation Project 2020-21	$100,000 (supported by additional 50% external funding (projected))

Attached for Council Review:

- CBCL Memo re Transportation Plan Order of Magnitude Costs

Respectfully Submitted,

Dylan Heide
Town of Mahone Bay CAO

Memo

Date	April 15, 2020
Memo to	Dylan Heide, CAO
Project name	Town of Mahone Bay – Transportation Plan
Subject	Order of Magnitude Cost Estimates (Draft)
From	Audrey Muir
Copies to	Emanuel Nicolescu, Abdullah Khayyal

As requested, we are pleased to provide order of magnitude costs for the proposed concepts developed as part of the Draft Transportation Plan. These concepts may form the basis of capital projects for the consideration of Council into the 2020/21 budget, and beyond.

Description of Proposed Concepts

101. Main St/Edgewater St Intersection Reconfiguration (3-Way Stop)

Narrowing the intersection to a 3-way approach with stop signs and adding crosswalks to all approaches. The integration of stop signs and crosswalks will prioritize pedestrian movements through the intersection and enhance safety for all users. This includes the relocation of the Cenotaph to a new location to improve the overall experience of visiting the monument.

Class-D estimated construction costs with contingencies (HST not included) = $458,000

102. Edgewater St Living Shoreline and Trail

A 700m Living Shoreline to protect ongoing erosion of this stretch of coast, protect Edgewater Street from storm surge flooding, and provide a pleasant multi-use pathway. The cost also includes the construction of a 55m span Pedestrian Bridge across the cove from the foot of Parish Street to the bandstand.

Class-D estimated construction costs with contingencies (HST not included) = $2,500,000

103. Main St/Clearway St Intersection Reconfiguration (3-Way Stop)

Reconfiguration of the intersection into a 3-way stop controlled intersection and adding stop signs and crosswalk to all approaches. This addresses a number of safety and

speeding issues. It facilitates safe crossing and provides a safer school route. It also forces vehicular flows on Main St to stop, thereby checking their speed on Main St.
Class-D estimated construction costs with contingencies (HST not included) = $46,000

104. Main St/Longhill Rd Roundabout

Reconfiguration of the intersection into a two-lane roundabout with pedestrian and cycling facilities. The roundabout could be landscaped to complement the Cenotaph intersection as the western gateway to Mahone Bay.
Class-D estimated construction costs with contingencies (HST not included) = $1,472,000

105. New Boulevard

Develop a secondary access route for Mahone Bay, with a 1,570m multi-modal boulevard that accommodates a treed two-lane road, with cycling path and sidewalks. This boulevard would first of all provide redundancy to the Main Street and Edgewater Street corridors. Considering the potential for the Town's future growth, and retreat from limited developable parcels along the shoreline as flooding becomes more of an issue. This Boulevard would also open interior parcels of land up for servicing and development.
Class-D estimated construction costs with contingencies (HST not included) = $5,902,000

106. Main St/Fauxburg Rd Intersection Reconfiguration

Reconfiguration of the intersection and the south/northbound approach to accommodate the larger turning radii of heavy trucks and would permit turning movements of larger vehicles. In addition, adding stop signs and crosswalks to all approaches is included. An added measure of speed control on Main Street would therefore be provided, by forcing all vehicles to stop.
Class-D estimated construction costs with contingencies (HST not included) = $202,000

107. Fairmont St One-Way Southbound Reconfiguration

Reconfiguration of Fairmont St to permit one-way movement only and adding the required signage.
Class-D estimated construction costs with contingencies (HST not included) = $28,000

108. New Visitor Parking Lot and Trail

A visitor parking lot over an area of about 8,600 sq.m behind the school, with access onto Clearland Road. A 520m footpath to give access to Cherry Lane is included. This parking lot could be used as the Town's main visitor parking area during peak periods and special events. A shuttle service could take visitors into the centre of the Town, without the associated pressures of increased vehicular traffic.
Class-D estimated construction costs with contingencies (HST not included) = $292,000

109. Town Hall Plaza

Reconfiguration of the area in front of Town Hall into a formal plaza, thematically extending onto Main Street. Road surface would be graded flush with the street. Main Street is re-organized with two 3.5m drive lanes, separated from the pedestrian area by bollards. The flush "table top" treatment of the road in front of the plaza prioritizes non-motorized movement and provides a prominent crossing space. It provides the opportunity to extend a sidewalk on the north side of North Street, to Clearway Street.
Class-D estimated construction costs with contingencies (HST not included) = $467,000

110. Main St Sidewalk on the North Side from Town Hall to Clearway St

Adding a sidewalk to the north side of Main St from the Town Hall to the intersection with Clearway St.
Class-D estimated construction costs with contingencies (HST not included) = $272,000

111. Downtown Visitor Parking

A commercial parking lot over an area of about 2,700 sq.m behind the businesses fronting the Town Hall Plaza, possibly sharing access with the Quinlan driveway.
Class-D estimated construction costs with contingencies (HST not included) = $483,000

112. Main St/Pleasant St Intersection Reconfiguration (3-Way Stop)

Reconfiguration of the intersection into a 3-way stop controlled intersection and adding stop signs and crosswalk to all approaches. Full stop control on all approaches would bring a measure of security, forcing all vehicles to stop. Crosswalks on all approaches would improve pedestrian and active transportation circulation and safety.
Class-D estimated construction costs with contingencies (HST not included) = $31,000

113. Cherry Lane One-Way Reconfiguration

Reconfiguration of Cherry Lane to permit one-way movement only and adding the required signage.
Class-D estimated construction costs with contingencies (HST not included) = $20,000

114. Orchard St Closure

Closing the End of Orchard St at the intersection with Main St.
Option 1 (Permanent):
Class-D estimated construction costs with contingencies (HST not included) = $24,000
Option 2 (Seasonal):
Class-D estimated construction costs with contingencies (HST not included) = $1,400

115. Main St East Side Sidewalk

Extension of the formal sidewalk on the north side of Main street from Amos Pewter to Fairmont St.
Class-D estimated Construction Costs with Contingencies (HST not included) = $155,000

116. Route 3/Oakland Rd Reconfiguration (All-Way Stop)

Reconfiguration of the intersection into All-Way stop controlled intersection and adding stop signs and crosswalks to all approaches.
Class-D estimated Construction Costs with Contingencies (HST not included) = $37,000

117. Parking Management Plan

Adding the required signage to prohibit curbside parking over a total stretch of 2,000m on Main St and Edgewater St. Parking restrictions enacted on the approaches to the Cenotaph intersection would keep road space for vehicle movement and reduce conflicts and road blockages.
Class-D estimated Construction Costs with Contingencies (HST not included) = $32,000
Full time by-law enforcement = $50,000/year

118. Signed Pedestrian Crosswalk at Rebecca's Restaurant

Adding a signed crosswalk on Edgewater St at the location of Rebecca's Restaurant.
Class-D estimated Construction Costs with Contingencies (HST not included) = $11,000

119. Fauxburg Road Widening

The widening of Fauxburg Road on a length of about 900m to accommodate two 3.5m lanes and a 2.0m shared pathway.
Class-D estimated Construction Costs with Contingencies (HST not included) = $994,000

120. Pedestrian Crosswalk at the Lutheran Church

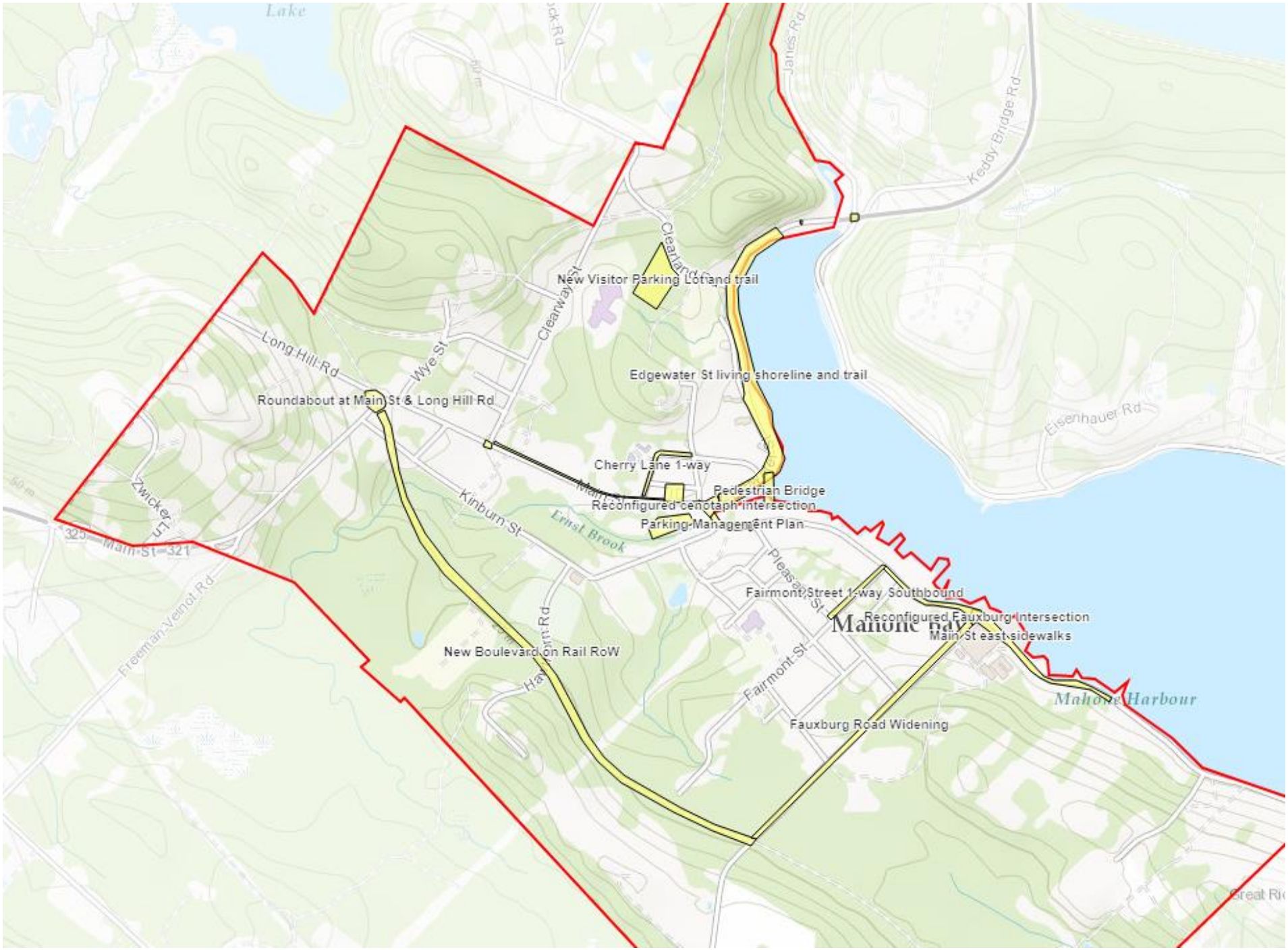
Adding a signed crosswalk on Edgewater St at the location of the Lutheran Church.
Class-D estimated Construction Costs with Contingencies (HST not included) = $11,000

Attachments:
Appendix A – Map showing Location of Proposed Concepts

Appendix B - Class D Cost Estimates

Memo

Appendix A – Map showing Location of Proposed Concepts


New Visitor Parking Lot and trail
Edgewater St living shoreline and trail
Roundabout at Main St & Long Hill Rd
Cherry Lane 1-way
Pedestrian Bridge
Reconfigured cenotaph intersection
Parking Management Plan
Fairmont Street 1-way Southbound
Reconfigured Fauxburg Intersection
Main St east sidewalks
New Boulevard on Rail RoW
Fauxburg Road Widening
Long Hill Rd
Wye St
Clearway St
Clearland Cr
James Rd
Keddy Bridge Rd
Eisenhauer Rd
Zwicker Ln
Main St
Kinburn St
Ernst Brook
Pleasant St
Fairmont St
Hawthorn Rd
Freeman-Vernot Rd
Mahone Harbour

Memo

Appendix B – Class D Cost Estimates

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
101	**Main St/Edgewater St Intersection Reconfiguration (3-Way Stop)**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 15,000	1	$ 15,000
1.2	Traffic Control	LS	$ 24,000	1	$ 24,000
2	**SOIL**				
2.1	Excavation & Reuse Existing Soil (Cut & Fill)	m3	$ 20	150	$ 3,000
3	**REMOVALS / RELOCATIONS**				
3.1	Sawcut & Remove Existing Asphalt	m2	$ 52	1,440	$ 74,880
3.2	Remove Existing Concrete Curb	m	$ 40	205	$ 8,200
3.3	Traffic Sign Post	ea	$ 500	2	$ 1,000
3.4	Relocation of the Cenotaph	LS	$ 10,000	1	$ 10,000
4	**CONSTRUCTION COSTS**				
4.1	Pavement Markings	m	$ 11	859	$ 9,861
	Concrete Curb				
4.2	Supply and Place Concrete Curb	m	$ 120	200	$ 24,000
	Road Resurfacing				
4.3	Supply and Place Type 2 Gravel	m3	$ 60	340	$ 20,414
4.4	Supply and Place Type 1 Gravel	m3	$ 65	170	$ 11,036
4.5	Supply and Place Asphalt Road (2 Lifts 75mm + 50mm)	m2	$ 95	1,100	$ 104,192
	Sidewalks				
4.6	Supply and Place Type 2 Gravel	m3	$ 60	40	$ 2,400
4.7	Supply and Place Type 1 Gravel	m3	$ 70	30	$ 2,100
4.8	Supply and Place Pre-Cast Concrete Curbstone	m2	$ 100	200	$ 20,000
5	**TRAFFIC SIGNS**				
5.1	Supply and Install Regulatory and Warning Signs	ea	$ 1,000	9	$ 9,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 339,083**
6	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**		15%		$ 50,862
	Construction Contingency (**see Note 2)**		10%		$ 33,908
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**		N/A		N/A
	Location Factor **(see Note 4)**		N/A		N/A
	Engineering & Geotechnical		10%		$ 33,908
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 458,000**

THIS OPINION OF PROBABLE COSTS IS PRESENTED ON THE BASIS OF EXPERIENCE, QUALIFICATIONS, AND BEST JUDGEMENT. IT HAS BEEN PREPARED IN ACCORDANCE WITH ACCEPTABLE PRINCIPLES AND PRACTICES. MARKET TRENDS, NON-COMPETITIVE BIDDING SITUATIONS, UNFORESEEN LABOUR AND MATERIAL ADJUSTMENTS AND THE LIKE ARE BEYOND THE CONTROL OF CBCL LIMITED. AS SUCH WE CANNOT WARRANT OR GUARANTEE THAT ACTUAL COSTS WILL NOT VARY FROM THE OPINION PROVIDED.

Note 1 A Design Development Contingency is for rhe necesaary growth of qtys, increase material labour costs as the work is better defined
Note 2 A Construction Contingency is for the cost of additional work that is over and above the original tendered construction contract price.
Note 3 The Escalation/Inflation is provided for anticipated increases in construction costs from the time budget to time of Tender
Note 4 The Location Factor is variances between costs at the location of the project and historical costs data used to prepare the budget.
Note 5 Note that for the above UNIT RATE FORMAT General Contractor, Fees, Overheads and Profit are included in each unit cost.

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
102	**Edgewater St Living Shoreline and Trail**				
1	**CONSTRUCTION COSTS**				
1.1	700 m living shoreline length (Kedy's to Ernst Brook outlet), incl. trail and pedestrian bridge and contingencies	LS	$ 2,500,000	1	$ 2,500,000
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 2,500,000**

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OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
103	**Main St/Clearway St Intersection Reconfiguration (3-Way Stop)**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 8,000	1	$ 8,000
1.2	Traffic Control	LS	$ 12,000	1	$ 12,000
2	**CONSTRUCTION COSTS**				
2.1	Pavement Markings	m	$ 7	705	$ 4,935
3	**TRAFFIC SIGNS**				
3.1	Supply and Install Regulatory and Warning Signs	Unit	$ 1,000	9	$ 9,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 33,935**
4	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**	15%			$ 5,090
	Construction Contingency (**see Note 2)**	10%			$ 3,394
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**	N/A			N/A
	Location Factor **(see Note 4)**	N/A			N/A
	Engineering & Geotechnical	10%			$ 3,394
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 46,000**

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Note 1 A Design Development Contingency is for rhe necesaary growth of qtys, increase material labour costs as the work is better defined
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Note 3 The Escalation/Inflation is provided for anticipated increases in construction costs from the time budget to time of Tender
Note 4 The Location Factor is variances between costs at the location of the project and historical costs data used to prepare the budget.
Note 5 Note that for the above UNIT RATE FORMAT General Contractor, Fees, Overheads and Profit are included in each unit cost.

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
104	**Main st/Longhill Rd Roundabout**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 30,000	1	$ 30,000
1.2	Environment Protection and Silt Fencing	m	$ 12	350	$ 4,200
1.3	Traffic Control	LS	$ 32,000	1	$ 32,000
2	**SOIL**				
2.1	Excavation & Reuse Existing Soil (Cut & Fill)	m3	$ 20	11,000	$ 220,000
3	**REMOVALS / RELOCATIONS**				
3.1	Clearing and Grubbing	m2	$ 5	7,000	$ 35,000
3.2	Sawcut & Remove Existing Asphalt	m2	$ 100	1,200	$ 120,000
3.3	Remove Existing Concrete Curb	m	$ 50	150	$ 7,500
4	**CONSTRUCTION COSTS**				
4.1	Pavement Markings	m	$ 7	2,000	$ 14,000
	Concrete Curb				
4.2	Supply and Place Concrete Curb	m	$ 120	450	$ 54,000
	Road Resurfacing				
4.3	Supply and Place Type 2 Gravel	m3	$ 60	840	$ 50,434
4.4	Supply and Place Type 1 Gravel	m3	$ 65	420	$ 27,266
4.5	Supply and Place Asphalt Road (2 Lifts 75mm + 50mm)	m2	$ 95	2,800	$ 265,216
	Sidewalks				
4.6	Supply and Place Type 2 Gravel	m3	$ 59	175	$ 10,332
4.7	Supply and Place Type 1 Gravel	m3	$ 62	110	$ 6,811
4.8	Supply and Place Pre-Cast Concrete Curbstone	m2	$ 100	700	$ 70,000
5	**Regrading & Landscaping**				
5.1	Import Borrow Backfill	m3	$ 25	5,000	$ 125,000
5.2	150mm Thick Topsoil and Sod	m2	$ 14	900	$ 12,600
6	**TRAFFIC SIGNS**				
6.1	Supply and Install Regulatory and Warning Signs	ea	$ 1,000	6	$ 6,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 1,090,359**
7	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**		15%		$ 163,554
	Construction Contingency (**see Note 2)**		10%		$ 109,036
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**		N/A		N/A
	Location Factor **(see Note 4)**		N/A		N/A
	Engineering & Geotechnical		10%		$ 109,036
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 1,472,000**

THIS OPINION OF PROBABLE COSTS IS PRESENTED ON THE BASIS OF EXPERIENCE, QUALIFICATIONS, AND BEST JUDGEMENT. IT HAS BEEN PREPARED IN ACCORDANCE WITH ACCEPTABLE PRINCIPLES AND PRACTICES. MARKET TRENDS, NON-COMPETITIVE BIDDING SITUATIONS, UNFORESEEN LABOUR AND MATERIAL ADJUSTMENTS AND THE LIKE ARE BEYOND THE CONTROL OF CBCL LIMITED. AS SUCH WE CANNOT WARRANT OR GUARANTEE THAT ACTUAL COSTS WILL NOT VARY FROM THE OPINION PROVIDED.

Note 1 A Design Development Contingency is for rhe necesaary growth of qtys, increase material labour costs as the work is better defined
Note 2 A Construction Contingency is for the cost of additional work that is over and above the original tendered construction contract price.
Note 3 The Escalation/Inflation is provided for anticipated increases in construction costs from the time budget to time of Tender

Note 4 The Location Factor is variances between costs at the location of the project and historical costs data used to prepare the budget.

Note 5 Note that for the above UNIT RATE FORMAT General Contractor, Fees, Overheads and Profit are included in each unit cost.

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
105	**New Boulevard**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 220,000	1	$ 220,000
1.2	Environment Protection Silt Fencing	m	$ 12	3,200	$ 38,400
2	**SOIL**				
2.1	Excavation & Reuse Existing Soil (Cut & Fill)	m3	$ 12	9,700	$ 116,400
3	**REMOVALS / RELOCATIONS**				
3.1	Clearing and Grubbing	m2	$ 5	32,000	$ 160,000
4	**CONSTRUCTION COSTS**				
4.1	Pavement Markings	m	$ 7	11,200	$ 78,400
	Concrete Curb				
4.2	Supply and Place Concrete Curb	m	$ 120	3,200	$ 384,000
	Road Resurfacing				
4.3	Supply and Place Type 2 Gravel	m3	$ 60	3,400	$ 204,136
4.4	Supply and Place Type 1 Gravel	m3	$ 65	1,700	$ 110,364
4.5	Supply and Place Asphalt Road (2 Lifts 75mm + 50mm)	m2	$ 95	11,200	$ 1,060,864
	Sidewalks				
4.6	Supply and Place Type 2 Gravel	m3	$ 60	800	$ 48,032
4.7	Supply and Place Type 1 Gravel	m3	$ 65	600	$ 38,952
4.8	Supply and Place Asphalt Surface	m2	$ 55	4,000	$ 221,728
	Cycling Path				
4.9	Supply and Place Type 2 Gravel	m3	$ 60	960	$ 57,638
4.10	Supply and Place Type 1 Gravel	m3	$ 65	720	$ 46,742
4.11	Supply and Place Asphalt Surface	m2	$ 55	4,800	$ 266,074
5	**Regrading & Landscaping**				
5.1	Import Borrow Backfill	m3	$ 25	38,000	$ 950,000
5.2	150mm Thick Topsoil and Sod	m2	$ 14	16,000	$ 224,000
5.3	Supply and Plant Native Trees	ea	$ 500	260	$ 130,000
6	**TRAFFIC SIGNS**				
6.1	Supply and Install Regulatory and Warning Signs	ea	$ 1,000	16	$ 16,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 4,371,730**
7	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**		15%		$ 655,760
	Construction Contingency (**see Note 2)**		10%		$ 437,173
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**		N/A		N/A
	Location Factor **(see Note 4)**		N/A		N/A
	Engineering & Geotechnical		10%		$ 437,173
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 5,902,000**

Note 1	A Design Development Contingency is for rhe necesaary growth of qtys, increase material labour costs as the work is better defined
Note 2	A Construction Contingency is for the cost of additional work that is over and above the original tendered construction contract price.
Note 3	The Escalation/Inflation is provided for anticipated increases in construction costs from the time budget to time of Tender
Note 4	The Location Factor is variances between costs at the location of the project and historical costs data used to prepare the budget.
Note 5	Note that for the above UNIT RATE FORMAT General Contractor, Fees, Overheads and Profit are included in each unit cost.

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
106	**Main St/Fauxburg Rd Intersection Reconfiguration**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 9,000	1	$ 9,000
1.2	Traffic Control	LS	$ 8,000	1	$ 8,000
2	**SOIL**				
2.1	Excavation & Reuse Existing Soil (Cut & Fill)	m3	$ 12	450	$ 5,400
3	**REMOVALS / RELOCATIONS**				
3.1	Clearing and Grubbing	m2	$ 5	70	$ 350
3.2	Sawcut & Remove Existing Asphalt	m2	$ 52	450	$ 23,400
3.3	Remove Existing Concrete Curb	m	$ 40	40	$ 1,600
3.4	Traffic Sign Post	ea	$ 500	2	$ 1,000
3.5	Relocate Fire Hydrant	ea	$ 10,000	1	$ 10,000
4	**CONSTRUCTION COSTS**				
4.1	Pavement Markings	m	$ 7	674	$ 4,718
	Concrete Curb				
4.2	Supply and Place Concrete Curb	m	$ 120	70	$ 8,400
	Road Resurfacing				
4.3	Supply and Place Type 2 Gravel	m3	$ 60	180	$ 10,807
4.4	Supply and Place Type 1 Gravel	m3	$ 65	90	$ 5,843
4.5	Supply and Place Asphalt Road (2 Lifts 75mm + 50mm)	m2	$ 95	550	$ 52,096
5	**TRAFFIC SIGNS**				
5.1	Supply and Install Regulatory and Warning Signs	ea	$ 1,000	9	$ 9,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 149,614**
6	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**		15%		$ 22,442
	Construction Contingency (**see Note 2)**		10%		$ 14,961
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**		N/A		N/A
	Location Factor **(see Note 4)**		N/A		N/A
	Engineering & Geotechnical		10%		$ 14,961
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 202,000**

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Note 3 The Escalation/Inflation is provided for anticipated increases in construction costs from the time budget to time of Tender
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Note 5 Note that for the above UNIT RATE FORMAT General Contractor, Fees, Overheads and Profit are included in each unit cost.

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
107	**Fairmont St One-Way Southbound Reconfiguration**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 3,000	1	$ 3,000
1.2	Traffic Control	LS	$ 4,000	1	$ 4,000
2	**CONSTRUCTION COSTS**				
2.1	Pavement Markings	m	$ 7	720	$ 5,040
3	**TRAFFIC SIGNS**				
3.1	Supply and Install Regulatory and Warning Signs	ea	$ 1,000	8	$ 8,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 20,040**
4	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**		15%		$ 3,006
	Construction Contingency (**see Note 2)**		10%		$ 2,004
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**		N/A		N/A
	Location Factor **(see Note 4)**		N/A		N/A
	Engineering & Geotechnical		**10%**		**$ 2,004**
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 28,000**

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Note 5 Note that for the above UNIT RATE FORMAT General Contractor, Fees, Overheads and Profit are included in each unit cost.

Form CBCL .035 Rev 2

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
108	**New Visitor Parking Lot and Trail**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 9,000	1	$ 9,000
1.2	Environment Protection Silt Fencing	m	$ 12	450	$ 5,400
2	**SOIL**				
2.1	Excavation & Reuse Existing Soil (Cut & Fill)	m3	$ 12	4,500	$ 54,000
3	**REMOVALS / RELOCATIONS**				
3.1	Clearing and Grubbing	m2	$ 5	8,600	$ 43,000
4	**CONSTRUCTION COSTS**				
4.1	Pavement Markings	m	$ 7	3,000	$ 21,000
	Road Surfacing				
4.2	Supply and Place Type 2 Gravel	m3	$ 60	2,600	$ 156,104
4.3	Supply and Place Type 1 Gravel	m3	$ 65	1,300	$ 84,396
4.4	Supply and Place Asphalt Road (2 Lifts 75mm + 50mm)	m2	$ 95	8,600	$ 814,592
	Sidewalks				
4.5	Supply and Place Type 2 Gravel	m3	$ 60	220	$ 13,209
4.6	Supply and Place Type 1 Gravel	m3	$ 65	165	$ 10,712
4.7	Supply and Place Asphalt Surface	m2	$ 55	1,100	$ 60,975
5	**Regrading & Landscaping**				
5.1	Import Borrow Backfill	m3	$ 25	5,000	$ 125,000
6	**TRAFFIC SIGNS**				
6.1	Supply and Install Regulatory and Warning Signs	ea	$ 1,000	6	$ 6,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 215,896**
7	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**		15%		$ 32,384
	Construction Contingency (**see Note 2)**		10%		$ 21,590
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**		N/A		N/A
	Location Factor **(see Note 4)**		N/A		N/A
	Engineering & Geotechnical		10%		$ 21,590
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 292,000**

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Note 5 Note that for the above UNIT RATE FORMAT General Contractor, Fees, Overheads and Profit are included in each unit cost.

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
109	**Town Hall Plaza**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 11,000	1	$ 11,000
1.2	Traffic Control	LS	$ 12,000	1	$ 12,000
2	**SOIL**				
2.1	Excavation & Reuse Existing Soil (Cut & Fill)	m3	$ 20	50	$ 1,000
3	**REMOVALS / RELOCATIONS**				
3.1	Sawcut & Remove Existing Asphalt	m2	$ 52	400	$ 20,800
3.2	Remove Existing Concrete Curb	m	$ 40	60	$ 2,400
4	**CONSTRUCTION COSTS**				
4.1	Pavement Markings	m	$ 11	100	$ 1,148
	Road Resurfacing				
4.2	Supply and Place Type 2 Gravel	m3	$ 60	100	$ 6,004
4.3	Supply and Place Type 1 Gravel	m3	$ 65	50	$ 3,246
4.4	Supply and Place Brick Paver	m2	$ 250	300	$ 75,000
	Sidewalks and Plaza				
4.5	Supply and Place Type 2 Gravel	m3	$ 60	150	$ 9,006
4.6	Supply and Place Type 1 Gravel	m3	$ 65	100	$ 6,492
4.7	Supply and Place Brick Paver	m2	$ 250	700	$ 175,000
5	**TRAFFIC SIGNS**				
5.1	Supply and Install Regulatory and Warning Signs	ea	$ 2,000	3	$ 6,000
6	**BOLLARDS**				
6.1	Supply and Install Permenant Bollards	ea	$ 1,200	14	$ 16,800
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 345,896**
6	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**		15%		$ 51,884
	Construction Contingency (**see Note 2)**		10%		$ 34,590
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**		N/A		N/A
	Location Factor **(see Note 4)**		N/A		N/A
	Engineering & Geotechnical		10%		$ 34,590
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 467,000**

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Note 3 The Escalation/Inflation is provided for anticipated increases in construction costs from the time budget to time of Tender
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Note 5 Note that for the above UNIT RATE FORMAT General Contractor, Fees, Overheads and Profit are included in each unit cost.

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
110	**Main St Sidewalk on the North Side from Town Hall to Clearway St**				
1					
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 9,000	1	$ 9,000
1.2	Traffic Control	LS	$ 4,000	1	$ 4,000
2	**SOIL**				
2.1	Excavation & Reuse Existing Soil (Cut & Fill)	m3	$ 20	120	$ 2,400
3	**REMOVALS / RELOCATIONS**				
3.1	Sawcut & Remove Existing Asphalt	m2	$ 52	250	$ 13,000
4	**CONSTRUCTION COSTS**				
	Concrete Curb				
4.1	Supply and Place Concrete Curb	m	$ 120	500	$ 60,000
	Sidewalks				
4.2	Supply and Place Type 2 Gravel	m3	$ 60	225	$ 13,500
4.3	Supply and Place Type 1 Gravel	m3	$ 70	135	$ 9,450
4.4	Supply and Place Pre-Cast Concrete Curbstone	m2	$ 100	900	$ 90,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 201,350**
5	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**		15%		$ 30,203
	Construction Contingency (**see Note 2)**		10%		$ 20,135
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**		N/A		N/A
	Location Factor **(see Note 4)**		N/A		N/A
	Engineering & Geotechnical		10%		$ 20,135
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 272,000**

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OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
111	**Downtown Visitor Parking**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 12,000	1	$ 12,000
1.2	Environment Protection Silt Fencing	m	$ 12	180	$ 2,160
2	**SOIL**				
2.1	Excavation & Reuse Existing Soil (Cut & Fill)	m3	$ 20	500	$ 10,000
3	**REMOVALS / RELOCATIONS**				
3.1	Clearing and Grubbing	m2	$ 5	2,800	$ 14,000
4	**CONSTRUCTION COSTS**				
4.1	Pavement Markings	m	$ 11	600	$ 6,888
	Road Surfacing				
4.2	Supply and Place Type 2 Gravel	m3	$ 60	600	$ 36,024
4.3	Supply and Place Type 1 Gravel	m3	$ 65	400	$ 25,968
4.4	Supply and Place Asphalt Road (2 Lifts 75mm + 50mm)	m2	$ 95	2,600	$ 246,272
5	**TRAFFIC SIGNS**				
5.1	Supply and Install Regulatory and Warning Signs	ea	$ 1,000	4	$ 4,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 357,312**
6	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**		15%		$ 53,597
	Construction Contingency (**see Note 2)**		10%		$ 35,731
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**		N/A		N/A
	Location Factor **(see Note 4)**		N/A		N/A
	Engineering & Geotechnical		10%		$ 35,731
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 483,000**

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Form CBCL .035 Rev 2

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
112	**Main St/Pleasant St Intersection Reconfiguration (3-Way Stop)**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 3,000	1	$ 3,000
1.2	Traffic Control	LS	$ 4,000	1	$ 4,000
2	**CONSTRUCTION COSTS**				
2.1	Pavement Markings	m	$ 7	940	$ 6,580
3	**TRAFFIC SIGNS**				
3.1	Supply and Install Regulatory and Warning Signs	Unit	$ 1,000	9	$ 9,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 22,580**
4	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**	15%			$ 3,387
	Construction Contingency (**see Note 2)**	10%			$ 2,258
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**	N/A			N/A
	Location Factor **(see Note 4)**	N/A			N/A
	Engineering & Geotechnical	10%			$ 2,258
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 31,000**

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Form CBCL .035 Rev 2

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
113	**Cherry Lane One-Way Reconfiguration**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 3,000	1	$ 3,000
1.2	Traffic Control	LS	$ 4,000	1	$ 4,000
2	**CONSTRUCTION COSTS**				
2.1	Pavement Markings	m	$ 20	15	$ 300
3	**TRAFFIC SIGNS**				
3.1	Supply and Install Regulatory and Warning Signs	ea	$ 1,000	7	$ 7,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 14,300**
4	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**		15%		$ 2,145
	Construction Contingency (**see Note 2)**		10%		$ 1,430
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**		N/A		N/A
	Location Factor **(see Note 4)**		N/A		N/A
	Engineering & Geotechnical		10%		$ 1,430
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 20,000**

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Form CBCL .035 Rev 2

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTI	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
114A	**Orchard St Closure (Permanent)**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 3,000	1	$ 3,000
1.2	Traffic Control	LS	$ 4,000	1	$ 4,000
2	**REMOVALS / RELOCATIONS**				
2.1	Sawcut & Remove Existing Asphalt	m2	$ 100	50	$ 5,000
2.2	Remove Existing Concrete Curb	m	$ 50	10	$ 500
3	**CONSTRUCTION COSTS**				
	Concrete Curb				
3.1	Supply and Place Concrete Curb	m	$ 120	15	$ 1,800
4	**Regrading & Landscaping**				
4.1	Import Borrow Backfill	m3	$ 25	10	$ 250
4.2	150mm Thick Topsoil and Sod	m2	$ 14	50	$ 700
5	**TRAFFIC SIGNS**				
5.1	Supply and Install Regulatory and Warning Signs	ea	$ 1,000	2	$ 2,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 17,250**
6	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**	15%			$ 2,588
	Construction Contingency (**see Note 2)**	10%			$ 1,725
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**	N/A			N/A
	Location Factor **(see Note 4)**	N/A			N/A
	Engineering & Geotechnical	10%			$ 1,725
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 24,000**

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OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTI	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
114A	**Orchard St Closure (Seasonal)**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 500	1	$ 500
2	**PLANTERS**				
2.1	Supply and Install Rectangular Planter Boxes	ea	$ 175	4	$ 700
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 1,200**
3	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**	N/A			N/A
	Construction Contingency (**see Note 2)**	10%			$ 120
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**	N/A			N/A
	Location Factor **(see Note 4)**	N/A			N/A
	Engineering & Geotechnical	N/A			N/A
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 1,400**

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Form CBCL .035 Rev 2

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
115	**Main St East Side Sidewalk**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 10,000	1	$ 10,000
1.2	Traffic Control	LS	$ 16,000	1	$ 16,000
2	**SOIL**				
2.1	Excavation & Reuse Existing Soil (Cut & Fill)	m3	$ 20	50	$ 1,000
3	**REMOVALS / RELOCATIONS**				
3.1	Sawcut & Remove Existing Asphalt	m2	$ 52	118	$ 6,110
4	**CONSTRUCTION COSTS**				
	Concrete Curb				
4.1	Supply and Place Concrete Curb	m	$ 120	235	$ 28,200
	Sidewalks				
4.2	Supply and Place Type 2 Gravel	m3	$ 60	100	$ 6,000
4.3	Supply and Place Type 1 Gravel	m3	$ 70	70	$ 4,900
4.4	Supply and Place Pre-Cast Concrete Curbstone	m2	$ 100	423	$ 42,300
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 114,510**
6	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**		15%		$ 17,177
	Construction Contingency (**see Note 2)**		10%		$ 11,451
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**		N/A		N/A
	Location Factor **(see Note 4)**		N/A		N/A
	Engineering & Geotechnical		10%		$ 11,451
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 155,000**

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OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
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PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
116	**Route 3/Oakland Rd Recofiguration (All-Way Stop)**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 3,000	1	$ 3,000
1.2	Traffic Control	LS	$ 4,000	1	$ 4,000
2	**CONSTRUCTION COSTS**				
2.1	Pavement Markings	m	$ 7	1,175	$ 8,225
5	**TRAFFIC SIGNS**				
5.1	Supply and Install Regulatory and Warning Signs	Unit	$ 1,000	12	$ 12,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 27,225**
6	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**	15%			$ 4,084
	Construction Contingency (**see Note 2)**	10%			$ 2,723
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**	N/A			N/A
	Location Factor **(see Note 4)**	N/A			N/A
	Engineering & Geotechnical	10%			$ 2,723
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 37,000**

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OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

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PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
117	**Parking Management Plan**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 3,000	1	$ 3,000
2	**TRAFFIC SIGNS**				
2.1	Supply and Install Regulatory and Warning Signs	Unit	$ 1,000	20	$ 20,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 23,000**
3	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**	15%			$ 3,450
	Construction Contingency (**see Note 2)**	10%			$ 2,300
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**	N/A			N/A
	Location Factor **(see Note 4)**	N/A			N/A
	Engineering & Geotechnical	**10%**			**$ 2,300**
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 32,000**

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Form CBCL .035 Rev 2

OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
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PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
118	**Signed Pedestrian Crosswalk at Rebecca's Restaurant**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Traffic Control	LS	$ 1,600	1	$ 1,600
2	**CONSTRUCTION COSTS**				
2.1	Pavement Markings	m	$ 11	250	$ 2,750
3	**TRAFFIC SIGNS**				
3.1	Supply and Install Regulatory and Warning Signs	ea	$ 1,000	4	$ 4,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 8,350**
4	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**		15%		$ 1,253
	Construction Contingency (**see Note 2)**		10%		$ 835
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**		N/A		N/A
	Location Factor **(see Note 4)**		N/A		N/A
	Engineering & Geotechnical		N/A		N/A
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 11,000**

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OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
119	**Fauxburg Road Widening**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Mobilization, Bonds, Insurance, Pre-Construction Management	LS	$ 27,000	1	$ 27,000
1.2	Traffic Control	LS	$ 24,000	1	$ 24,000
2	**SOIL**				
2.1	Excavation & Reuse Existing Soil (Cut & Fill)	m3	$ 20	1,300	$ 26,000
3	**REMOVALS / RELOCATIONS**				
3.1	Clearing and grubbing	m2	$ 5	3,500	$ 17,500
3.2	Sawcut & Remove Existing Asphalt	m2	$ 100	350	$ 35,000
4	**CONSTRUCTION COSTS**				
4.1	Pavement Markings	m	$ 7	3,500	$ 24,500
	Concrete Curb				
4.2	Supply and Place Concrete Curb	m	$ 105	1,800	$ 189,000
	Road Resurfacing				
4.3	Supply and Place Type 2 Gravel	m3	$ 60	400	$ 24,000
4.4	Supply and Place Type 1 Gravel	m3	$ 70	200	$ 14,000
4.5	Supply and Place Asphalt Road (2 Lifts 75mm + 50mm)	m2	$ 100	1,320	$ 132,000
	Shared Pathway				
4.6	Supply and Place Type 2 Gravel	m3	$ 60	400	$ 24,000
4.7	Supply and Place Type 1 Gravel	m3	$ 70	270	$ 18,900
4.8	Supply and Place Pre-Cast Concrete Curbstone	m2	$ 100	1,760	$ 176,000
5	**TRAFFIC SIGNS**				
5.1	Supply and Install Regulatory and Warning Signs	ea	$ 1,000	4	$ 4,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 735,900**
6	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**	15%			$ 110,385
	Construction Contingency (**see Note 2)**	10%			$ 73,590
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**	N/A			N/A
	Location Factor **(see Note 4)**	N/A			N/A
	Engineering & Geotechnical	10%			$ 73,590
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 994,000**

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OPINION OF PROBABLE CONSTRUCTION COSTS

Transportation Plan
Town of Mahone Bay
Class D Cost Estimates

DATE:	April 15, 2020
CBCL FILE No.:	201061.00
PREPARED BY:	Abdullah Khayyal
EST. DESCRIPTION:	Class D

No.	DESCRIPTION	UNIT	UNIT COST	EST. QTY.	TOTAL
120	**Pedestrian Crosswalk at the Lutheran Church**				
1	**Mod, Demob, Bonds, Insurance, Pre-Construction Management**				
1.1	Traffic Control	LS	$ 1,600	1	$ 1,600
2	**CONSTRUCTION COSTS**				
2.1	Pavement Markings	m	$ 11	250	$ 2,750
3	**TRAFFIC SIGNS**				
3.1	Supply and Install Regulatory and Warning Signs	ea	$ 1,000	4	$ 4,000
	SUB-TOTAL - DIRECT & INDIRECT CONSTRUCTION COSTS				**$ 8,350**
4	**CONTINGENCIES and ALLOWANCES**				
	Design Development Contingency **(see Note 1)**	15%			$ 1,253
	Construction Contingency (**see Note 2)**	10%			$ 835
	Escalation / Inflation (Based on 2018 Dollars) **(see Note 3)**	N/A			N/A
	Location Factor **(see Note 4)**	N/A			N/A
	Engineering & Geotechnical	N/A			N/A
	TOTAL CONSTRUCTION COSTS with CONTINGENCIES, HST NOT INCLUDED				**$ 11,000**

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