



Town of Wasaga Beach Constance Boulevard Drainage Improvements Schedule 'C' Municipal Class Environmental Assessment Addendum

Public Information Centre

June 13, 2024

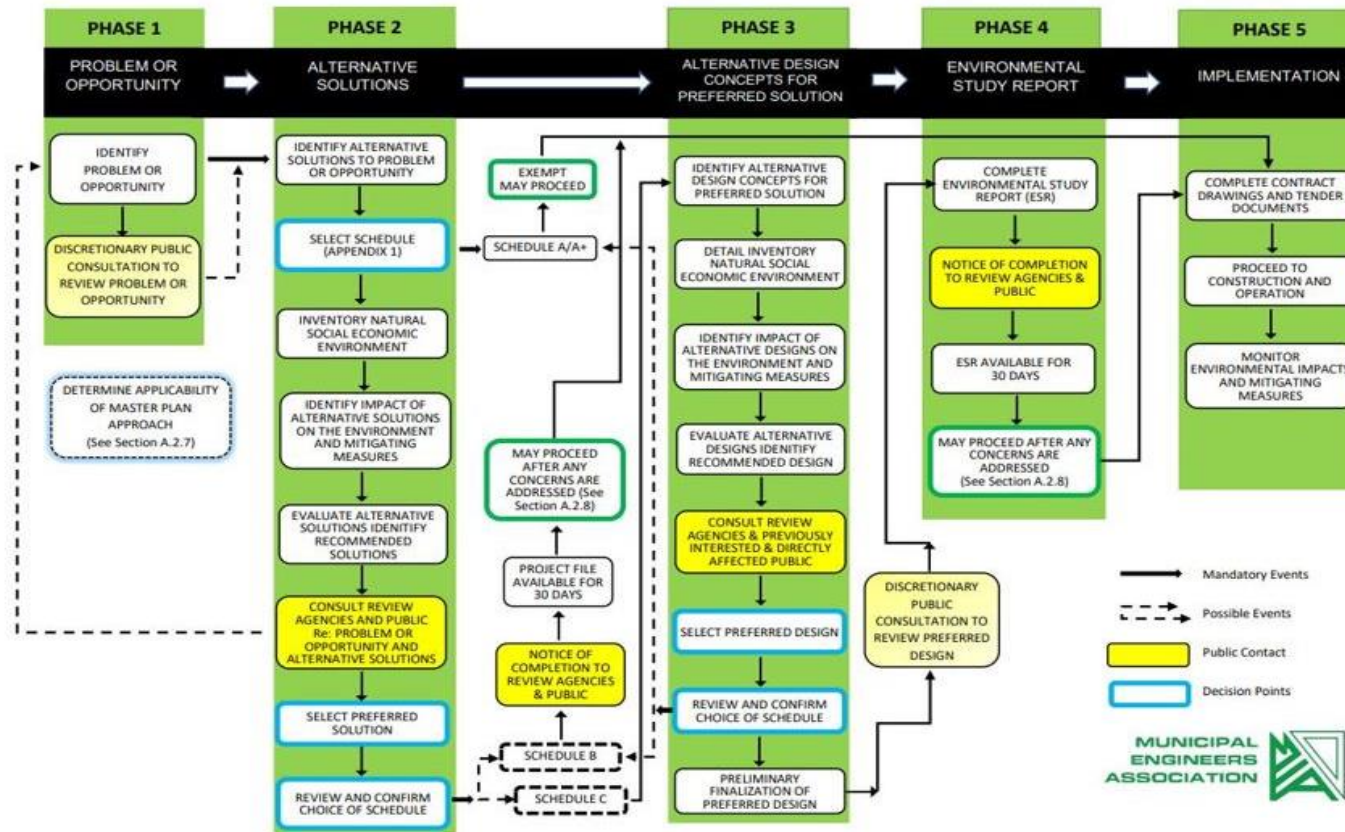


Agenda

1. Purpose of Public Information Centre
2. Project Overview
3. Results of MCEA Phase 2 Evaluation
4. Phase 3 Preferred Design Alternative
5. Additional Alternative Solution
6. Design Concept of New Alternative Solution
7. Evaluation of Design Concepts
8. New Preferred Design
9. Next Steps

Purpose

The purpose of this PIC is to present various design concepts that have been developed to implement the Preferred Solution. Consultation is an important part of the Class Environmental Assessment process, public input is encouraged and will be considered throughout the project process.



Project Overview

- The Town of Wasaga Beach undertook a Municipal Class Environmental Assessment (Class EA) to identify a suitable solution for reducing the probability of flooding events in the area of Constance Boulevard and Thomas Street to Bayswater Drive, particularly in consideration of snow melt occurrences as well as increased rainfall intensities expected due to climate change.



- The current capacity of the side road ditch along Constance Boulevard in this area is insufficient to contain larger stormwater events and results in flooding.
- The study area (outlined roughly in red) is focused around the corridors of Thomas Street, Bayswater Drive, and the segment of Constance Boulevard that runs parallel to the shoreline of Georgian Bay.

*The Town is undertaking a 2D hydraulic model specific to the area of George Ave., Marilyn Ave. South, and Robert St. South. This undertaking (area boundary outlined roughly in yellow and beyond) is a separate project and being conducted under the Drainage Master Plan.

Project Overview

- The Class EA process requires the evaluation of potential alternative solutions and design concepts so as to select a suitable approach that will address the problem or opportunity, but also keep impacts to a minimum.
- The Addendum report contains details of the Preferred Solution and Preferred Design Alternative chosen during the MCEA process, the newly considered solution, and an evaluation of the environmental implications of this alternative compared to the original preferred solution. Various background field studies were completed to determine existing environmental conditions to assist with identify any potential impacts from the alternative solutions proposed.
 - Cultural Heritage Resource Assessment
 - Stage 1 Archaeological Assessment
 - Natural Heritage Preliminary Constraints Investigation
- During Phase 4 of the MCEA, an Environmental Study Report (ESR) was published that documented the Class EA process for this project and included the selected Preferred Design Solution and any mitigation measures. The ESR was made available for public and stakeholder comment.
- The Notice of Completion, marking the end of Phase 4 of the MCEA, was issued on December 21, 2022.

Project Overview

WASAGA BEACH

Services & Payments Home & Property Explore & Discover Business & Development **Town & Government**

Town Government

Accessibility Services Forms Agendas and Minutes
Applications, Licences and Permits Marriage Services Advisory Committee Meeting Calendar
Bid Opportunities Municipal By-Law Enforcement Committees and Boards
Budget and Finances Municipal Initiatives and Projects Council
By-laws and Policies News Releases, Notices and FAQs Council Meeting Calendar
Clerk's Office Office of the CAO Delegations
Climate Action Operations and Customer Service Elections
Contact Us Property Taxes and Utilities Term of Council Priorities
Departments and Divisions Studies Mission and Vision Statement
Development Charges Town-Owned Properties for Sale Office of the Mayor
Employment and Volunteering Water and Wastewater Proclamations
Fees and Charges Wasagas Finest Citizen

Departments and Divisions

Home / Town & Government / Town / Departments and Divisions

Administration Building and Development Standards

Operations and Customer Service Division Economic Development and Tourism

Fire and Emergency Services Human Resources

Municipal By-Law Enforcement **Municipal Engineering Services**

Related Information

Engineering Standards Engineering Review Fee Policy Fees and Charges Construction Notices Construction Issue Complaints **Town Studies** Nottawasaga River Shorewall Standard

- Organizational Staffing and Customer Service Delivery Review.
- Asset Management Plan
- Economic Development
- Engineering
- Environmental Assessments & Public Works**

Bay Sands Area Storm Drainage and Outlet Improvements Class EA

- Bay Sands Class - Report
 - Appendices

Constance Boulevard Drainage Improvements Class EA

- ESR Report
- Notice
- Recording
- Slides
- Notice of Completion
- Notice of Addendum
- Addendum Report**

- A digital copy of the Addendum report is available on the Town of Wasaga Beach's website at www.wasagabeach.com

Results of MCEA Phase 2 Evaluation

- The alternative solutions developed for consideration under Phase 2 to address the problem or opportunity were:
 - Option 1 - “Do Nothing”/Status Quo
 - **Option 2 - Create New Outlet to the Bay through Property at 18 Constance Boulevard**
 - Option 3 - Increase Capacity of Constance Boulevard Ditch to Outlet North of Bayswater Drive
 - Option 4A - Redirect Drainage to Other Private Lands
 - Option 4B - Redirect Drainage to Other Private Lands
- Each of the alternatives were evaluated based on their potential impact to the study area environment (physical, natural, cultural, and socio-economic).
- Given the results of the evaluation and review of input received, Option 2 was selected as the Preferred Solution.



Phase 3 Preferred Design Alternative

As part of Phase 3 of the Class EA process, several design concepts were developed for consideration to implement the Preferred Solution.

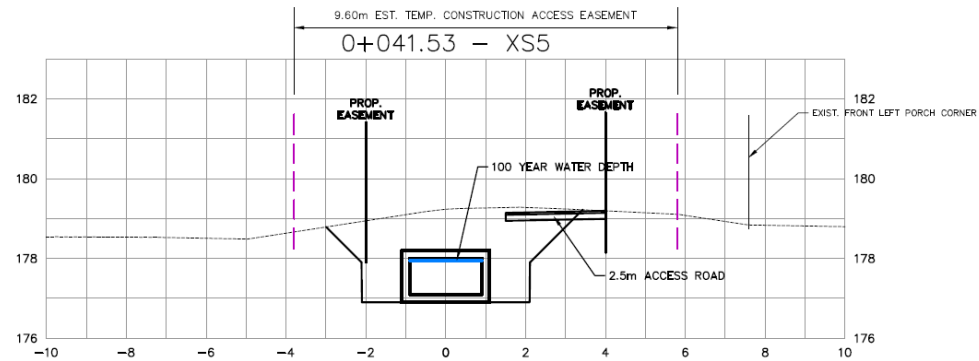
- Alternative 1 – Skewed Alignment with a Culvert Extension
- Alternative 2 – Skewed Alignment with Open Channel, Slope of 3:1
- Alternative 3 – Straight Alignment with Culvert Extension
- Alternative 4 – Skewed Alignment with Open Channel, Slope of 2:1
- Alternative 5 – Skewed Alignment with Open Channel and Retaining Wall, Slope of 2:1

Alternative 1 – Skewed Alignment with a Culvert Extension

- A concrete culvert installed under Constance Boulevard. The current culvert under Thomas Street that outlets to the Constance Boulevard ditch will remain in place.
- New concrete box culvert extension 1800 x 900mm (width and height).
- Access road for maintenance would be adjacent to the culvert extension.
- Total easement width required would be approximately 9.6m for construction, with the possibility post construction the easement width reduced 6m.

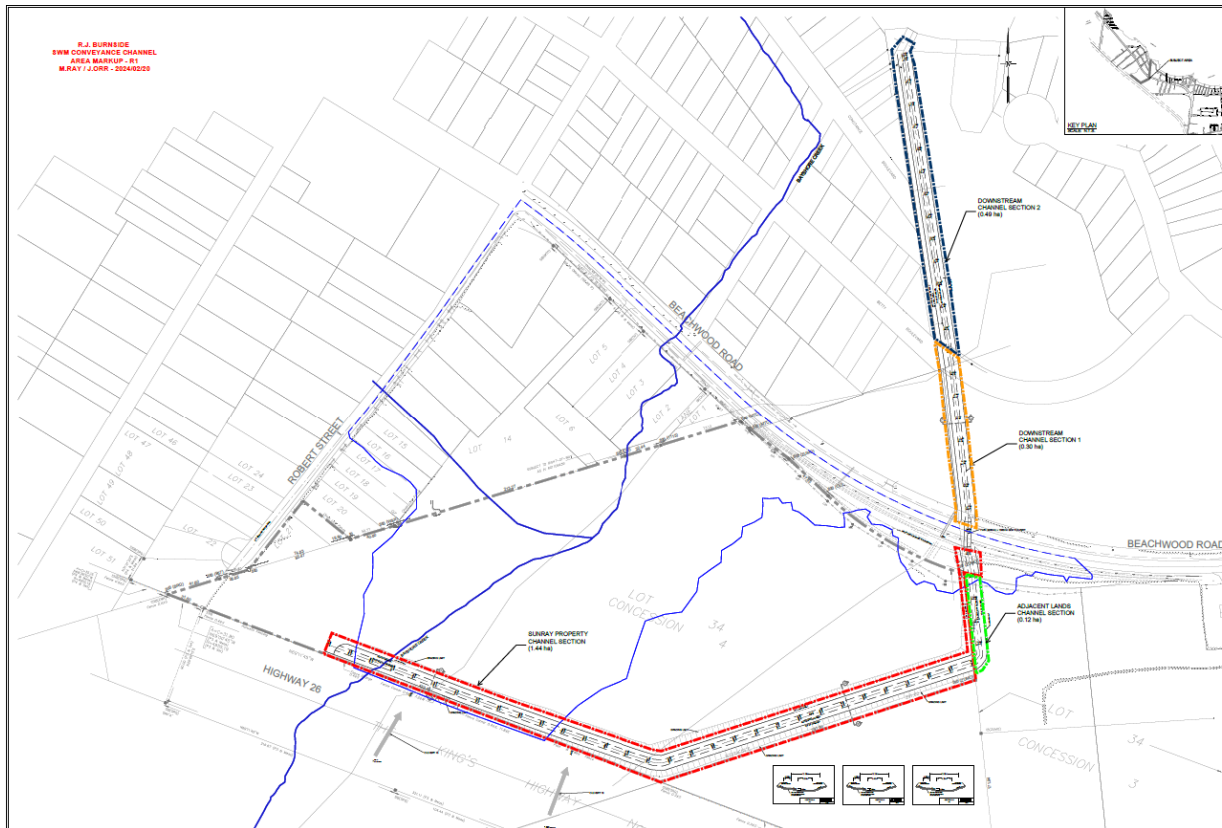
Phase 3 Preferred Design Alternative

- The results of the initial evaluation identified the preliminary preferred design as **Alternative 1: Skewed Alignment with a Culvert Extension**



Additional Alternative Solution

Option 5 – Create New Channel to Redirect Drainage from Bayswater Creek to the West End Public Works Depot and Water Tower Outlet Channel.

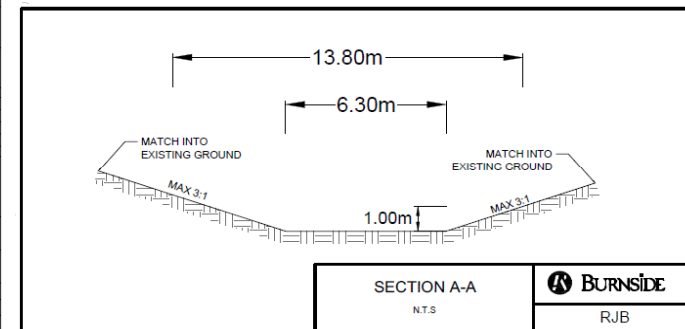
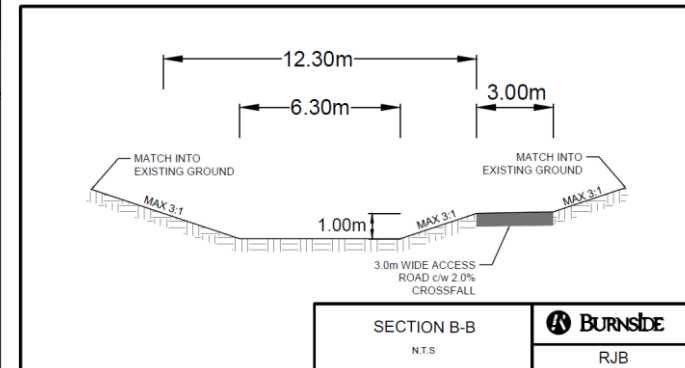
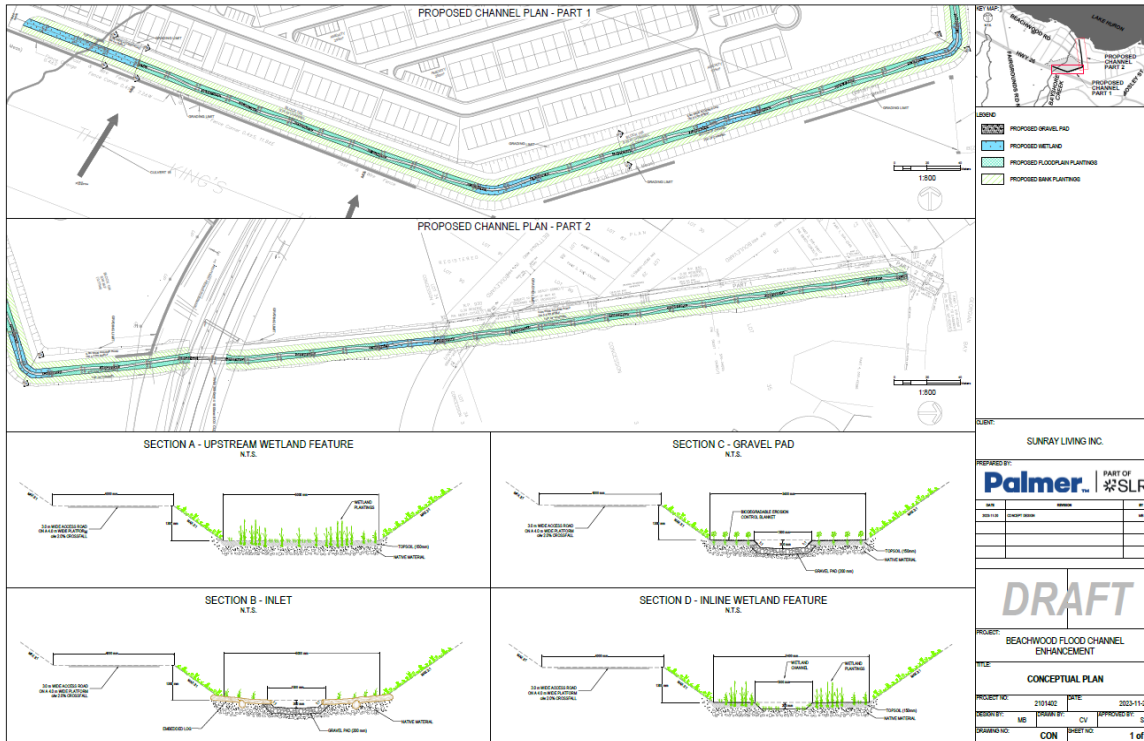


Design Concept

- A 1.1 km channel extending from west of Bayswater Creek along the rear property line of 8859 Beachwood Road will merge with the proposed channel for the West End Public Works Depot and Water Tower project, about 80 m south of Beachwood Road, and extend to Georgian Bay.
- The dimensions of the channel are expected to consist of varying bankfull width of approximately 18 to 19m including a 4m access road, and flat-bottom configuration ranging from 4.25 to 5m wide, including a 1.5 m wide sinuous low-flow channel, ranging from approximately 0.2 to 0.3m deep, with additional wetland features and 3:1 side slope.
- The channel profile varies from a profile grade of 0.69 to 1.52% along the entire length.
- Replacement of the existing crossing culvert under Beachwood Road with twin 3000mm span x 1500mm rise concrete box culverts.
- Flow depths in the channel are expected to range from 1.2 to 1.3 m deep along the length of the outlet, accounting for flow within the low flow portion.

Design Concept

- The alignment of the proposed channel for this option flows east in proximity to Highway 26, and then north into the proposed West Depot Channel. The West Depot Channel will flow north and outlet into Georgian Bay at a new outlet location along the shoreline.



Evaluation of Design Concepts

- MCEA preferred design and new Alternative design were evaluated based on their potential impact to the study area environment (physical, natural, cultural, and socio-economic).
- The evaluation is presented in a table or matrix to provide a simplified, visual comparison.

Legend:

Positive	Positive Neutral	Neutral	Negative Neutral	Negative
P	PN	O	NN	N

- Green represents the most preferred option, as it will address the key concerns, but create the least amount of environmental impact.
- Red is indicative of a least preferred option as it has a higher potential to impact the environment.
- A blank space indicates that the impact is considered neutral

Evaluation of Design Concepts

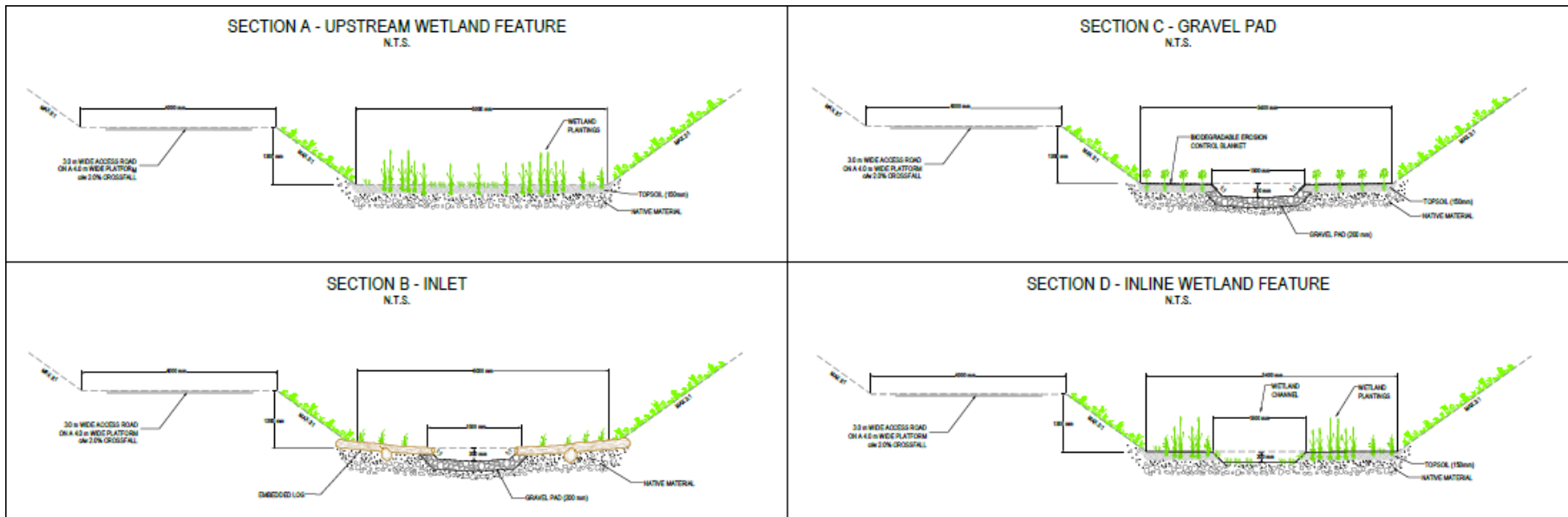
EVALUATION CRITERIA	OPT 2	OPT 5	DESCRIPTION OF IMPACTS
PHYSICAL ENVIRONMENT			
Increases Capacity to Reduce Flooding	PN	P	Option 2 provides the creation of a new outlet to enhance capacity. Option 5 addresses the overall flooding issue in addition to Thomas Constance and can effectively convey the design storm, offering a comprehensive solution to the stormwater management challenges.
Constructability	PN	P	Option 2 is deemed feasible for construction but is located within the existing Municipal Road allowance and traverses an existing residential property. Conversely, Option 5 presents an advantage over Option 2 since the alignment is primarily through undeveloped properties and follows the proposed drainage outlet channel for the Public Works Depot and Water Tower site (which has already received approvals), thereby streamlining the implementation process.
Erosion Potential	P	P	Increased erosion is possible where the conveyance route turns. Both Option 2 and Option 5 offer a direct flow pathway without the presence of multiple 90-degree bends or sharper turns at road intersections.
Sufficient Grade	P	P	Higher grades within the conveyance route facilitate greater capacity. Option 2 follows the natural contours in the area over the shortest pathway, presenting an optimal choice for grading purposes. Additionally, Option 5 features a large channel ensuring efficient conveyance and alignment with natural topography.
Required Footprint	P	PN	Option 2 demonstrates commendable efficiency in addressing existing capacity issues, providing an optimal cross-section for improved performance. However, while Option 5 offers substantial capacity enhancements, its implementation requires a larger footprint due to the construction of a larger channel, presenting a potential drawback in terms of land usage.
Expected Performance	PN	P	Option 5 presents a notable advantage with its extensive coverage, offering ample space for efficient maintenance activities. Its superior capacity compared to Option 2 enhances its effectiveness in managing flow diversion. Conversely, while Option 2 demonstrates efficiency, its limited capacity may hinder its ability to adequately address the required flow diversion, potentially impacting overall effectiveness.
Impacts to Existing Utilities	NN	PN	Option 2 involves proposed work on private property, potentially impacting private utility services. Conversely, Option 5 does not pose any risk to private utility services, providing a distinct advantage in terms of project implementation.
NATURAL ENVIRONMENT			
Terrestrial Vegetation (Includes SAR)	NN	N	The execution of Option 2 may involve the removal of trees, subject to the dimensions of the channel. Conversely, Option 5, characterized by a larger channel size, is anticipated to necessitate a more extensive removal of trees compared to Option 2.
Wildlife (Includes SAR)	PN	PN	The woodlot to the east of the project area contains potential habitat for endangered bats. Adherence to the timing restriction window for tree removal under proposed Options 2 and 5 will mitigate impacts to individual SAR bats.
Fish Habitat (Includes SAR)	PN	N	While the alignment of Option 2 currently doesn't intersect with fish habitat constraints, both options entail fisheries considerations. Altering or eliminating the tributary within the current alignment could result in the harmful alteration, disruption, or destruction of fish habitat. Option 5 is expected to permanently eliminate 360 linear meters of indirect fish habitat and permanently alter 520 linear meters of direct Coldwater fish habitat.
Ground Water	O	O	The project area is within a highly vulnerable aquifer zone. Further geotechnical studies will be conducted during the detailed design stage. It is not anticipated that any of the work proposed under the options would impact ground water conditions. There are approximately 10 residential wells located within the study area. Residents are connected to municipal water.

Evaluation of Design Concepts

EVALUATION CRITERIA	OPT 2	OPT 5	DESCRIPTION OF IMPACTS
CULTURAL & SOCIAL ENVIRONMENT			
Noise	NN	NN	Options 2 and 5 would have temporary noise disturbances due to construction activity. There are numerous residential dwellings in close proximity.
CULTURAL & SOCIAL ENVIRONMENT			
Archaeological	NN	NN	The work proposed under Option 2 has the potential to impact archaeological resources. Option 5 involves an area comprising a mixture of areas with archaeological potential and previously assessed lands of no further concern. However, further field investigation is required to confirm.
Cultural and Built Heritage	NN	NN	The beach/shoreline is identified as a Cultural Heritage Landscape (CHL), and the construction of a new channel outlet proposed under Options 2 and 5 may have a negative impact on the CHL.
Property Impacts	N	NN	Option 2 would have major property impacts to construct a new outlet. The channel can be placed to allow for future severance of this lot and maximizing the development potential while providing a positive outlet. Option 5 will entail impacts associated with the construction of a larger channel adjacent to future development lands, commercial businesses, and a new culvert crossing under Beachwood Road, which is owned by MTO.
Climate Change	N	P	Option 2 features a smaller channel compared to Option 5, resulting in less capacity to convey larger storms. Conversely, Option 5 entails a larger channel capable of accommodating larger storm events and possessing greater capacity to address climate change considerations
ECONOMIC ENVIRONMENT			
Construction Costs	NN	PN	The construction cost associated with Option 2 is lower than that of Option 5. However, Option 2 is funded solely under the Town's Capital Projects budgets, whereas Option 5 is funded by various sources including development charges, cost sharing with the developers, and the Town's Capital Projects budget.
Operating and Maintenance Costs	NN	PN	Option 2 includes a culvert that necessitates maintenance. The Town is responsible for maintaining the channel to prevent flooding issues, and the channel itself is smaller, making it difficult for maintenance purposes. Option 5 will feature a larger open channel, with direct access which is easier to clean and offers better operational efficiency.
TOTALS			
	PN	P	The Options have been ranked using the evaluation of all criteria to select a suitable approach that will address the problem/opportunity but also keep impacts to a minimum.

New Preferred Design

- The preferred solution for the Addendum is to Create New Channel to Redirect Drainage from Bayswater Creek to the West End Public Works Depot and Water Tower Outlet Channel.
- The estimated cost for the new preferred solution is \$1,143,790.



Next Steps

- All PIC material will be available on the Engineering Services – Environmental Assessment Studies page of www.wasagabeach.com
- The Town intends to proceed with the construction of this project in 2024.
- The Project Team will receive comments for consideration until **June 30, 2024**. The project team will review the input received, and the new information will be added to the Addendum report.

Comments

We invite you to provide any comments in writing via email.

All comments are to be submitted by **June 30, 2024** to one of the following members of the Project Team:

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Thank you for your attendance at this meeting!
We appreciate your participation.

MUNICIPAL FREEDOM OF INFORMATION & PROTECTION OF PRIVACY ACT

Comments and information regarding this project are being collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act for the purpose of meeting environmental assessment requirements. With the exception of personal information, all comments received will become part of the public record.