Exploring the Landscape of Post-Environmental Assessment Support

Ontario Association for Impact Assessment Conference

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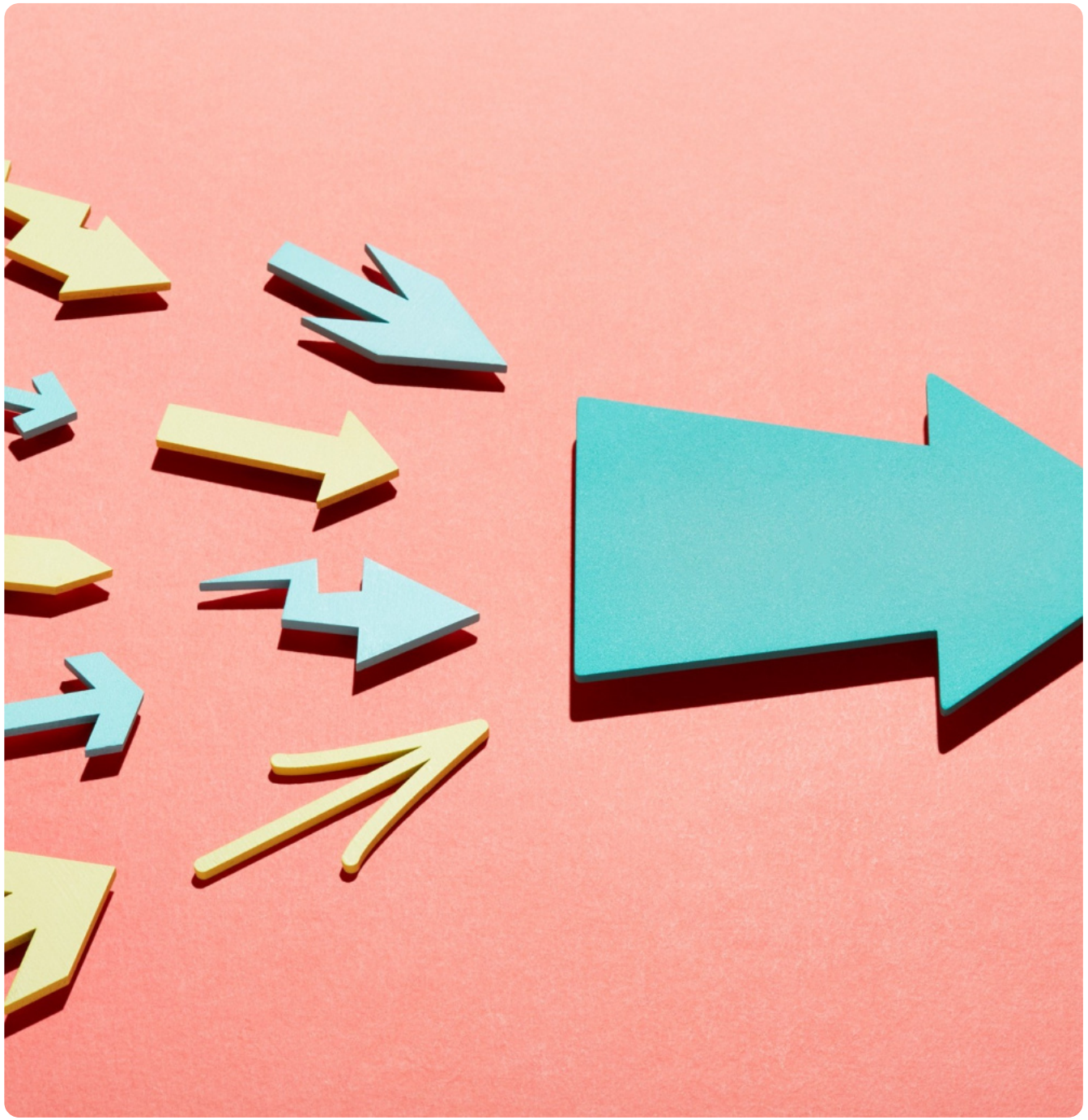
October 23, 2024



About Me

David Kielstra, MA, MCIP, RPP

Environmental Planner at Stantec for the past 7 years

14 years in Environmental Consulting & Infrastructure Sector

Focus areas:

- Infrastructure Environmental Assessments – highways, interchanges, water & sanitary systems
- Indigenous consultation
- Public engagement for EAs and Heritage Conservation District projects
- Socio-economic impact assessment

Stantec Values

We put people first

We are better together

We do what is right

We are driven to

Objectives

The Ontario EA policy ecosystem has undergone a period of tremendous change in 2023-2024.

This presentation will help us:

- **Recognize** the changing landscape of EAs in Ontario, and adapting to the new policy landscape
- Better **align** our mitigation measures to be more useful within the detailed design process
- Use **adaptive management concepts** to re-frame how to obtain data necessary for permits and approvals

Agenda

1. Background for Recent EA changes
2. The EA is done – end of the road, right?
3. Do your Commitments Make Sense?
4. Commitment Pitfalls
5. Using Mitigation Measures Effectively
6. What is Adaptive Management?
7. Post EA Activities
8. Navigating Detailed Design without an EA
9. Closing/ Next Steps

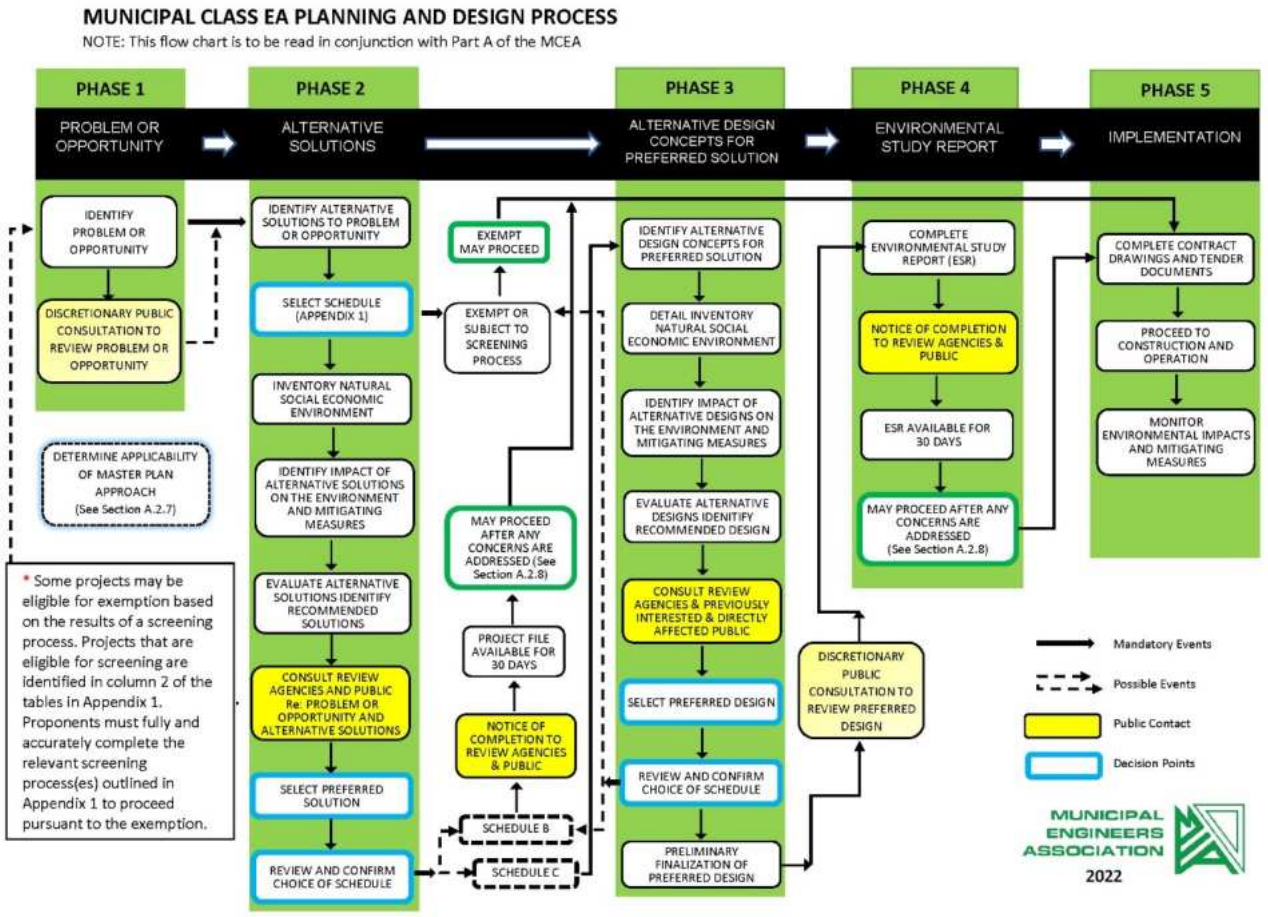
Moving to a Project List Approach…

- MECP launched a major revision of the EA process in Ontario in February 2024 by its effort to move to a project list approach under the *Environmental Assessment Act*.
- Seven Class Environmental Assessments (Class EAs) were also amended
    - Freeways, expressways, and certain electricity transmission lines and stations now are subject to the streamlined process in a Class EA.
    - Amendments seek to better align with the EAA and other legislation.
- The seven Class EAs will continue to apply

Municipal Class EA 2024 Update

Changes to the Municipal Class EA

- Updates to align with the EAA changes
- Schedule B and C projects still require the typical MCEA phases

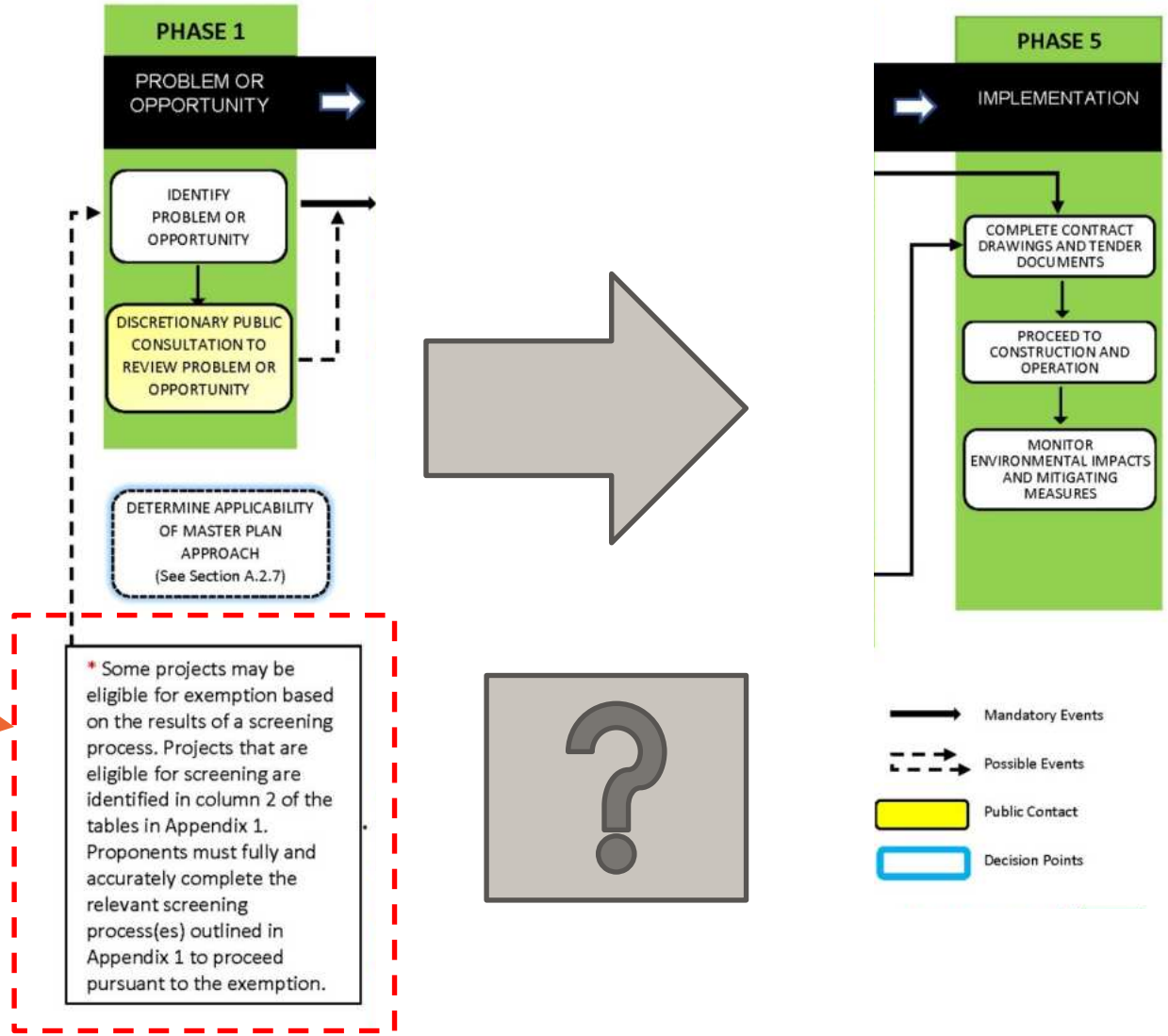


Municipal Class Environmental Assessment and Design Process (2023 and 2024 MEA guide)

Municipal Class EA 2024 Update

Changes to the Municipal Class EA

- Schedule B and C projects still require the typical MCEA phases
- More EA exempt projects
- More emphasis on completing required work in detailed design



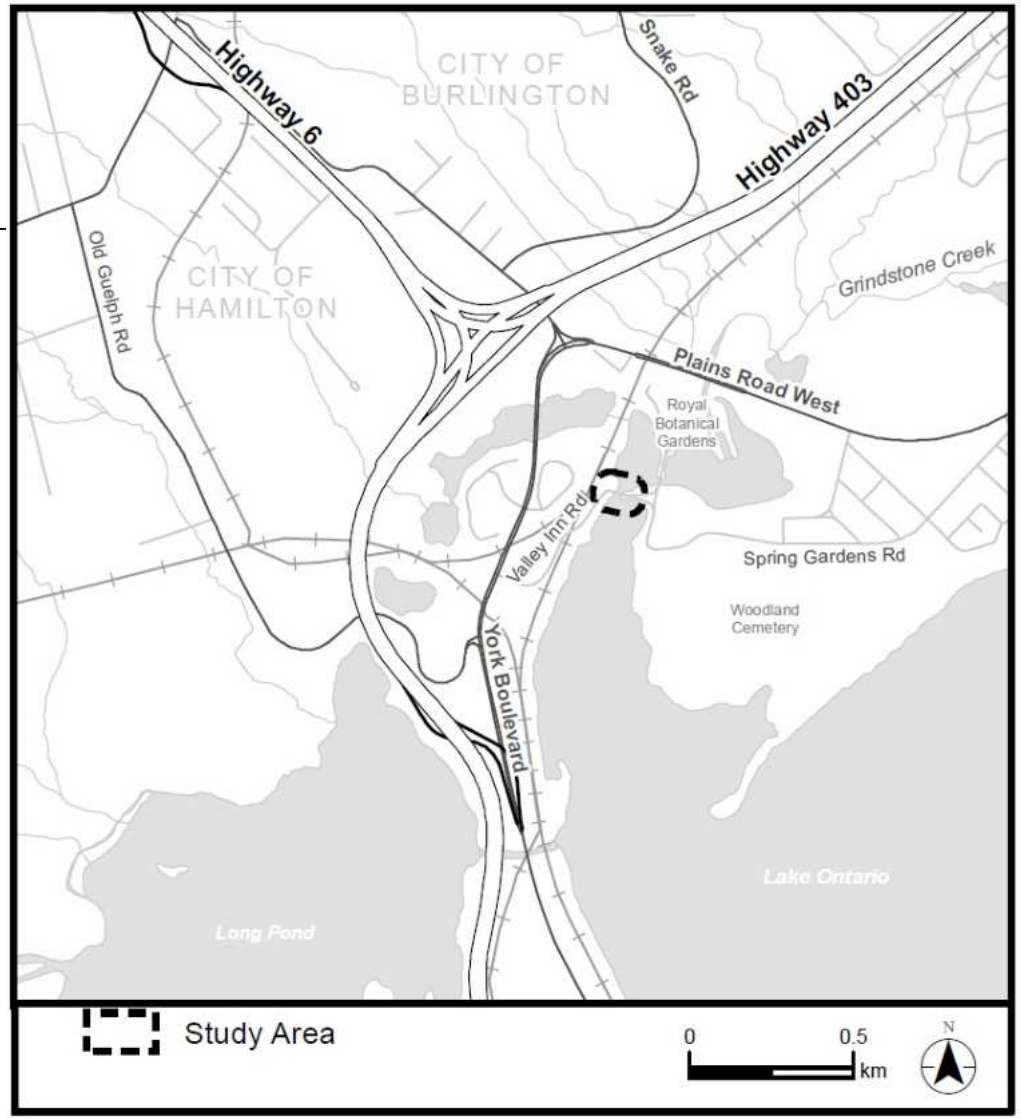
If you proceed right to detailed design – are you still getting the answers you need on permitting or future studies?

MTO Class EA for Provincial Transportation Facilities and Municipal Expressways

- The MTO Class EA was last updated in 2000.
- New 2024 EA updates recent legislation references and consultation.
- Greater emphasis on completing a Transportation Environmental Study Report (TESR), which is primarily a preliminary design document
- **Result?**
- Greater focus of public engagement during preliminary design
- **Detailed design may lack some of the detail necessary to translate work into site/contract-specific language**
- May require further study if some elements are not constructed for years

Case Study: Valley Inn Bridge, City of Hamilton

- Due to the age and recognized heritage value of the existing structure, the City of Hamilton initiated a Class EA study to review alternative solutions for improvements to the Valley Inn Bridge.
- The study area is situated on the border between the City of Hamilton and the City of Burlington.
- Known locally as the “clickety-clack” bridge” - famously part of the “Around the Bay” race

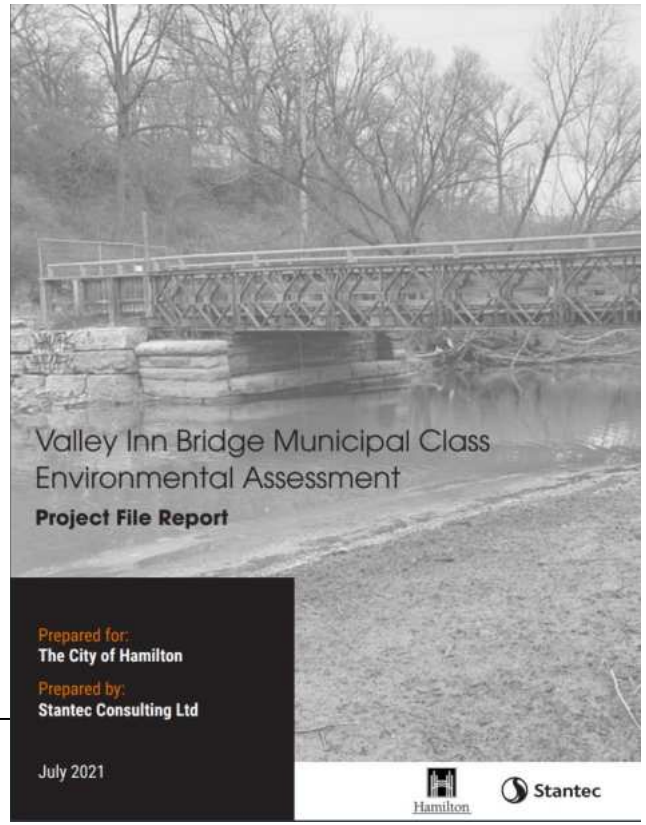


Original Valley Inn Bridge, City of Hamilton

Completed EA

EA Completed by Stantec

Study Status: Completed (2021)
Classification: Schedule B (Phases 1 & 2)



VALLEY INN BRIDGE MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT PROJECT FILE REPORT

July 2021

Table 3: Detailed Design Commitments

ID#	Detailed Design Commitments
1	**Protection of Fish and Fish Habitat**
	• If in-water work is required, develop, and implement a project-specific fish relocation plan and mussel relocation plan to relocate fish and mussels from within an in-water work area. The Contractor must obtain a Licence to Collect Fish for Scientific Purposes from the MNRF prior to the commencement of in-water work. • If work is required below the normal high-water level, submit a Request for Review to DFO for review under the Fisheries Act and for screening under the Species at Risk Act.
2	**Species at Risk**
	• Consultation with MECP during detailed design and upon completion of design drawings in order to confirm mitigation measures and determine authorization requirements, if any. • Targeted surveys for plants and wildlife are recommended if the project footprint changes. • Due to the potential presence of American Eel, Lilliput and possibly Spotted Gar, MECP is to be consulted if in-water work is required, to determine authorization requirements for provincially regulated aquatic species at risk.
3	**Property Restoration**
	• Consultation with RBG is recommended to obtain input on post-construction restoration measures.
4	**Sediment and Erosion Control**
	• An Erosion and Sediment Control (ESC) Plan should be developed and employed during construction to reduce the risk of erosion and entry of sediment into surface water and other natural features. o Implement project-specific temporary ESC measures per prior to starting work (e.g., silt fence and/or sediment logs). o Keep additional ESC materials available on site to provide a contingency supply in the event of an emergency. o Monitor and maintain erosion and sediment controls, as required. Controls are to be removed only after the soils of the construction area have stabilized and vegetation cover has re-established. o Stabilize materials requiring stockpiling (fill, topsoil, etc.) and keep a safe distance (> 30 m) from watercourse.
5	**Archaeology**
	• If in-water work is required at Carroll's Bay, the potential for marine archaeological resources will be evaluated using the MHSTCI's Criteria for Evaluating Marine Archaeological Potential Checklist. • Consultation and engagement will continue with interested Indigenous communities during detailed design as it relates to the project and further archaeological assessment. The City of Hamilton will contact Indigenous communities to arrange an on-site monitor as part of the fieldwork, if required.
6	**Cultural Heritage**
	• Retain the Documentation Report, the accompanying photo log and photos sent via FTP on file with the City of Hamilton and deposit a copy at the Local History and Archives Collection at the Hamilton Public Library. • Incorporate the display of the salvaged bridge materials alongside the three interpretive panels prepared as part of the Documentation Report. The panels and salvaged components should be displayed in close proximity to the original location of the bridge.
7	**Waste Management Plan**
	• The Contractor will be responsible for preparing a Waste Management Plan during detailed design to identify the approach to properly disposing of removed materials.

The EA is done – end of the road, right?

- After an EA is completed, EA commitments must be:
  1. Integrated into the project design and tender documents
  2. Permits must be obtained, and
  3. Consultation continues (residents, agencies, Indigenous communities).
- This can be a complicated process whereby EA commitments are transferred to designers and then subsequently to a contractor.

How can we think like a designer, field staff, or contractor? What do they need from us?

Do your Commitments Make Sense?

- All too often, preliminary design EAs include vague language, or that does not match with the reality of the next phases
- Where EAs are no longer completed, proponents or municipal project teams in detailed design may have limited information to work with when preparing contracts, or where to start with obtaining approvals – this creates considerable uncertainty

Commitment Pitfalls

There are three major pitfalls made when it comes to developing mitigation measures

Vague /Unclear Requirements

Examples: Statements like “will be determined in detailed design” OR further consultation should be conducted”

Concern: The Contractor may not be aware of when to apply the mitigation, or prepare the plan.

Lacking Construction Details

Examples: “The Contractor will develop a plan to address excess materials…”

“Erosion and Sediment Controls are to be used…” (What type? In what context?)

“Further natural environment studies may need to be required…”

Concern: the statements may be true, but more details to guide the contractor requirements may be needed.

No Contingency

Example: This project will avoid the timing windows for migratory birds

No in-water work will be allowed

Concern: The mitigation designer may not trust that the work will be completed, and over corrects by leaving no adaptability.

Rigid mitigation may lead to problems when trying to construct, or changes

Post-EA: Deciphering EA-speak

- **Once the EA is completed, a designer, Environmental Planner or client must determine how best to implement.**
- **A clearly articulated " commitments for detailed design" table in your EA can be a wonderful addition, alongside the general mitigation measures.**

Commitments Best Practices to help in Detailed Design:

- Action-oriented Language
- Reference Legislation or Guidance Documents
- Is there already a typical drawing?
- Identify and provide relevant timing windows
- Type of Technology Required
- Time duration?

Using Mitigation Measures

Action-oriented Language

Reference Legislation or Guidance Documents

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Describe next steps

What is Adaptive Management?

Adaptive management means being systematic and flexible in the face of change.

There are many definitions:

Definition Government of British Columbia

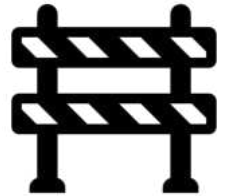
"**Adaptive management** is **a systematic process** for continually improving management policies and practices by learning from the outcomes of operational programs."

Impact Assessment Agency of Canada

"Adaptive management is a **planned and systematic process for continuously improving** environmental management practices by learning about their outcomes. Adaptive management **provides flexibility** to identify and implement new mitigation measures or to modify existing ones during the life of a project."

How can it be applied to the Post-EA process?

- **Consideration of Pre-Construction challenges:**
  - Do we have the required permits?
  - Are there offsets from an environmental feature or waterbody for sediment fencing you want applied?
- **Monitoring Mitigation effectiveness:**
  - Contingency for if a new species or nest is found?
  - Would the contractor know how to identify a species? Are fact-sheets needed in the contract documents?



Consider including a review by a Contract Administrator group to consider questions of constructability/ implementation

Valley Inn Bridge Post-EA Activities

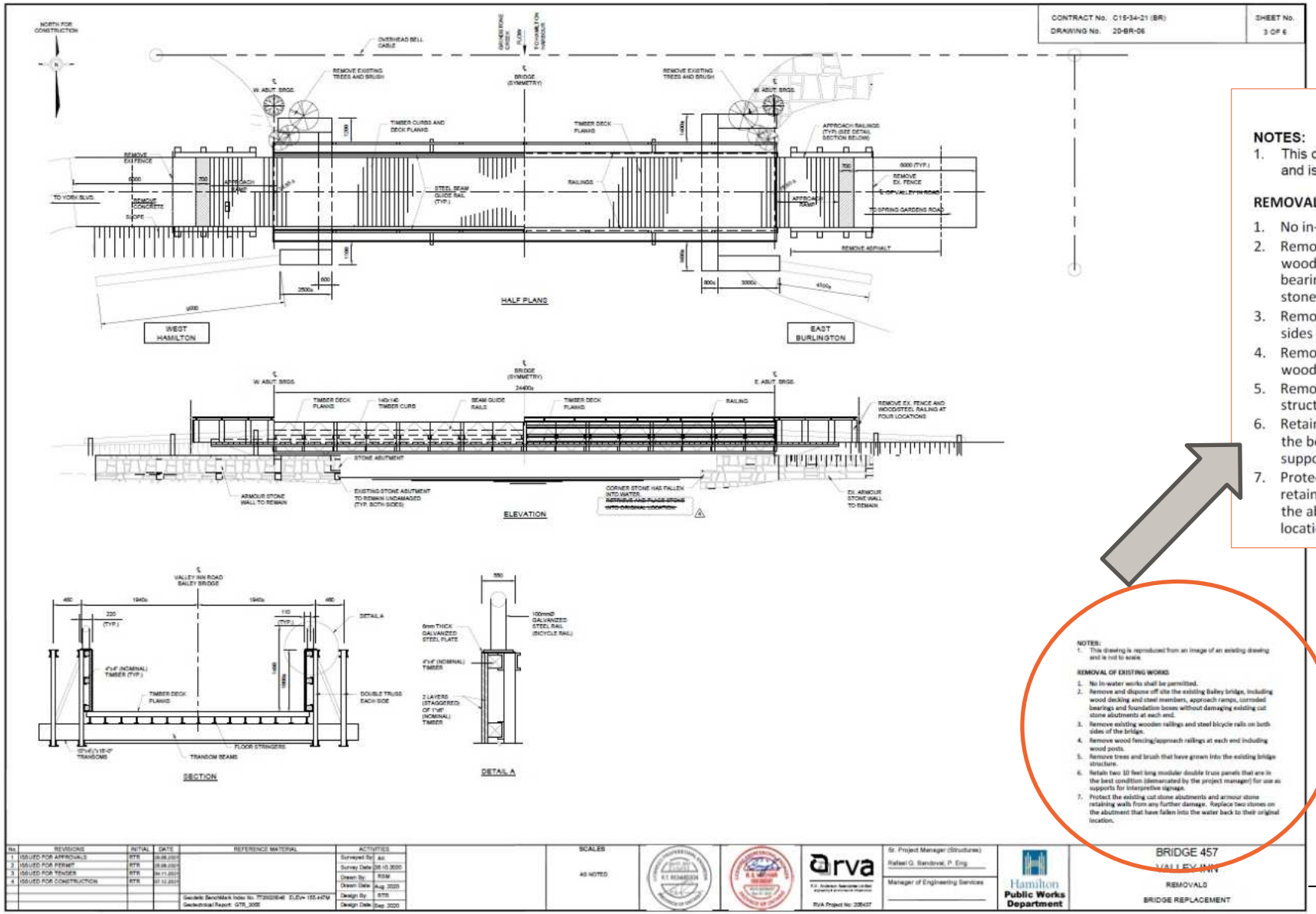
1. Call setup towards the end of the EA to clarify the post-EA permitting process (MECP, two local CA planners). Set out requirements for permitting in a multi-jurisdictional area

2. Addressed Cultural Heritage next steps: Documentation and Salvage Report prior to removal, Signage and public display considerations

3. Permit package prepared, through engagement with Conservation Halton

4. Integration of EA and Conservation Authority comments in the design drawings

Valley Inn Bridge



BRIDGE 457 - VALLEY INN - BRIDGE REPLACEMENT

20-BR-06 (3)

NOTES:

1. This drawing is reproduced from an image of an existing drawing and is not to scale.

REMOVAL OF EXISTING WORKS

1. No in-water works shall be permitted.
2. Remove and dispose off site the existing Bailey bridge, including wood decking and steel members, approach ramps, corroded bearings and foundation boxes without damaging existing cut stone abutments at each end.
3. Remove existing wooden railings and steel bicycle rails on both sides of the bridge.
4. Remove wood fencing/approach railings at each end including wood posts.
5. Remove trees and brush that have grown into the existing bridge structure.
6. Retain two 10 feet long modular double truss panels that are in the best condition (demarcated by the project manager) for use as supports for interpretive signage.
7. Protect the existing cut stone abutments and armour stone retaining walls from any further damage. Replace two stones on the abutment that have fallen into the water back to their original location.

What if I'm EA Exempt?

- Other legislation/ regulations are not changing as fast as EA policy changes
- Even if your EA is exempt, you will still likely need to do some or all of the following assessments to obtain permits and approvals:
    - Natural Environment Environmental Impact Study (EIS)
    - Species at Risk survey
    - Aquatic resources
    - Tree inventory
    - Identification of permits and requirements (CA, DFO)
    - Cultural heritage checklist/ Cultural Heritage Evaluation Report
    - Stage 1 Archaeology Assessment
    - Groundwater assessment

Keeping Track: Risk Register/ Permitting Log

A **proactive approach – objective is to consider hazards or risks**, and assess the effectiveness of existing controls and to develop new controls if necessary.

Tasks with high levels of inherent risk are ***critical tasks***, and require detailed and stringent controls. It is important that the people who perform the tasks are involved in this analysis, as their experience and knowledge are essential to the process.

Risk registers can:

- Identify project risks early, and planning for possible outcomes, making for a better project overall
- Allow the project to be proactive rather than reactive
- Encourage dialogue about key issues, at the outset
- Reduce unforeseen risks to the extent possible
- Reduce inefficiencies that risk resulting in higher costs

Risk Register as a Detailed Design tool

Tasks with high levels of inherent risk are ***critical tasks*** and require detailed mitigation plans. It is important that the people who perform the tasks are involved in this analysis, as their experience and knowledge are essential to the process.

Client Name, City of EXAMPLE, Risk Register

Stantec, As of DATE

ID No.	Origin of the Risk Identification	Impact Type	Critical Work Items	Description of the Risk and Potential Impact	Probability	Impact Level	Mitigation Strategy	Mitigation Measures
1	City	Technical/ Natural environment		Location of culvert outlet is in a forested area and near a creek	#	#	-Investigate: Natural environment field visit	• -SAR Information through EIS background review. • Information Gathering Form (IGF) if SAR identified during fieldwork • -sediment fencing to be provided at outlets
2	Consultant	Natural Environment	Work needed in 2025	In-water work needed	#	#	Avoid	• - timing windows to be provided on contract drawings
3	City	Technical		Area residents have previously indicated flooding concerns near the property	#	#	Avoid if possible or Mitigation	• Utility locates/ survey requested • Utilities marked on contract drawing • requirements
4	Consultant	Natural Environment/ Consultation		Location of the new structure is within 30 m of a CA Regulatory Area	#	#	Notify/ Mitigate	• Meeting to be set up with CA • Obtain permit for work within a regulated area
5	Consultant	Consultation		Notification will be required in advance of construction for detours	#	#	Notify	• Develop construction consultation plan

Legend:

Probability		
1	Very Low	<10%
2	Low	10%<30%
3	Medium	30%<60%
4	High	60%<90%
5	Very High	>90%

Impact Level	
1	Little to no impact
2	Slight impact - Meet objective with more resources
3	Moderate impact
4	Significant impact - Slip in critical path
5	Critical impact - Miss major milestones

Strategy	
Accept	No action is taken to reduce, eliminate or transfer the risk
Mitigate	Adopt a response strategy
Transfer	Transfer to the contractor through the tender documents
Avoid	Take steps to eliminate the risk

Impact Type
Natural Environmental
Economic
Social
Regulatory / Natural Environmental
Regulatory / Social
Regulatory
Technical

Final Valley Inn Bridge

Stantec Consulting Ltd.

Stantec - EA, environmental permitting support
RV Anderson - Bridge design

Image Credit: City of Hamilton Twitter (2022) (https://x.com/cityofhamilton/status/1504831818209574912?lang=en)

Take Aways

- EA processes are changing, but information is still needed in Detailed Design
- Work with the end in mind – think like a designer or contractor
- Remove uncertainty by planning ahead to reduce risks
- Adaptive Management
    - A plan may change as soon as shovels hit the ground
    - Permitting delays – build in time to obtain
    - Use a risk register or permit tracking log to identify potential complications with timing, or permitting delays
    - Provide options if available – not always only one way to complete the mitigation
    - Make contingency plans, where necessary
- Consider including a review by a Contract Administrator group to consider questions of constructability/ methods

Thank you!

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