

Design study for new structures over Assiniboine River and Long Lake Drain and realignments of PTH 26 and PR 248

PHASE 3 ENGAGEMENT
WINTER 2024/2025

Manitoba 

Welcome

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- Thank you for participating in the preliminary and functional design study for the new structures over the Assiniboine River and Long Lake Drain and the associated realignment of PTH 26 and PR 248.
- The image at right illustrates the general study area.
- The following slides provide an overview of the study process and objectives.
- The intent of this engagement is to:
 - Share evaluation outcomes and the preferred alignment
 - Offer an opportunity for stakeholders to provide input on the preferred alignment
 - Share important details regarding the next steps for this project



Project team

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Manitoba Transportation and Infrastructure (MTI)

Project Owner

Colin Spikula, MTI Project Manager



WSP

Engineering Consultant

Jim Lukashenko, WSP Project Manager



Landmark Planning & Design

Public and Stakeholder Engagement Consultant

Donovan Toews, Engagement Lead

Background

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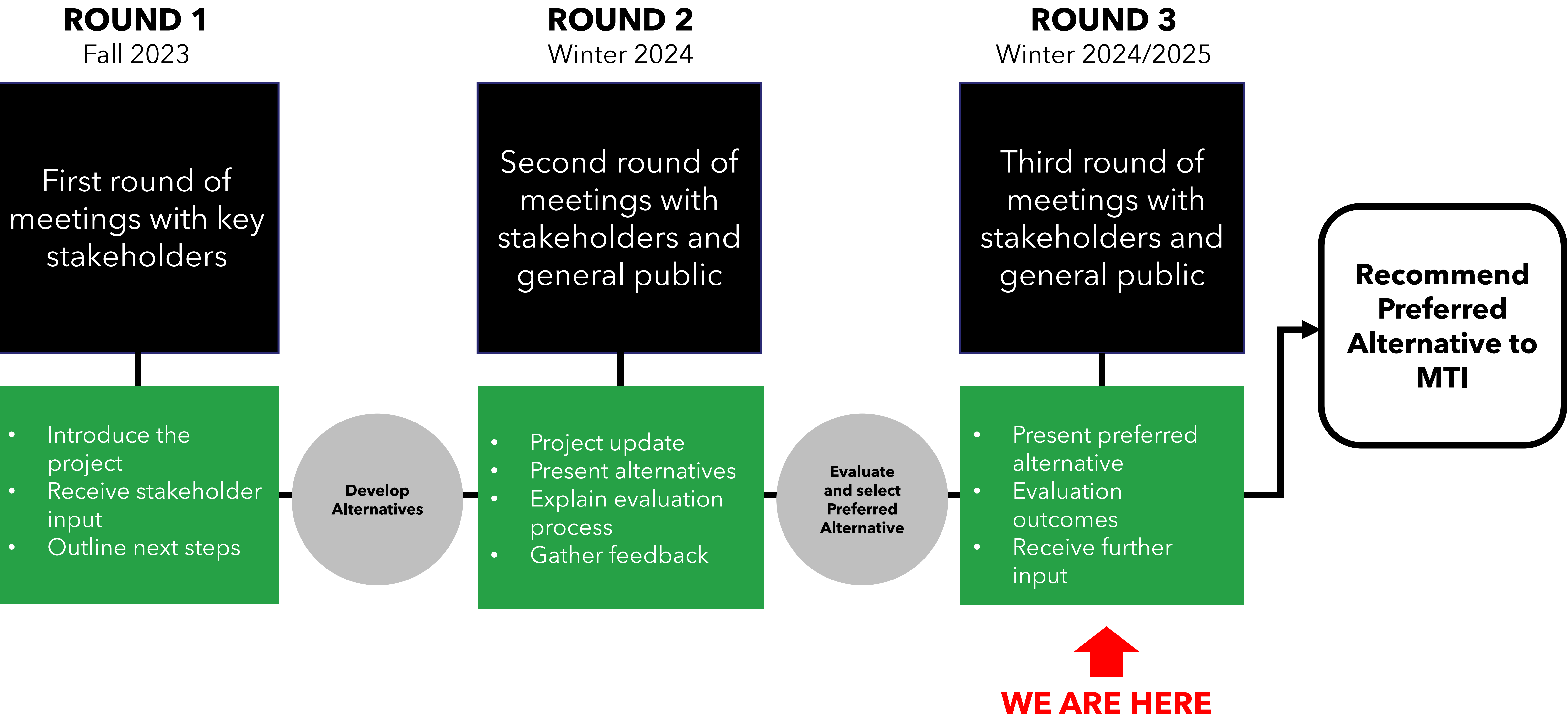
- The objective of the project is to prepare a design concept to replace the aging structures over Assiniboine River and Long Lake Drain and improve the alignments of PTH 26 and PR 248.
- The existing truss bridge over the Assiniboine River was constructed in 1948 and the timber bridge over the Long Lake Drain was constructed in 1928. Both bridges are approaching the end of their design service lives and require replacement.
- This study will be followed by a more detailed design study for the selected preferred alternative.



Engagement process

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The following diagram illustrates the engagement process:



Stakeholders

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There are many people and groups that may be interested in or affected by this project:

- Indigenous Rights Holders
- RM of St. Francois Xavier
- RM of Cartier
- Residents / landowners
- Agricultural operations
- Business owners
- Local school divisions
- Utilities in the vicinity
- Manitoba Trucking Association
- Local trail or recreation groups
- Emergency services providers
- Others as identified throughout the engagement process



Study considerations

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The study team has considered a number of factors in the design process, including;

- Safety and collision history
- Traffic projections
- Environmental impacts
- Local land use and access patterns
- Right-of-way requirements
- Active transportation requirement
- Cultural or heritage considerations
- Emergency access
- Wildlife
- Water crossings and navigation requirements
- Utilities
- Capital and maintenance costs
- Other factors were identified through the engagement process, including stakeholder and Rights Holder perspectives on these and other topics



What we heard (stakeholders)

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During the first and second rounds of Stakeholder Engagement meetings in late 2023, and spring 2024, comments were offered by participants. The following comments represent a summary of the input that the study team needs to carefully consider:

- Concerns about soil conditions and agricultural disruption
- Concerns about safety in relation to speed limit, visibility, left turns, winter conditions, and truck traffic
- Concerns about structural capacity of both bridges
- Concerns about environmental impacts and river disruption
- Concerns about ice jams and flooding risks
- Concerns about encroachment Old Baie St. Paul cemetery
- Suggestions to consider existing and planned water lines across the study area
- Suggestions to consider north-south connectivity as the only route between a range of RMs
- Suggestions to accommodate different bridge users (farm equipment, pedestrians, etc.)
- Desire to see RTAC connection between PTH6 and Elie
- Concerns about land acquisition and value impacts
- Concerns about emergency services and school bus disruption during and after construction
- Questions about construction timeframes and costs

Roadway alignment alternatives

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- Different roadway alignment alternatives were developed to accommodate the new bridge structures and highway alignments.
- Each roadway alignment has strengths and weaknesses that the study team has evaluated. Rights Holder and stakeholder input supplemented technical considerations in the evaluation.
- The next slide illustrates the following roadway alternatives:

PR 248

1. Direct route

- a) 450' Radius
- b) 600' Radius

2. Easterly route

3. River diversion

4. Westerly route

5. Reconfigure existing bridge corridor

- a) South of existing
- b) At existing location

PTH 26

A. Partial curve correction

B. Full curve correction

C. Realignment north

Alternatives evaluation criteria

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This slide illustrates the many considerations for evaluating alternatives at a high level; all considerations are important.

Social

- Land and property acquisition
- Traffic disruption
- Local access changes
- Agricultural land disruption
- Long-term residential disruption
- Project duration
- Emergency services disruption/response
- School transportation disruption
- Potential environmental impacts
- DFO approval process
- Efficient movement of goods
- Future AT/trails accommodation
- Risk of cemetery disturbance

Engineering

- Safety improvement
- RTAC loading accommodation
- Long Lake Drain accommodation
- Overall route length
- Route continuity/connectivity
- Intersection/curve spacing
- Geometry
- Bridge skew
- Number of bridges
- Bridge constructability
- Geotechnical risk
- Erosion risk
- Overall project simplicity

Costs

- Capital cost
- Maintenance cost
- Life cycle cost

Alternatives evaluation criteria

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The chart on the next slide shows all the roadway alignment alternatives and relative strengths and weaknesses of each:

- Key topics raised as important by Rights Holders, stakeholders, project team members, and the public are included.
- The alternatives that have the most green ratings are more preferred, while the alternatives that have more yellow and red ratings are less preferred.
- The selected alternative should be most effective for highway safety and efficiency, but also give consideration to the other topics.
- A preferred alternative has been selected for recommendation to MTI, which could be advanced to a detailed design stage.

Alternatives evaluation criteria

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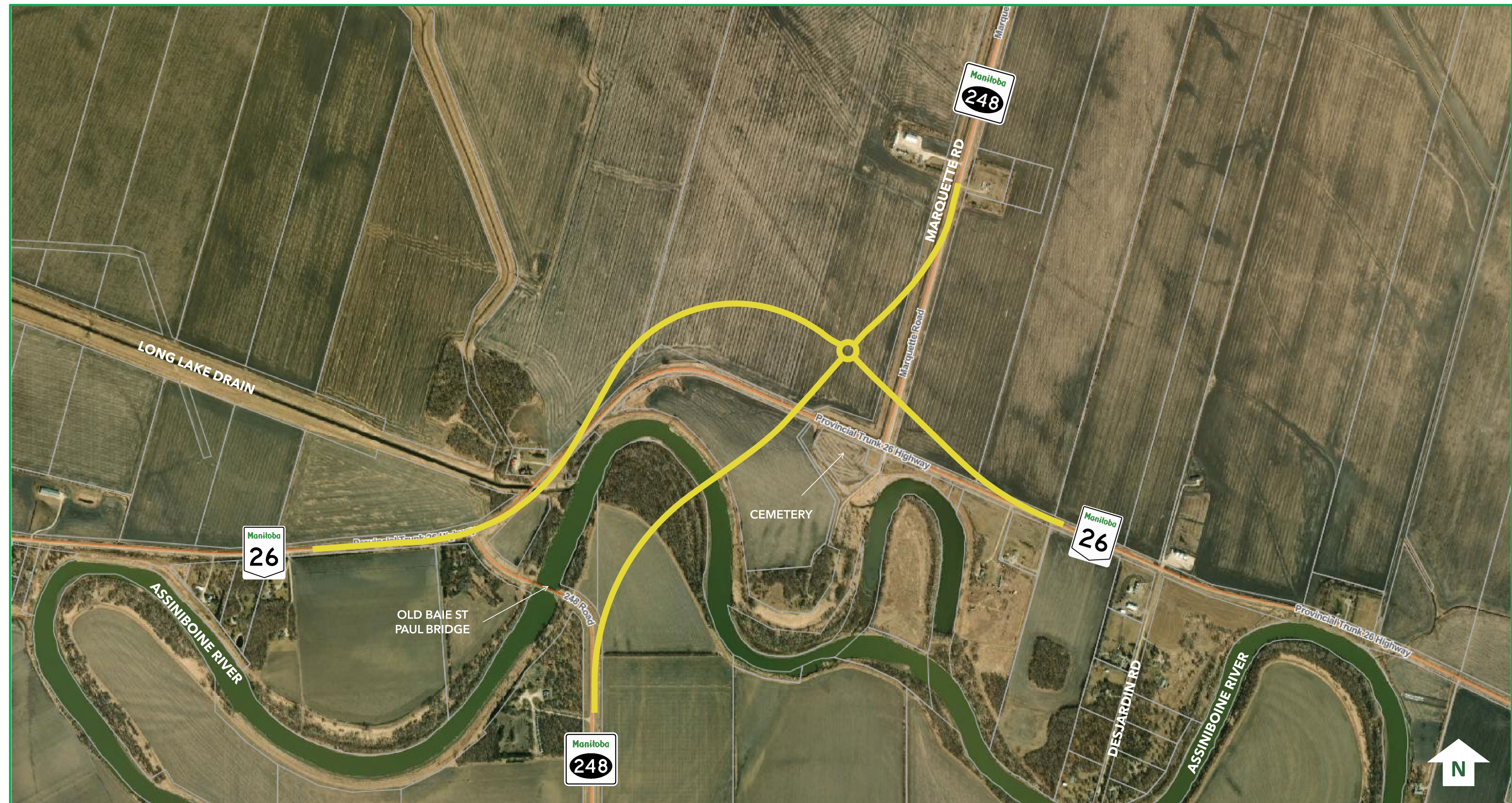
- This chart illustrates the relative strengths and weaknesses of each corridor alternative
- Alternatives that have fewer red ratings are more attractive than options that have fewer green ratings
- Simply replacing the bridge where it exists now has some advantages but would not meet the intent of the project to improve highway alignments (see Board 4)
- Alternatives 4 and 5 are routes that do not meet up with highway design standards (red dashed circle)

PR248 & PTH26 Structures Preliminary Corridors Options Evaluation Criteria		Bridge Location and PR 248 Road Alignments							Replace Bridge Only	PTH 26 Alignments		
		Option 1		Option 2	Option 3	Option 4	Option 5			Option A	Option B	Option C
		a. Direct Route (450' radius)	b. Direct Route (600' radius)	Easterly Route	River Diversion	Westerly Route	a. South of Existing	b. At Existing Location		Partial Curve Correction	Full Curve Correction	Realignment North
		59	57	39	27	37	35	21	21	42	50	40
Engineering	Safety	Better	Better	Better	Better	OK	OK	OK	No improvement	OK	OK	Better
	Accommodates RTAC Loading											
	Accommodates Long Lake Drain											
	Overall Route Length											
	Route Continuity/Connectivity	Better	Better	Stop	Stop	Jog/Stop	Jog/Stop	Jog/Stop	Jog/Stop			
	Intersection/curve Spacing	Meets Standards	Meets Standards	Needs Exception	Meets Standards	Meets Standards	Meets Standards	Meets Standards	Substandard	Needs Exceptions	Needs Exceptions	Meets Standards
	Geometry	Sub-standard	Meets Standards	Sub-standard	Sub-standard	Sub-standard	Sub-standard	Sub-standard	Sub-standard	Sub-standard	Sub-standard	No Exceptions
	Constructability/Staging	Better	Better	Better	Better	More challenging	More challenging	More challenging	Difficult	More challenging	More challenging	Better
	Geotechnical Risk	Some	Some	More	More	Some	Some	Some	Least	More	Some	Some
	Flooding Risk								Status Quo			
	Erosion Risk	Higher	Higher	Lower	Moderate	Moderate	Lower	Lower	Lower	Higher	Lower	
	Overall Project Simplicity	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Simplest	Simplest	Simplest	Moderate
Bridge Skew	Close to 90	Close to 90	Significantly Less than 90	90 degrees	90 degrees	90 degrees	90 degrees	90 degrees	90 degrees	n/a	n/a	n/a
Social	Land and Property Acquisition	More	Most	More	Most	Some	Most	Most	Least	Least	Some	Most
	Utilities Changes	Least	Least	Moderate	Higher	Moderate	Moderate	Moderate		Least	Least	Moderate
	Traffic Disruption	Some	Some	Some	Less	Less	Less	More	More	Some	Some	Least
	Local Access Changes	Least	Least	Moderate	More	Some	Some	Some	Some	Least	Least	More
	Agricultural Land Disruption	Some	Some	Higher	Higher	Some	Some	Some	Least	Less	Less	Some
	Long-term Residential Disruption	Some	Some	Some	Some	More	More	More	Less	Less	Less	More
	Project Duration	Less	Less	Less	Higher	Moderate	Moderate	Moderate	Shortest	Moderate	Moderate	Moderate
	Emergency Services Disruption Risk	Less	Less	Less	Less	Some	Some	More	More	Some	Some	Less
	School Transportation Disruption Risk	Less	Less	Less	Less	Some	Some	More	More	Some	Some	Less
	Potential Environmental Impacts	Some	Some	Most	Most	Some	Some	Some	Least	Some	Some	Some
	DFO Approval Process	Moderate	Moderate	More complex	More complex	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
	Efficient Movement of Goods	Best	Best	Best	Best	OK	OK	OK	OK	Best	Best	Best
	Accommodates Future AT/Trails	Good	Good	Good	Good	OK	OK	OK	OK	Good	Good	Good
	Risk of Cemetery Disturbance ⁽⁵⁾	Some Risk	Some Risk	Minimal Risk	Some Risk	Minimal Risk	Minimal Risk	Minimal Risk	Minimal Risk	Minimal Risk	Minimal Risk	Minimal Risk
Scope	Accommodates PTH 26 realignment									n/a	n/a	n/a
	Requires Left Turns/Stops for N/S Travel	No	No	No	No	Yes	Yes	Yes	Yes	n/a	n/a	n/a
Cost	Capital Cost (Class D) (Millions \$)	\$ 35.6	Not Estimated	\$ 40.4	\$ 36.9	Not Estimated			\$ 17.0	\$3.3m	\$4.6m	\$7.1m

Preferred alternative

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Alternative 1A (450M radius) has been selected as the preferred PR 248 alignment alternative and **Alternative B (Full Curve Correction)** has been selected as the preferred PTH 26 alignment alternative as the combination of both alignments carries the most strengths and least weaknesses.



Key questions

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- Does the preferred corridor alternative make sense to you? Would you add any considerations for the refinement of the preferred alternative?
- What impacts or benefits do you see from your own perspective with the preferred corridor alternative?

Your feedback will help the team continue to identify topics of importance and specific information that can be incorporated into the refinement of the preferred alternative.



Next steps

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- Review further input from stakeholders
- Refine the preferred design alternative as required
- Provide a recommendation to MTI

Thank you. Questions?

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Thank you for participating in this process.

Your feedback is important to us, so please fill out an online comment sheet at the following link:

<https://www.surveymonkey.com/r/PR248andPTH26R3>

If you have any further questions, please contact:

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