

Region of Waterloo

# Schneider's Creek Trail

**Decision Matrix:**

**Alignment Options**

**Block Line Road to Balzer Road**

November 26, 2024

## Schneider's Creek Trail

### Decision Matrix: Alignment Options Block Line Road to Balzer Road

November 20, 2024

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## Executive Summary

The purpose of a decision matrix is to evaluate and prioritize various options to aid in decision-making. It begins by establishing a list of criteria and then evaluates options against these criteria. For this report, four separate design options for a section of the Schneider's Creek Trail between Block Line Rd and Balzer Rd were evaluated based on a set of criteria to help determine a direction.

The four options are identified as A, B, C, and D (appended). It should be noted that during early investigation and extensive consultation with Hydro One, Option A was identified as unfeasible and is not open to further consideration; it was accordingly omitted from the decision matrix scoring.

The criteria represent typical high-level considerations when designing multi-use trails, covering aspects ranging from environmental impact to cost. The results suggest a preferred option –Option C-- which can be understood as the option that best balances the criteria (i.e., project priorities).

# 1 Decision Matrix

## 1.1 Categories

Five categories are identified, representing considerations for assessing strengths and weaknesses, in this case as they apply to implementing multi-use trails. These categories include the Natural Environment, Socio-Economic Environment, Transportation, Accessibility, and Cost. The categories are not intended to be exhaustive but represent broad strokes from which to provide a balanced assessment of the design options.

## 1.2 Design Options

**Option A:** Provides the most direct alignment and shortest distance, however, it runs near existing Hydro One towers and within their corridor lands. Extensive consultation between the Region of Waterloo and the utility owner determined opposition to this alignment for various reasons, including safety concerns, and has ultimately removed it from consideration. Accordingly, Option A has been omitted from the matrix scoring below.

**Option B:** Provides a direct alignment and short distance, however, it requires interaction with the existing GRCA-regulated wetland area. Accordingly, a raised boardwalk is proposed.

**Option C:** Utilizes natural topography for alignment, requiring a more serpentine form than Option B. This option avoids interaction with the existing wetland but may require a land acquisition/agreement with neighbouring lands.

**Option D:** Utilizes natural topography for alignment, requiring the longest and most serpentine form. This option avoids interaction with the existing wetland but may require a land acquisition/agreement with neighbouring lands. It also provides the most potential of the three for additional connections.

**Evaluation Scores:** *Very Good, Good, Fair, Poor*

	Option B	Option C	Option D
<b>Natural Environment</b>	<ul style="list-style-type: none"> <li>Least amount of grading disturbance required.</li> <li>Most efficient route; least amount of interaction between users/maintenance vehicles and the nat. environment</li> <li>Direct interaction with wetland area and potential impact on</li> </ul>	<ul style="list-style-type: none"> <li>Avoids wetland area altogether.</li> <li>Increased grading disturbance.</li> <li>Possible impact on natural overland flow.</li> <li>Increased human presence.</li> </ul>	<ul style="list-style-type: none"> <li>Avoids wetland area altogether</li> <li>Highest level of grading disturbance.</li> <li>Possible impact on natural overland flow.</li> <li>Increased human presence.</li> </ul>

	function; subject to GRCA approvals. <ul style="list-style-type: none"> <li>• Potential opportunities for educational signage, etc.</li> </ul>		
	Poor	Fair-Good	Good

	Option B	Option C	Option D
<b>Socio-Economic Environment</b>	<ul style="list-style-type: none"> <li>• Provides increased access and connection to broader trail network.</li> <li>• Least amount of property acquisition required.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides increased access and connection of broader trail.</li> <li>• Offers potential connection to adjacent development.</li> <li>• Possible property acquisition required.</li> <li>• Possible increase in public visibility towards residential buildings.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides increased access and connection of broader trail.</li> <li>• Offers potential connection to adjacent development.</li> <li>• Possible property acquisition required.</li> <li>• Possible increase in public visibility towards residential buildings.</li> </ul>
	Good	Good – Very Good	Good – Very Good

	Option B	Option C	Option D
<b>Transportation</b>	<ul style="list-style-type: none"> <li>• Provides well needed connection for existing trail community.</li> <li>• Provides the most direct connection.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides well needed connection for existing trail community.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides well needed connection for existing trail community.</li> <li>• Least direct but offers increased connectivity options.</li> </ul>
	Good-Very Good	Good	Good

	Option B	Option C	Option D
<b>Accessibility</b>	<ul style="list-style-type: none"> <li>• Most accessible; least changes in grade.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased changes in grade.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased changes in grade.</li> </ul>

	<ul style="list-style-type: none"> <li>Challenging winter conditions – boardwalk maintenance.</li> </ul>	<ul style="list-style-type: none"> <li>Potential steep running slopes, cross slopes.</li> <li>Challenging winter conditions - grades.</li> <li>Possible reduction in visibility.</li> </ul>	<ul style="list-style-type: none"> <li>Potential steep running slopes, cross slopes.</li> <li>Challenging winter conditions - grades.</li> <li>Possible reduction in visibility.</li> </ul>
	Fair-Good	Fair	Fair

	Option B	Option C	Option D
<b>Costs</b>	<ul style="list-style-type: none"> <li>Approximate Capital Cost of \$430,000.</li> <li>Increased &amp; Unique cost for construction of raised boardwalk.</li> <li>Potentially higher maintenance/lifecycle cost for upkeep/replacement of boardwalk elements.</li> </ul>	<ul style="list-style-type: none"> <li>Approximate Capital Cost of \$530,000.</li> <li>Lowest approximate lifecycle cost.</li> <li>Potential Cost associated with land acquisition.</li> </ul>	<ul style="list-style-type: none"> <li>Approximate Capital Cost of \$670,000.</li> <li>Costs associated with greatest physical length, grading requirements of three options.</li> <li>Potential Cost associated with land acquisition.</li> </ul>
	Fair-Good	Fair-Good	Fair

## 2 Conclusion

The results of the matrix suggest that the options are balanced, however option C is narrowly preferred over option D based on the listed categories and considerations. For split scores, e.g. “Fair-Good”, a mark was included in each category.

	Option B	Option C	Option D
Very Good	I	I	I
Good	IIII	IIII	III
Fair	II	III	II
Poor	I		

**Option B:** Fair-Good

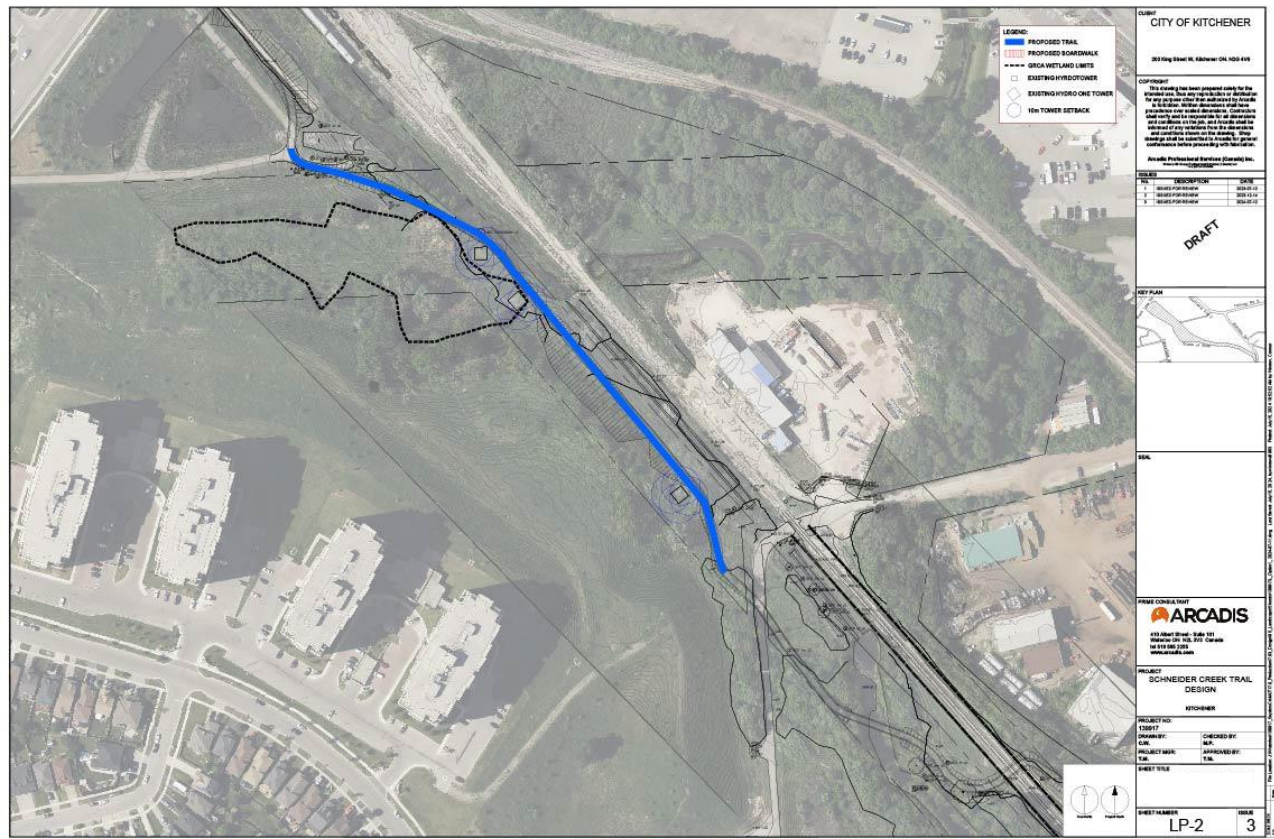
**Option C:** Good

**Option D:** Good

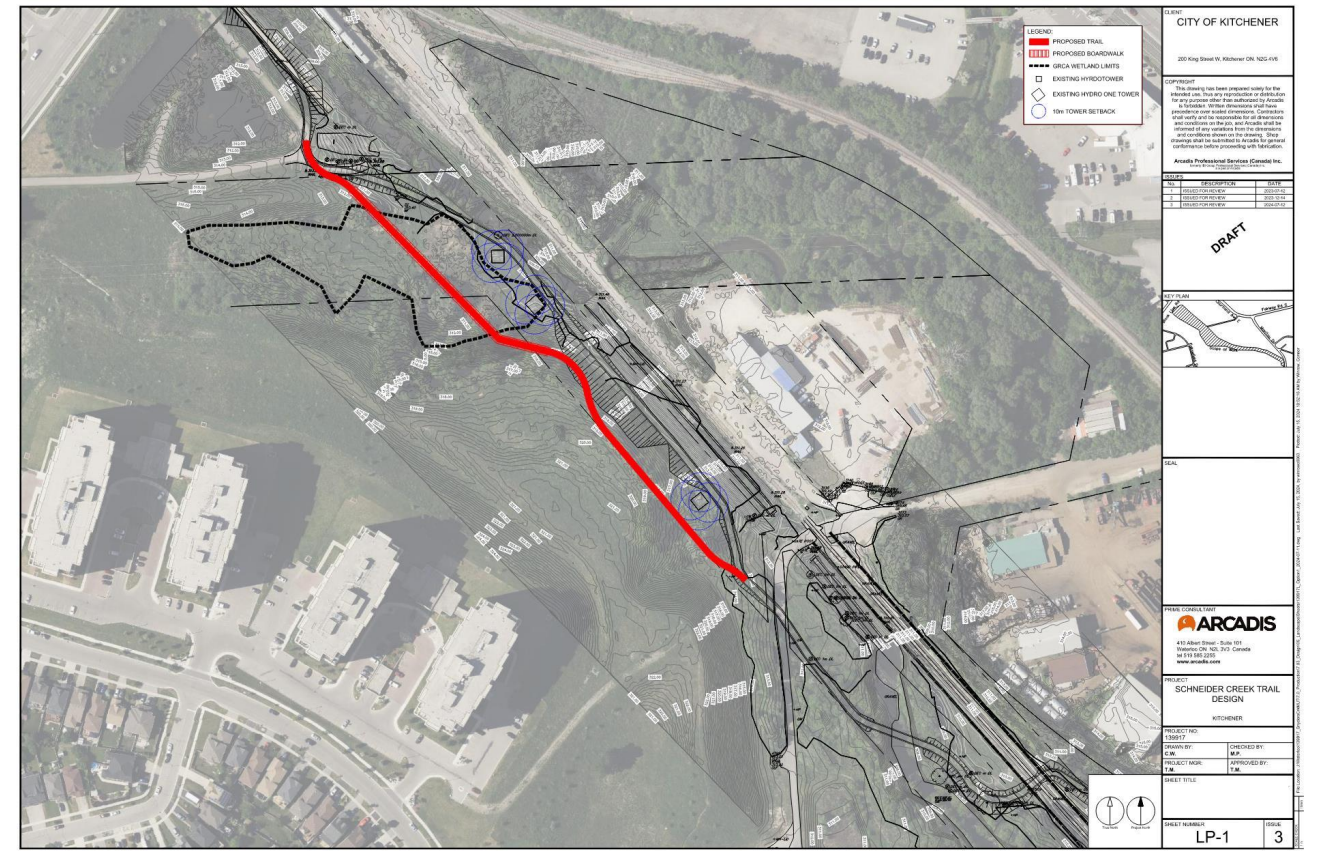
Option C and D score similarly, with varying positives and negatives; Option C might be considered less intensive and costly; however, Option D offers greater potential opportunity for connections and integration. Worth noting, the ‘Poor’ designation was only applied to Option B with reference to the Natural Environmental impacts.

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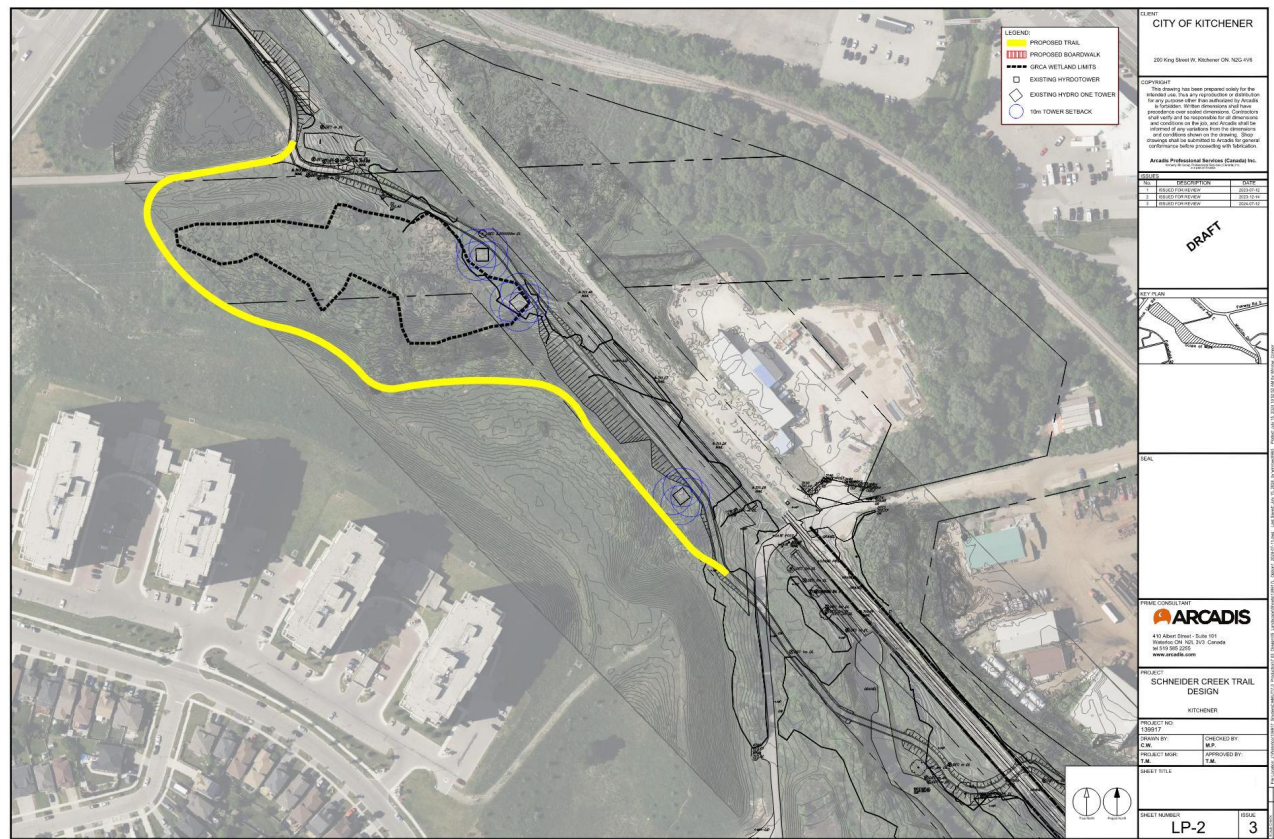
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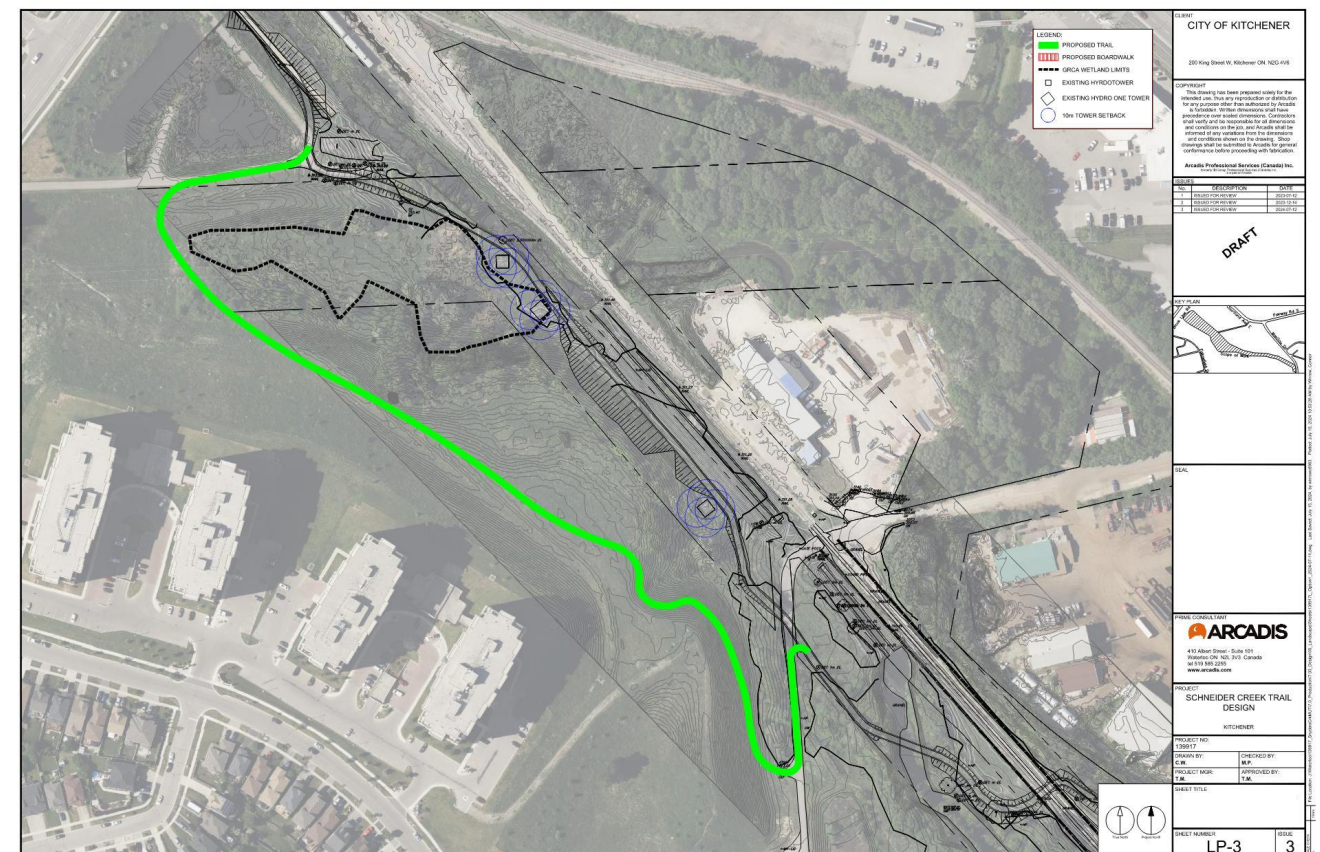
Option A



Option B



Option C



Option D