

**Municipality of Chatham-Kent**  
**Infrastructure and Engineering Services**  
**Engineering and Transportation Division**  
**Information Report**

**To:** Mayor and Members of Council

**From:** Chris Thibert, P.Eng  
Director, Engineering and Transportation

**Date:** June 1, 2021

**Subject:** Rose Beach Line Slope Stability Municipal Class Environmental Assessment

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This report is for the information of Council.

**Background**

In early 2017, the Municipality of Chatham-Kent (CK) retained the consultant AECOM to complete a Slope Stability Report to document existing conditions along Rose Beach Line (immediately northeast of Big Creek) and to review potential solutions to address road stability and risk. The report identified the need for a Municipal Class Environmental Assessment (EA) study to evaluate in detail, different solutions to the problem in consultation with the community, review agencies, stakeholders and Indigenous Communities. In mid 2017, AECOM was procured to complete this EA due to their knowledge of the area from the previous review.

In October 2017, the first Public Information Centre (PIC) provided an overview of the EA process and alternatives to how the project would proceed and what actions could take place. There was a great deal of public input and as a result, additional alternatives were added into the EA evaluations process.

The second Public Information Centre took place in May 2018 and included new concepts including hybrid alternatives. In August 2018, the Chatham-Kent Lake Erie Shoreline Study by Zuzek Inc. was adopted by Council and the decision was made to put the Rose Beach Line EA on hold until the Shoreline Study was completed. This would provide CK and AECOM with a better understanding of the entire Lake Erie shoreline erosion causes and potential mitigation measures to be made. The Chatham-Kent Lake Erie Shoreline Study was completed in May 2020 and the Rose Beach Line EA re-commenced, with the requirement to incorporate the Lake Erie Shoreline Study's recommendations into the evaluation.

Due to the results and recommendations of the Lake Erie Shoreline Study completed in May 2020 and the increased/continuing degradation of the existing slope, the previously recommended preferred alternative solution was no longer viable. As a result, three new

alternatives were developed and evaluated alongside the original alternatives. These new alternatives were presented to the public as a third Virtual Public Information Centre in December 2020 and January 2021.

AECOM collected and addressed comments and concerns until May 2021, at which time the Notice of Completion was accepted by the Ministry of Environment, Conservation and Parks.

## **Comments**

### **Problem/Opportunity Statement**

Rose Beach Line, east of Antrim Road and along Lake Erie, has localized areas of slope instability that have encroached upon the roadway to the extent that Chatham-Kent had to permanently close the road to pedestrian and vehicular traffic. Previous attempts to provide protection to the slope, including the placement of rock and concrete rubble along the slope, have not been successful. Degradation to the slope has continued to occur as evidenced by tree tilting, undercutting, over-steepening of the Lake Erie bluff and implementation of emergency road closure measures.

This section of road also contains municipal water and sanitary sewer infrastructure that is currently being relocated recognizing risk due to slope failure. A Shoreline Study has been completed for all of Chatham-Kent that provides direction and recommendations for all areas adjacent to Lake Erie that will provide a consistent region wide approach to the evaluation of road alternatives. For this specific location, the recommended approach per the Shoreline Study is to “Retreat”.

### **Screening List of Alternatives**

The evaluation of the alternatives to carry forward is based on an assessment to consider the suitability of the alternatives and to identify how well each alternative is able to fulfill the problem/opportunity statement

<b>Alternative Solution</b>	<b>Description</b>	<b>Screening Result</b>
1	Do nothing	Not carried forward
2	Upgrade McKinlay Road and New Scotland Line to a Class 4 paved road	Carried forward for further evaluation
3	Upgrade Antrim Road and New Scotland Line	Not carried forward
4	Upgrade New Scotland Line	Carried forward for further

<b>Alternative Solution</b>	<b>Description</b>	<b>Screening Result</b>
		evaluation
5a	Construct new road around slope stability issues and several residences	Not carried forward
5b	Relocate road north and undertake slope stability works	Not carried forward
6	Undertake slope stability works	Carried forward for further evaluation
7	Extend Rose Beach Line westerly with a cul-de-sac	Not carried forward
8	Undertake slope stability works and upgrade New Scotland Line	Carried forward for further evaluation
9	Re-Align Rose Beach Line in the form of a private driveway behind existing properties, retire subject section of Rose Beach Line and upgrade New Scotland Line	Carried forward for further evaluation
10	Provide driveway access mostly within existing ROW and upgrade New Scotland Line	Carried forward for further evaluation
11	Provide driveway access from the West	Not carried forward

### Preferred Solution

A detailed assessment of each short-listed alternative solution was completed based on the following evaluation components and criteria:

- Engineering – Criteria includes factors such as Traffic, Overall Safety, Road Design, Infrastructure Conflicts and Effectiveness.
- Natural Heritage – Criteria includes factors such as Terrestrial Environment and Aquatic Environment.

- Socio-Economic and Culture – Criteria includes factors such as Property Impacts and Acquisition, Business/Institutional Operations, Built and Cultural Heritage Resources
- Cost – Criteria evaluates high level capital costs associated with each alternative.

The evaluation approach used to consider the suitability and feasibility of alternative solutions for the study was a qualitative assessment. In this evaluation approach, trade-offs consider the advantages and disadvantages of each alternative to address the problem and opportunity statement with the least environmental effects and the most technical benefits which forms the rationale for the identification of the preferred alternative.

Based on the criteria and methodology applied as part of the evaluation process, the preferred alternative is:

Alternative 9: Re-align Rose Beach Line in the form of a private laneway behind existing properties, retire subject section of Rose Beach Line and upgrade New Scotland Line. A sketch of this alternative is attached as Appendix A. This sketch forms part of the final EA document and will be made available on the Municipal website.

The preferred alternative includes the closing of Rose Beach Line between Antrim Road and west of Wildwood on the Lake, construction of new private laneway to provide access to the residents adjacent to the failure location, and future upgrading of New Scotland Line to accommodate added traffic directed away from Rose Beach Line.

The preferred alternative provides a long-term solution to the problem and opportunity statement. Closing Rose Beach Line and constructing private driveway access behind the existing properties will ensure the properties can be accessed for the longest amount of time possible (over 25 years). The upgrading of New Scotland Line will accommodate the increased traffic due to the new closed Rose Beach Line.

### **Consultation**

Public consultation was conducted throughout the Rose Beach Line Slope Stability Municipal Class Environmental Assessment process. The following public meetings were held:

- Public Information Centre 1 – October 5, 2017 at Wildwood by the Lake community hall.
  - The purpose of PIC #1 was to share the study findings, present a preliminary recommended alternative and gather comments.
- Public Information Centre 2 – May 2, 2018 at Wildwood by the Lake community hall
  - PIC #2 provided a summary of PIC #1 and replied to comments and questions provided on the comment forms. This was also an opportunity to

present new recommended alternatives as well as the preferred alternative (Alternative 8).

- Public Information Centre 3 – Online presentation, which went live on December 14, 2020 and remained accessible for the remainder of the project.
  - PIC #3 reintroduced the study after it was placed on hold to complete the Chatham-Kent Lake Erie Shoreline Study. This PIC also introduced new alternative solutions and the new preferred alternative (Alternative 9).

In addition to the three PIC's, a pre-consultation meeting was held with Wildwood by the Lake Board of Directors and the residents directly adjacent to the location of slope instability. After the Lake Erie Shoreline Study was finalized, another meeting was held with adjacent residents to discuss the new alternatives.

Indigenous stakeholders were also consulted.

### **Financial Implications**

The estimated cost associated with the final recommended alternative (Alternative 9) is \$7,770,000. A portion of this cost will be addressed in 2021 for the private laneway and will come to Council as future reports. The remainder will be included in the 2022 Municipal Capital Plan for future consideration which will be dependent on the rate of erosion and subject to Council prioritization and funding.

Prepared by:

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Engineering and Transportation Division

Reviewed by:

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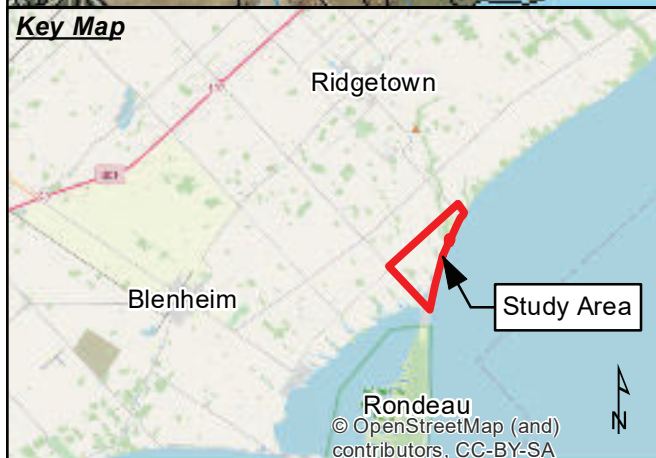
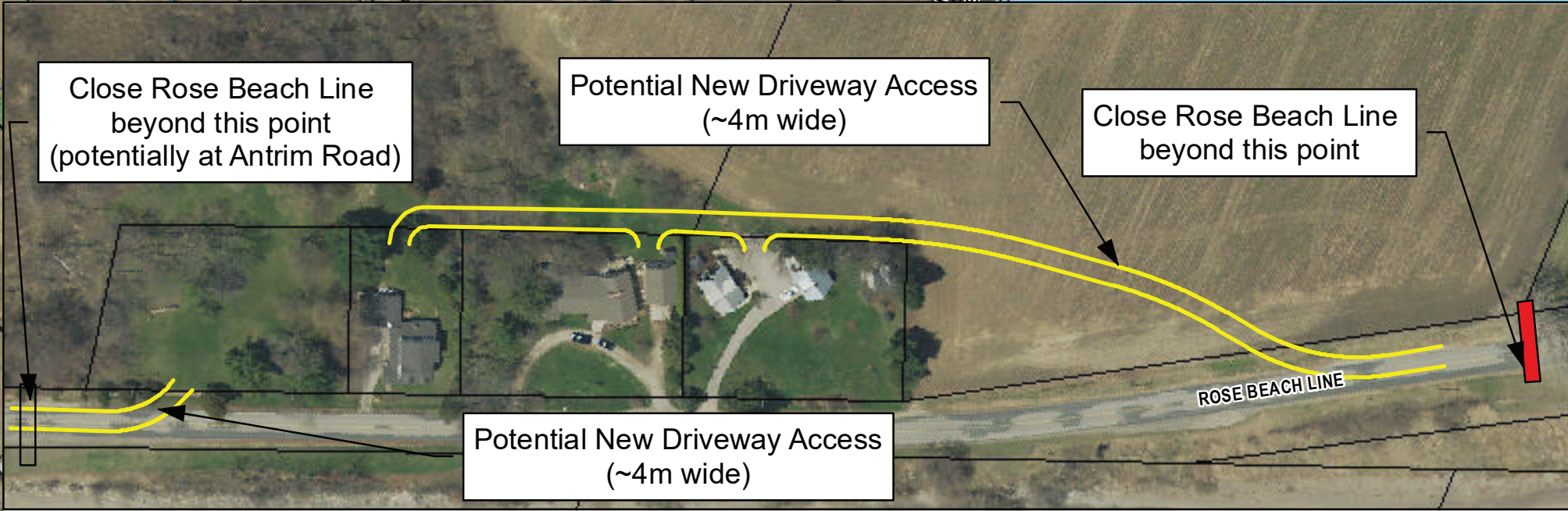
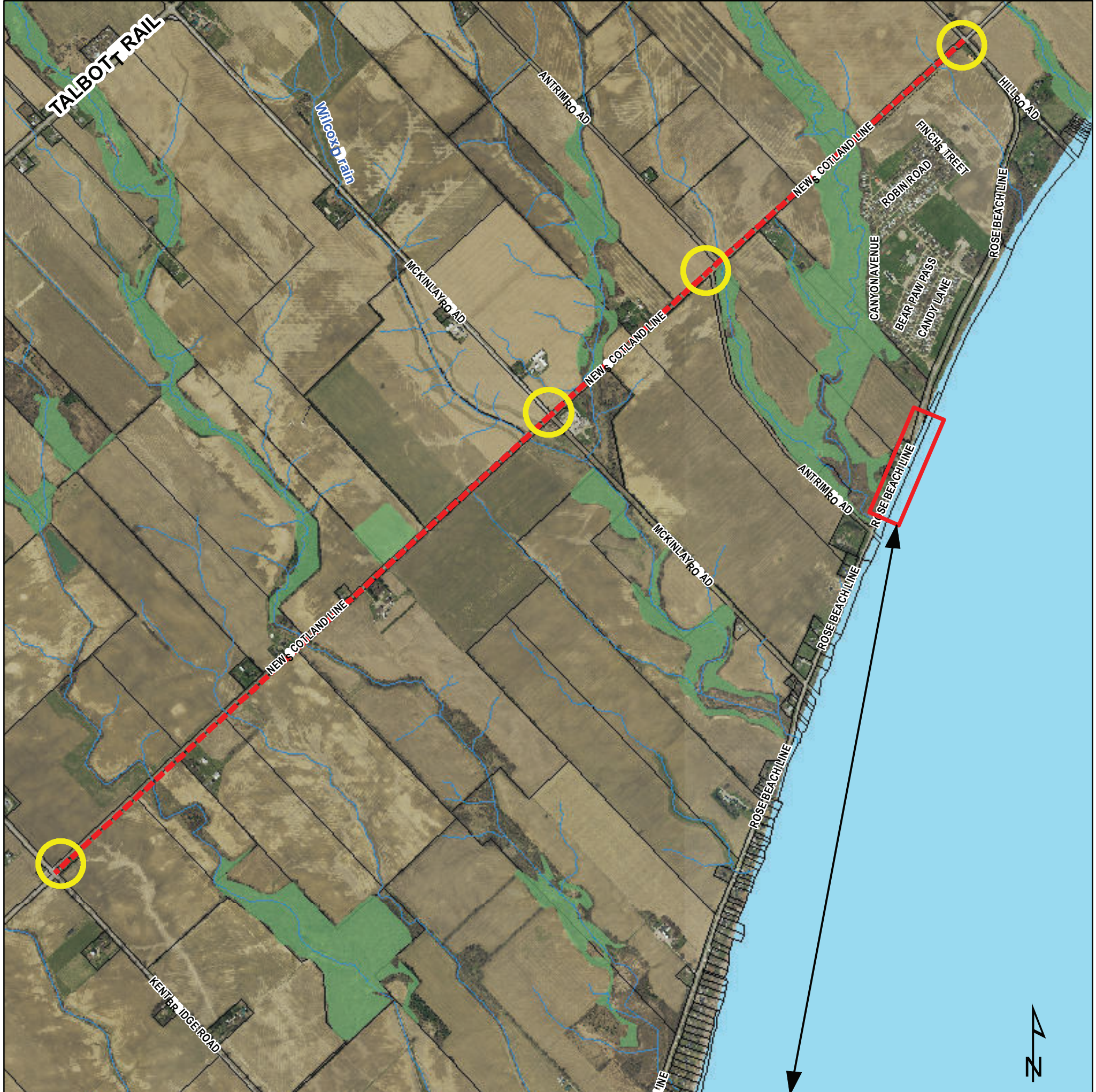
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Attachments: Appendix A: Rose Beach Line Slope Stability Municipal Class Environmental Assessment – Figure 12: Alternative 9

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**Municipality of Chatham-Kent  
Rose Beach Line Slope Stability  
Municipal Class Environmental Assessment  
Schedule 'B'**

**Figure 12:  
Alternative 9**

Date: January 2021	PN: 60547650	Datum: NAD83 UTM17 Source: Municipality of Chatham-Kent
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- Legend**
- Watercourse / Drain
  - Alternative 4 Road Upgrade Location
  - Alternative 9 New Private Driveway
  - Natural Heritage Study Area
  - Woodlands
  - Potential for Intersection Improvement
  - Lot Lines

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