

Public Information Centre #2 – Technical and Environmental Assessments Presentation – Narration

Slide 1

Hello, welcome to the for Public Information Centre #2 for the Municipal Class EA Study for the Coleraine Drive Grade Separation, undertaken by the Region of Peel.

This presentation is in addition to the Main Overview presentation and provides further details on the evaluation and technical assessments completed in support of the study.

We encourage you to provide feedback on the PIC using the comment boxes and voting tools on the PIC website.

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I would like to acknowledge that the land on which we gather, and on which the Region of Peel operates, is part of the Treaty Lands and Territory of the Mississaugas of the Credit.

Peel Region - the traditional territory of the Anishinabek (Ojibway), Huron-Wendat, Haudenosaunee (Iroquois), and home to the Métis, was most recently, the territory of the Mississaugas of the Credit First Nation.

On this day our meeting place is still occupied by many Indigenous peoples (i.e., First Nations, Métis, and Inuit) from across Turtle Island (North America). We are grateful to have the opportunity to work on this land, and by doing so, we give our respect to its first inhabitants.

A shared understanding of how our collective past brought us to where we are today will help us walk together into a better future.

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This slide summarizes the evaluation completed for the Road Under Rail and Road Over Rail options. The evaluation will be detailed in the final Environmental Study Report, completed at the end of this study.

The two design options were evaluated through key criteria:

From a Traffic perspective, both alternatives are similar in that they will eliminate queuing and improve operations

From a Natural Environment perspective, both alternatives will have minimal impact to natural resources in the study area

From a Stormwater Management and Groundwater perspective, Road Under Rail is less preferred as its excavation will result in significant drainage requirements (including an

increased impervious area and the requirement for a pumping station) and groundwater impacts. Road Under Rail configurations often encounter flooding.

From the Pedestrian and Cyclists perspective, both alternatives will accommodate similar upgraded facilities

From the Noise and Air Quality perspectives, both alternatives will have similar impacts

From the Archeological and Cultural Heritage perspectives, both alternatives will have similar impacts

In terms of Access and Property, both alternatives will have similar impacts however the Road Over Rail will have less desirable aesthetics due to the high retaining walls required. Mitigation measures include using exterior design approaches and landscaping (as presented in the Main Overview presentation) however there will be shadow impacts.

In terms of constructability and cost, the Road Under Rail is less desirable due to its large construction staging requirement, deep excavation requirements, need for a rail diversion and increased cost.

Overall, the Road Over Rail option has been identified as the preliminary preferred design alternative.

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A Transportation and Traffic Study was completed as part of this study to review the existing and future traffic conditions in the study area.

With the increase in motor vehicle and train traffic, queues generated at the at-grade crossing are expected to extend beyond the intersection of Coleraine Drive & King Street West/Harvest Moon Drive in the future years. This issue is expected to become worse due to the planned extension of GO Train services to a new Bolton Station, increasing the frequency of trains during peak hours.

Benefits of including either Road Over Rail or Road Under Rail options include:

- Elimination of queuing and reduced risk of train collisions
- Reduction of intersections
- Improved truck network and reliability for movement of goods
- Opportunity for bicycle, pedestrian, and transit facility upgrades.

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A Noise Assessment was undertaken to determine the potential noise impact on neighbouring noise sensitive areas, due to the improvements.

Noise sensitive areas include a range of land uses including private homes, townhouses, hospitals, etc., and the outdoor living area associated with them. Noise prediction modelling was completed to determine the potential noise impact and a summary of the predicted noise levels is shown in the table on the slide. As indicated, comparable noise levels are expected between the two options. The Road Over Rail levels assume mitigation measures are applied, and these include slightly higher roadside barriers.

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A Natural Heritage Study was conducted to determine the presence and extent of natural heritage features and associated constraints in the study area. The study area is located within the Humber River Watershed and the Main Humber sub-watershed, regulated by the Toronto and Region Conservation Authority. The natural features in the study area are shown in the map on the right side of the slide. Woodlands have been identified in the northeast portion of the study area and there is a stormwater pond west of Coleraine Drive. A perched culvert outlet drains into the pond. The pond does not support fish habitat because the culvert is a barrier to fish species. No Species at Risk were observed during field assessment. The alternatives were evaluated based on the habitats, species, and features identified in the study area. Measures to mitigate impacts to the environment are recommended for construction activities.

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Both the Rail Under Road and Rail Over Road alternatives will increase the imperious areas in the study area. Water quality, quantity and erosion controls will be provided by the existing stormwater management pond west of Coleraine Drive and a proposed Low Impact Development stormwater management facility near Manchester Court. The storm sewer system is recommended to be upgraded to accommodate a 10-year design storm to improve drainage and help combat climate change.

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A Hydrogeological Assessment was completed to determine the hydrogeological conditions in the study area. Boreholes were advanced along Coleraine Drive revealed soil characterized by a low hydraulic conductivity. The groundwater table is relatively shallow and the soils are potentially susceptible to internal erosions. Therefore, the Road Under Rail grade separation will require measures to permanently manage groundwater seepage and systems to prevent ground loss or erosion. This is a key disadvantage to the Road Under Rail option compared to Road Over Rail.

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A Stage 1 Archaeological Assessment was conducted to evaluate the study area's archeological potential and recommend strategies for Stage 2 assessment, if required.

The archaeological potential of the study area was evaluated through an examination of its geography, history, previous archaeological fieldwork and current land conditions.

The Stage 1 Assessment determined that the study area did have some archaeological potential but that this potential has been removed for most parts of the area due to deep and extensive disturbances resulting from past urban and industrial development, or sloped areas. Some sections of manicured lawn and overgrown fields still retain archaeological potential, such as the vegetated area at the intersection of Holland Drive and Coleraine Drive. Stage 2 assessment is recommended for this area.

A Cultural Heritage Assessment Report was prepared to research and evaluate properties for their cultural heritage value or interest.

The Cultural Heritage Assessment Report determined there is a protected heritage property and property of culture heritage value or interest in the study area. This heritage property, known as the Shore-Wakely Stone house, is designated under the Ontario Heritage Act for its architectural and historical value, and will not be impacted by the proposed works.

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An assessment of constructability was also undertaken between the two design options. Constructability refers to the ease and efficiency with which the modifications can be built.

The Road over Rail alternative was found to be less complex to construct overall compared with the Road under Rail alternative because it does not require deep excavation, the requirement of a pumping station, or a rail diversion which increases construction requirements and cost. The Road Under Rail option therefore also has the potential for a longer duration of construction.

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A Vibration Assessment was carried out for the study to analyze the Zone of Influence impacted by ground vibrations produced during the anticipated construction operations and their potential impact on neighbouring residential structures.

Machinery of high vibration levels, such as pile drivers and vibratory rollers will likely be used during construction and the vibrations from these are anticipated to be below standard vibration control limits, however, the induced ground vibrations will be felt at surrounding residences. It will be recommended that vibration monitoring be conducted for the duration of construction activities.

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A Shadow Impact Analysis was also undertaken as part of this study. The analysis followed the Requirements for Shadow Studies, as outlined by the Town of Caledon's Town-Wide Design

Guidelines. Example images of the analysis are shown in this slide, with the details included in the Shadow Impact Analysis Report that is available on the region's project website.

The analysis concluded that there will be minimal shadow on neighbouring streets and sidewalks, and therefore not considered an impact by the guidelines.

The shadow on properties adjacent to Coleraine Drive, particularly to the east, will not meet the requirements of the Town's guidelines. The analysis identified that some properties will have less than five consecutive hours of sunlight at certain times of the year and/or shadow on over 50% of their gardens.

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As presented in the Main Overview presentation, typical signalized intersection improvements or a reconfiguration into a roundabout were considered for the intersection of Coleraine Drive at Harvest Moon Drive and King Street. These intersection improvements are independent of the Road Under Rail or Road Over Rail design alternatives. The two intersection improvement alternatives were evaluated, and the key advantages and disadvantages of each alternative are discussed on the following slide.

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Ultimately, a reconfiguration into a roundabout was selected as preferred as it provides safety benefits by encouraging slower speeds and reducing the severity of collisions, reduces delay during off peak hours compared with a conventional signalized intersection, provides for more streetscaping potential, and has less impact to utilities. The roundabout does have a larger footprint compared with the signalized intersection, however the footprint has less impact to sensitive natural features in the area.

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The next steps in the study include completing the preliminary design of the preliminary preferred alternative and preparing an Environmental Study Report to document the study recommendations and decision-making process.

The Environmental Study Report will be made available for a minimum 30-day public review period at the end of the study. Following approval of this Environmental Assessment study, the project will move into a detailed design phase. It is anticipated that the project will go to the detailed design in 2024, followed by property acquisitions and utility relocations. According to the 2021 Transportation Capital Budget, the construction of the project is scheduled to begin in 2029.

We are looking forward to hearing your feedback on the materials presented at this Public Information Centre and to provide your input and feedback, please fill-in the comment boxes and vote in the polls available on the PIC website.

If you have any questions or would like an alternate way to provide feedback, please contact either project manager via the contact information shown here and on the PIC website.