



City of Hamilton Confidential Report for Consideration

To: Chair and Members
General Issues Committee

Date: May 21, 2025

Report No: PW25031

Subject/Title: Red Hill Valley Parkway Design Review from
Greenhill Avenue to King Street

Ward(s) Affected: City Wide

Discussion of this Confidential Report in closed session is subject to the following requirement(s) of the *Municipal Act, 2001*:

- section 239(2)(e) litigation or potential litigation, including matters before administrative tribunals, affecting the City or a local board; and,
- section 239(2)(f) the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose.

Reason for Confidentiality

This Report is being considered in Closed Session because it relates to information that is relevant to ongoing litigation and refers to advice provided to the City that is subject to solicitor-client privilege.

Rational for Maintaining Confidentiality

Staff are recommending that this Report and its discussion remain confidential as public disclosure could adversely impact the City's position in ongoing litigation and associated negotiations as well as reveal confidential solicitor-client communications.

Closed Recommendations

That Report PW25031 respecting the Red Hill Valley Parkway Design Review from Greenhill Avenue to King Street, **BE RECEIVED** for information.

Open Recommendations

That Report PW25031 respecting the Red Hill Valley Parkway Design Review from Greenhill Avenue to King Street, remain confidential.

Key Facts

- This report summarizes findings and next steps from a geometric review of the Red Hill Valley Parkway (RHVP) between the King Street and Greenhill Avenue interchanges, specifically examining roadway banking (superelevation).
- The review responds to a recommendation from Justice Herman J. Wilton-Siegel in the Red Hill Valley Inquiry (November 2023), directing an investigation into whether this section of RHVP was constructed with a superelevation of at least 6%.
- AECOM Canada ULC ("AECOM") was retained to undertake the investigation and used 2019 LiDAR remote sensing technology data provided by the City to analyze the roadway geometry.
- AECOM's analysis confirms that, based on the available data, it appears that in some areas of both northbound and southbound lanes between King Street and Greenhill Avenue, the superelevation is below 6% and recommends that the City address this section to bring the superelevation to within the 2017 Transportation Association of Canada (TAC) Geometric Design Guide guidelines.
- AECOM confirmed there is no immediate or imminent safety risk to drivers, staff, or the public.
- To inform a rehabilitation design, further survey and geotechnical work will be conducted. Options for corrective measures include resurfacing techniques such as overlays, partial-depth removal, or in-place recycling to adjust the superelevation (embankment).
- AECOM's analysis also noted that since the original RHVP design, the TAC Design Guidelines have adjusted the minimum radius for roadways with a design speed of 100 km/hr from 420 m to 440 m. Changing the curve radius for the roadway to meet current design guidelines would require a re-alignment of the road and is not proposed at this time. It may be considered in a future capital rehabilitation project.
- [REDACTED]

Financial Considerations

At a high level, the total estimated cost for the design and rehabilitation of this section of roadway is between \$4 million to \$5 million. This is a Class D estimate and should be

considered preliminary. The estimate will be further refined during the detailed design phase. The full cost of the project will be incorporated into the 2026 Capital Budget cycle.

Design work will commence immediately and will be funded through Project ID 4032355222 – *Corridor Infrastructure Condition and Programming*, which has an available balance of \$432,074.98. The design assignment will be completed by AECOM Canada as part of an extension to their existing agreement.

Background

Following the Report of the Red Hill Valley Inquiry (November 2023) by Justice Herman J. Wilton-Siegel, one of the recommendations required the City to investigate whether this section of RHVP was built with a superelevation of at least 6%. Superelevation refers to the banking of a road curve to help vehicles navigate turns safely. A steeper superelevation supports higher operating speeds. Superelevation is determined based on design speed and the curve radius of the roadway.

AECOM Canada ULC was retained to assess the roadway geometry using 2019 LiDAR data provided by the City. Their review compared the findings against both the 1992 Ministry of Transportation design standards (which applied when RHVP was built in 2005-2006) and the updated current 2017/2023 guidelines. The review was limited to roadway geometry and did not include geotechnical issues, pavement design, environmental impacts, lighting, or stormwater management.

Analysis

During the design and construction of the Red Hill Valley Parkway in 2005 and 2006, the applicable 1992 Ministry of Transportation design standards specified a superelevation of 0.06 m/m (6%) and a curve radius of 420 metres between the segment between the King Street and Greenhill Avenue interchanges. Superelevation refers to the tilting or banking of a roadway, where the outer edge is raised higher than the inner edge to help vehicles safely navigate curves at speed; generally, the higher the vehicle operating speed, the steeper the required superelevation. Curve radius refers to how tight or wide a curve is; in general, higher operating speeds require larger curve radii to allow for safe and controlled navigation.

Based on the AECOM review of the 2019 LiDAR data (a measurement of road geometry using laser-based equipment) provided by the City, it was determined that the superelevation of the curves within the segment is below the guideline of 6%. Furthermore, while the curve radius meets the 1992 Ministry of Transportation design guideline, which were applicable at the time of design and construction, it does not conform to the updated 2017 Transportation Association of Canada design guideline.

AECOM recommends the City reconstruct the RHVP in the noted segment to meet the superelevation requirements of either the 1992 Ministry of Transportation Geometrical Design Manual (1992) or the Geometric Design Guidelines for Canadian Roads, Transportation Association of Canada (TAC) – June 2017 (both recommending 6%).

Additionally, the curve radius should be addressed as part of a future rehabilitation project to meet the updated standards.

Legal Implications

[REDACTED]

Next Steps

- A detailed design is required before the rehabilitation work can begin. This will include additional surveying, geotechnical investigation, and repaving design work to address the superelevation deficiencies.
- A detail design is to begin Q2 2025; construction to be included for consideration in 2026 capital budget. A consultant is being retained to initiate the detailed design process.
- The Transportation Division will continue to review speed limits and signage in the area to identify any interim safety enhancements, with the goal of reducing the likelihood of traffic incidents and improving overall road user safety while longer-term solutions are assessed.
- [REDACTED]
- *Note: AECOM has confirmed there is no imminent danger to the public, staff, or the environment.*

Alternatives

Not Applicable.

Relationship to Council Strategic Priorities

The information presented in this report is consistent with Council Priority 2: Safe & Thriving Neighbourhoods, specifically Outcome 2, which aims to ensure the safe and efficient movement of people by foot, bicycle, transit, or automobile. The ongoing management of the Red Hill Valley Parkway, including the implementation of the Red Hill Valley Parkway Inquiry recommendations, represents a critical component of the City's safe systems approach to road safety and directly supports the objectives outlined in the Vision Zero Action Plan (2019–2025). Furthermore, the proposed next steps are aligned with Council Priority 3: Responsiveness & Transparency, as they establish a clear, accountable, and transparent framework for addressing the Inquiry's recommendations.

Previous Reports Submitted

- [PW24011\(a\), Management Update on Red Hill Valley Parkway Inquiry](#), General Issues Committee, March 19, 2025
- [PW24011, Red Hill Valley Parkway Inquiry: Management Update](#), General Issues Committee, April 3, 2024
- [PW23029\(a\), Red Hill Valley Parkway Inquiry Final Report](#), General Issues Committee, December 6, 2023

Consultation

Lisa Shields, City Solicitor, Legal and Risk Management Services, Corporate Services
Belinda Bain, Partner, Gowling WLG (Canada) LLP
Carolyn Ryall, Director, Transportation, Public Works

Appendices and Schedules Attached

Not Applicable.

Prepared by:

Greg Wuisman, Senior Project Manager
Engineering Services, Public Works

Dipankar Sharma, Manager, Engineering Services

Submitted and recommended by:

Brian Hollingworth, Director (Acting),
Engineering Services