City of Hamilton
Report for Information

To:	Chair and Members Public Works Committee
Date:	April 13, 2026
Report No:	PW26025
Subject/Title:	2023/2024 Annual Collision Report
Ward(s) Affected:	City Wide

Recommendations

That Report PW26025 respecting 2023/2024 Annual Collision Report, **BE RECEIVED** for information.

Key Facts

- Injury and fatal collisions declined 34% since 2019 (1,483 to 978).
- Injury and fatal collisions fell below 1,000 in 2024 for the first time in recent years.
- Total collisions increased as traffic volumes returned following the pandemic.
- Most collisions occur at arterial/collector intersections and on arterial roads.
- The Transportation Division is expanding roadway safety analysis through a partnership with Hamilton Public Health Services to incorporate injury data into future safety reporting.

Financial Considerations

There are no financial impacts associated with this report.

Background

On February 4, 2019, the Public Works Committee approved the Hamilton Strategic Road Safety Program and Vision Zero Action Plan (2019–2025) through Report PW19015. The Vision Zero Action Plan established a long-term framework to improve roadway safety across the city and includes ongoing monitoring of roadway safety performance through regular collision reporting.

Annual collision reporting is a key element of the Vision Zero program, providing Council and the public with information on roadway safety trends, identifying priority safety issues, and supporting future roadway safety initiatives.

In March 2023, Hamilton Police Service implemented a change to the way traffic collision reports are distributed to partner agencies. Collision reports are no longer provided directly to the Transportation Division and are instead submitted to the Ministry of Transportation of Ontario, where they are made available through the provincial collision data request system. This change aligns Hamilton Police Service with reporting practices used by other police services across the province.

As a result of this change, the Transportation Division was required to obtain collision data through the provincial system to continue analyzing collision trends across the transportation network. The City began the process of obtaining access to this system in April 2023. As a result of the transition to the provincial reporting system and the timing of the data release, the 2023 and 2024 collision analysis has been combined into a single report as it was not possible to maintain the annual reporting cycle.

Going forward, the City’s annual collision reporting will return to its typical schedule. The 2025 Annual Collision Report is anticipated to be presented to Public Works Committee in either the fourth quarter of 2026 or the first quarter of 2027.

Analysis

Hamilton is experiencing measurable improvements in roadway safety outcomes. Collisions resulting in injuries or fatalities have declined from 1,483 in 2019 to 978 in 2024, representing a reduction of approximately 34 percent. Fatal and injury collisions are the most serious types of collisions on the transportation network and remain the primary focus of the City's Vision Zero Action Plan.

In 2020 the COVID-19 pandemic impacted travel patterns between April and December 2020 peak period traffic volumes declined by approximately 50 percent compared to pre-pandemic levels. These reductions in travel activity corresponded with a decline in the total number of collisions during this period.

In the years that followed, traffic volumes gradually returned to pre-pandemic levels. As travel activity increased in 2023 and 2024, the total number of collisions increased accordingly. However, injury and fatal collisions continued to decline which indicates that roadway safety outcomes are improving.

The 2023/2024 Annual Collision Report, attached to PW26025 as Appendix 'A', represents the seventh edition of the City's collision reporting program and provides a high-level review of collisions occurring on Hamilton roadways over a five-year period from 2020 to 2024.

The analysis contained within the report supports the Vision Zero Action Plan, which focuses on eliminating traffic-related fatalities and serious injuries across the transportation network.

The 2023/2024 Annual Collision Report highlights several important trends related to roadway safety in Hamilton:

- Injury and fatal collisions decreased by 34 percent, from 1,483 in 2019 to 978 in 2024.
- In 2024, injury and fatal collisions fell below 1,000 for the first time in recent years.
- While total collisions increased as travel volumes recovered after the pandemic, severe collisions continued to decline.
- The City is partnering with Hamilton Public Health Services to expand roadway safety analysis and better understand injury outcomes related to traffic collisions.

These findings provide insight into how roadway safety is evolving and supports the City's Vision Zero efforts to eliminate serious injuries and fatalities. Vision Zero recognizes that collisions may still occur within a complex transportation system; however, the goal is to ensure that these events do not result in serious injury or loss of life.

City-Wide Collision Trends:

Hamilton experiences approximately 8,496 collisions per year on average over the ten-year period from 2015 to 2024.
Recent collision statistics are summarized below.

Year:	Injury & Fatal Collisions:	Fatal Collisions:	Property Damage Collisions:	Total Collisions:
2019	1,483	14	8,417	9,900
2020	1,154	13	5,456	6,610
2021	1,178	16	5,637	6,815
2022	1,179	16	7,085	8,264
2023	1,048	14	7,795	8,843
2024	978	14	8,796	9,774

Total collisions declined during 2020 and 2021 when travel activity decreased during the pandemic. As travel volumes increased in 2023 and 2024, total collisions increased accordingly. However, collisions resulting in injuries or fatalities declined, indicating that while overall traffic activity has increased, the severity of collisions has decreased.

To provide additional context regarding the scale of collisions occurring across the transportation network:

- One collision occurs approximately every 54 minutes.
- One injury collision occurs approximately every nine hours.
- One pedestrian collision occurs approximately every 1.9 days.
- One cyclist collision occurs approximately every 2.4 days.

Confirmed data for 2025 indicates that collisions resulting in injuries or fatalities continue the downward trend and remain below 1,000 per year. This information will be reported in detail as part of the 2025 Annual Collision Report.

Collision Severity Trends and Context:

In 2019, collisions resulting in injuries or fatalities represented approximately 15 percent of all collisions. By 2024, this proportion has declined to approximately 10 percent of collisions. This represents a one-third reduction in the likelihood that a collision results in injury or fatality.

Reducing the likelihood that a collision results in injuries is a central objective of the Vision Zero Safe Systems approach, which focuses on designing transportation networks that reduce the risk of serious harm when collisions occur. While the total number of collisions has fluctuated as traffic volumes returned following the COVID-19 pandemic, the likelihood that a collision results in injury or fatality has declined.

14 fatal collisions occurred in both 2023 and 2024, which is consistent with the five-year average of 14.6 fatalities per year and the ten-year average of 13.9 fatalities per year.

Because fatal collisions occur relatively infrequently, annual totals can fluctuate and are more difficult to influence through individual roadway safety interventions. It is also important to recognize that the difference between a fatal collision and an injury collision can depend on circumstances such as travel speed, point of impact, and the physical vulnerability of those involved. As a result, reductions in collisions resulting in injury are an important indicator of improved roadway safety outcomes, as each injury collision represents an event that had the potential to result in a more severe outcome.

When considered alongside population growth and increasing travel activity across the transportation network, the continued decline in injury collisions suggests that roadway safety initiatives implemented through the City's Vision Zero program are contributing to reducing the overall risk of serious harm on Hamilton's roadways.

Public Perception and Collision Risk:

The collision analysis presented in the 2023/2024 Annual Collision Report also provides an opportunity to consider how public perceptions of roadway safety compare with measured collision trends and where community concerns are most frequently raised.

Community concerns about roadway safety often arise on local residential streets, where residents experience traffic conditions directly within their neighbourhoods. At the same time, collision data indicates that the most serious collisions occur elsewhere within the transportation network. Understanding this difference is an important consideration in roadway safety planning.

The Transportation Division regularly receives requests from residents and Ward offices to review roadway safety concerns. On average, the Roadway Safety team receives approximately 1,500 to 2,000 requests annually. Analysis indicates that the majority of requests relate to local residential roads, which account for approximately 64 percent of

all requests, compared to 20 percent for arterial roads and 16 percent for collector roads.

Collision data presents a different picture of roadway safety risk. The Annual Collision Report indicates that most fatal and injury collisions occur on higher-volume arterial roads and at major intersections, where traffic volumes, turning movements, and interactions between road users are greatest.

While nearly two-thirds of roadway safety requests relate to local roadways within residential neighbourhoods, the difference between requests versus where serious collisions occur highlights an important consideration in roadway safety efforts. Resident requests provide valuable insight into how roadway conditions are experienced at the neighbourhood level and remain an important input to the City's overall roadway safety program.

Investigating and responding to requests on local streets requires time and resources. Transportation Division resourcing capacity is finite which means that prioritizing locations that experience relatively low numbers of serious collisions can reduce the City's ability to focus safety analysis and initiatives where the potential safety benefit in reducing serious injuries and fatalities is greatest.

This presents an opportunity to strengthen how roadway safety concerns are identified and discussed within the community. While neighbourhood-level concerns such as speeding and traffic behaviour remain important and will continue to be reviewed by the Transportation Division, collision analysis provides important insight into where the highest risk of serious injury exists and where the application of resources are most beneficial.

Improving public understanding of where serious collisions occur can help support more informed community dialogue about roadway safety and help direct attention toward

locations where safety improvements have the greatest potential to reduce injuries and save lives under the City's Vision Zero Action Plan.

Where Collisions Occur:

Analysis of collision locations indicates that 54 percent of collisions occur at intersections. Of these 68.3 percent occur at signalized intersections and 23.8 percent occur at stop-controlled intersections. While most collisions occur at intersections, the severity of collisions varies depending on location. Fatal collisions more frequently occur along roadway segments and injury collisions at intersections.

Understanding where collisions occur helps guide engineering improvements, signal timing adjustments, and targeted roadway safety initiatives. Because intersections account for most collisions within the roadway system, they represent an important focus of the City's roadway safety review process.

The Transportation Division regularly analyzes collision data to identify the intersections and roadway segments with the highest collision frequencies. In-service road safety reviews are used to review the annual top ten intersections and roadway segments identified through collision analysis. These reviews examine roadway design, traffic control, operational conditions, and road user interactions to identify opportunities to improve safety. Recommended safety improvements arising from these reviews are routinely implemented to enhance safety.

Comparison of high-collision screening results across past annual collision reports shows that the locations experiencing the highest number of collisions change over time. Several intersections that appeared on earlier high-collision screening lists are no longer on the most recent five-year analysis period which is a positive outcome.

Intersections previously identified through collision screening but not included in the most recent analysis include:

- John Street South at Main Street East (identified in earlier screening periods including 2015–2019)
- Main Street East at Victoria Avenue South (identified in earlier screening periods including 2015–2019)
- Mohawk Road East at Upper Wentworth Street (identified in earlier screening periods including 2018–2022)
- North Service Road at Ramp North Service Road to QEW Toronto (identified in earlier screening periods including 2018–2022)
- Gray Road at Highway No. 8 (identified in earlier screening periods including 2018–2022)

Several of these locations appeared on high-collision screening lists dating back nearly ten years (and in some cases longer) in earlier Annual Collision Reports. The removal of these locations from the list can indicate that roadway safety improvements, operational adjustments, and broader network safety initiatives are influencing collision outcomes at specific locations.

Several intersections continue to appear across multiple reporting periods, including locations such as Mohawk Road West at Upper James Street, Fennell Avenue West at Upper James Street, and Barton Street East at Centennial Parkway North. The continued presence of some locations reflects the complexity of managing roadway safety within a large and evolving roadway system and helps identify corridors where ongoing safety improvements remain a priority.

Monitoring changes in high-collision locations over time is an important component of the City’s data-driven approach to roadway safety under the Vision Zero Action Plan.

Urban and Rural Collision Context:

The 2023/2024 Annual Collision Report introduces new analysis comparing collisions occurring in urban and rural areas, this information was added as part of the

Transportation Division's ongoing commitment to continuous improvement in roadway safety reporting and analysis.

Hamilton's transportation network includes approximately 6,500 lane kilometres of roadway serving both urban and rural areas. Approximately 66 percent of the network is in urban areas, while 34 percent is in rural areas. 92 percent of collisions occur in urban areas, and 8 percent occur in rural areas. Urban areas account for approximately 89.6 percent of collisions resulting in injuries or fatalities, and rural areas represent approximately 10.4 percent.

When normalized by transportation network length, collision density in urban Hamilton is significantly higher. Urban areas experience approximately 15.3 collisions per centre-line kilometre, compared to approximately 2.5 collisions per centre-line kilometre in rural areas, indicating that collisions occur roughly six times more frequently per kilometre on urban roads. This is driven by higher traffic volumes, greater intersection density, and more frequent interactions among vehicles, pedestrians, and cyclists in urban areas. While collisions in rural areas may be associated with higher operating speeds and greater severity when they occur, the urban transportation network represents the greater overall roadway safety concern due to the substantially higher frequency and concentration of collisions.

Rural roads often operate at higher speeds and collisions occurring in rural environments can result in serious outcomes, the overall frequency of collisions resulting in injuries or fatalities remains substantially lower compared to urban areas. Understanding these patterns provides important context for roadway safety efforts and traffic collision analysis helps identify where the injuries occur and where safety initiatives would have the largest benefit.

Collisions Involving Vulnerable Road Users:

Collisions involving pedestrians and cyclists are significantly more likely to result in injuries or fatalities than other collision types. Between 2020 and 2024, 90.9 percent of pedestrian collisions resulted in injury, with 2.7 percent resulting in fatality. Similarly, 70.9 percent of cyclist collisions resulted in injury, including 0.4 percent resulting in fatal injury. By comparison, approximately 10.4 percent of collisions not involving pedestrians or cyclists resulted in injuries, while approximately 0.1 percent resulted in fatalities.

Over the past five years, pedestrian collisions have fluctuated between 172 and 228 per year, while cyclist collisions have ranged from 121 to 154 per year. In 2023 there were 228 pedestrian collisions and 190 in 2024. Conversely, in 2023 there were 121 cyclist collisions and 154 in 2024. Further, there were 4 pedestrian fatalities in 2023 and 3 in 2024, while 1 cyclist fatality occurred in each of 2023 and 2024.

The majority of pedestrian and cyclist collisions occurred at arterial/connector intersections, accounting for 66.2 percent of pedestrian collisions and 68.4 percent of cyclist collisions.

These pedestrian and cyclist collision statistics, particularly the elevated likelihood of injuries or fatalities when vulnerable road users are involved in a collision, reinforce why protecting vulnerable road users remains a key focus.

Collision Trends on the Lincoln M. Alexander Parkway and Red Hill Valley Parkway:

The Annual Collision Report includes analysis of collisions occurring on the LINC and the RHVP. The severity of collisions on both facilities over the most recent five-year period (2020–2024) was reviewed as part of this analysis.

The parkways experienced reduced traffic the COVID-19 pandemic, however as of 2023 volumes on both the LINC and RHVP have exceeded pre-pandemic levels. Despite the increased traffic volumes, trends on the LINC indicate improvements in collision severity. In 2023, the LINC experienced a 20.9 percent increase in total collisions compared to 2022; however, fatal and injury collisions decreased by 24 percent. In 2024, both total collisions and fatal and injury collisions declined further, decreasing by 16.8 percent and 31.6 percent respectively compared to 2023. There was one fatal collision on the LINC in 2023 and two fatal collisions in 2024.

RHVP collision trends indicate year-to-year variability and in 2023 there was a 6.3 percent decrease in total collisions compared to 2022; however, fatal and injury collisions increased by 26 percent. In 2024, total collisions increased by 6.3 percent compared to 2023, while fatal and injury collisions decreased by 8.7 percent. There was one fatal collision on the RHVP in each year from 2021 through 2024.

Other notable trends include a reduction in collisions occurring under non-dry road surface conditions on the RHVP, which declined from 57.8 percent during the 2016–2020 period to 21.2 percent during the 2020–2024 period.

Speed-related collisions remain a contributing factor on both facilities, accounting for approximately 30 percent of collisions on the LINC and 59 percent on the RHVP.

Advancing Road Safety Analysis:

Hamilton is enhancing roadway safety analysis by integrating public health injury data alongside traditional transportation information. This work is being enabled through a partnership between the City’s Transportation Division and Hamilton Public Health, positioning Hamilton as a leader among municipalities exploring how transportation and public health data can be combined to better understand roadway safety outcomes and strengthen evidence-based decision-making.

While Vision Zero recognizes road safety as a public health issue and encourages multidisciplinary collaboration, municipal roadway safety programs have historically relied primarily on transportation data sources such as police-reported collision records, roadway characteristics, and traffic volumes. Through this partnership with Public Health, the Transportation Division is advancing an emerging analytical approach that remains relatively uncommon in municipal Vision Zero programs.

Health administrative datasets provide information on emergency department visits, hospitalizations, and fatalities associated with traffic-related injuries and can capture injury outcomes that may not always be reflected in police-reported collision statistics alone. Public Health conducted an analysis of pedestrian and cyclist injuries resulting from traffic collisions, which suggests that Hamilton residents may experience higher rates of emergency department visits and hospitalizations compared to residents in similar municipalities. It should be noted that this is new analysis and the context and implications for the road safety program are still being explored. Differences in travel behaviour, levels of exposure to walking and cycling, built environment characteristics, and reporting practices across jurisdictions may also influence these comparisons. Further analysis is underway to better understand the factors contributing to these observed differences.

Comparison of Public Health injury data with traditional transportation data indicates that some collisions involving vulnerable road users may not be fully represented in police-reported collision records alone. This demonstrates the value of using complementary data sources to strengthen the City’s understanding of roadway safety outcomes and support more informed, evidence-based transportation safety planning.

Public Health analysis includes insights into demographic and equity dimensions of roadway safety outcomes. There are identified notable differences in injury rates across neighbourhoods experiencing varying levels of marginalization. For example, pedestrian injury rates ranged from approximately 7.8 emergency department visits per 100,000

residents in the least marginalized neighbourhoods to approximately 53.9 per 100,000 residents in the most marginalized neighbourhoods.

Examining these patterns alongside traditional collision data strengthens evidence-based decision making by providing additional insight into where injuries are occurring, and which communities may be disproportionately affected. Incorporating this information into the roadway safety program helps inform how safety measures are prioritized and applied so that improvements can achieve the greatest potential.

While public health injury data is not included in the 2023/2024 Annual Collision Report, the Transportation Division is continuing to examine how this information can complement traditional traffic safety data. As this work progresses, future Annual Collision Reports will incorporate public health data alongside police-reported collision statistics to provide a more comprehensive understanding of roadway safety outcomes and further strengthen evidence-based roadway safety planning.

Economic Impacts of Traffic Collisions:

Traffic collisions create significant economic impacts beyond the immediate human consequences. Transport Canada publishes national estimates of the societal cost of traffic collisions which are to understand the broader economic impacts of collisions and to evaluate the benefits of roadway safety investments. Societal costs include emergency response, health care treatment and rehabilitation, property damage, insurance administration, lost productivity, and quality-of-life impacts experienced by individuals and families.

According to Transport Canada, the societal cost of a fatal traffic collision is approximately $8.1 million. Injury collisions also generate significant costs, with estimated societal costs of approximately $720,000 for a serious injury and $160,000 for a minor injury. Applying these planning-level estimates to Hamilton’s collision data provides an indication of the broader economic impacts of traffic collisions. In 2023 and

2024, Hamilton experienced 2,026 collisions resulting in injury or fatality, including 28 fatal collisions.

Using Transport Canada's fatality cost estimate together with an average cost assumption for injury collisions, collisions resulting in injury or fatality in Hamilton during this two-year period represent an estimated societal cost of approximately $470 million.

This high estimated societal cost illustrates that the impacts of traffic collisions extend well beyond those directly involved. Costs are distributed across health care systems, employers, insurers, governments, families, and communities. As a result, roadway safety can reasonably be understood as a shared societal responsibility, with improvements benefiting both public safety and the broader economy.

Roadway Safety Implications:

The collision trends presented in the 2023/2024 Annual Collision Report demonstrate measurable progress in improving roadway safety across Hamilton's transportation network.

Collisions resulting in injury or fatality declined from 1,483 in 2019 to 978 in 2024, a 34 percent reduction, despite continued growth in population and travel activity. This marks the first time in recent years that injury and fatal collisions have fallen below 1,000 annually. Over the same period, the proportion of all collisions resulting in injury or fatality declined from approximately 15 percent to 10 percent, indicating an overall reduction in collision severity across the transportation network.

Taken together, these trends suggest that roadway safety in Hamilton is moving in a positive direction and reflect the City's continued commitment to reducing serious injuries and fatalities through the Vision Zero Action Plan.

Maintaining a data-driven approach to roadway safety will remain essential to sustaining this progress and advancing further improvements. The current Vision Zero Action Plan covers the period from 2019 to 2025, and the Transportation Division is currently developing the next phase of the plan to further strengthen the City's roadway safety program and continue advancing Vision Zero objectives. The updated Vision Zero Action Plan will be brought forward for Council's consideration in 2026.

Alternatives

There are no identified alternatives regarding the recommendation in this report.

Relationship to Council Strategic Priorities

The recommendation in this report is in direct alignment with Council Priority 2: Safe & Thriving Neighbourhoods, Outcome 2: Make sure people can safely and efficiently move around by foot, bike, transit or car. The continued annual reporting of collision data helps measure progress and working towards meeting the goals and objectives of the City's Vision Zero (2019-2025) Action Plan.

Previous Reports Submitted

- PW23062 City of Hamilton Annual Collision Report- 2022 Statistics and Trends
- PW22061 City of Hamilton Annual Collision Report- 2021 Statistics and Trends

Consultation

- Public Health
- Hamilton Strategic Road Safety Committee
- Hamilton Police Services

Appendices and Schedules Attached

Appendix A: 2023/2024 Annual Collision Report

Prepared by:	Mike Field, Acting Director Public Works, Transportation
	Josh van Ravens, Project Manager Traffic Services Public Works, Transportation Operations
Submitted and recommended by:	Mike Field, Acting Director Public Works, Transportation