



The Regional Municipality of Durham Strategic Road Safety Action Plan **Public Report**



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and the Chief Administrative Officer 1

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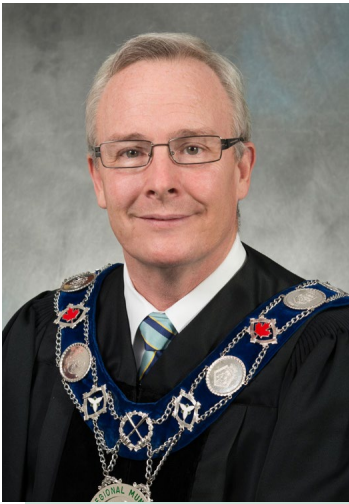
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A Message from the Regional Chair & CEO and the Chief Administrative Officer



Vision Zero is grounded in a clear principle: **no loss of life or serious injury on our roads is acceptable.** This public report highlights the progress we've made in our Strategic Road Safety Action Plan through co-ordinated efforts in safer road design, education and enforcement. Collisions carry a significant cost, but the human impact is far greater. Road safety is a shared responsibility, and together we can ensure everyone gets home safely.

John Henry, Regional Chair and CEO

Elaine Baxter-Trahair, Chief Administrative Officer





Introduction

Importance of Road Safety and Need for Action

In 2018, despite the Region's ongoing road safety initiatives and investments, more than 6,700 reported collisions occurred across the transportation network, equivalent to approximately one collision every 1.5 hours. These collisions resulted in significant human, social, and economic impacts, including fatalities and injuries, property damage, traffic delays and congestion, and increased demand on emergency response and healthcare services. The scale and impact of these collisions highlighted the need for a more coordinated, data-driven, and proactive approach to road safety.

In response, the Region developed its first Strategic Road Safety Action Plan (SRSAP) for implementation between 2019 and 2024. The SRSAP established a comprehensive framework to support the Region's commitment to reducing fatal and injury collisions and advancing a safer, more sustainable transportation system for all road users. The plan introduced a series of engineering, education, enforcement, policy, and partnership initiatives aligned with Vision Zero and Safe System principles to improve safety, mobility, network reliability, and overall quality of life across the Region.

Following the completion of the first implementation cycle, the Region undertook an evaluation study to assess the effectiveness of its road safety program and the impact of the implemented SRSAP initiatives. The evaluation examined the successes, lessons learned, remaining gaps, and opportunities for improvement to help inform the next phase of the Region's Vision Zero and road safety planning efforts.



Purpose

This report summarizes the progress and outcomes of the Regional Municipality of Durham's 2019 – 2024 Strategic Road Safety Action Plan. Its purpose is to communicate the actions undertaken over the implementation period, demonstrate the measurable impact of road safety initiatives, and provide transparency and accountability to Council, partners, and the public.

The report highlights key trends in collision data, summarizes the effectiveness of implemented engineering, enforcement, and educational measures, and identifies areas requiring continued attention. It also outlines future priorities and next steps to support ongoing progress toward reducing fatal and injury collisions and advancing the Vision Zero commitment.

Strategic Road Safety Action Plan Development

Guiding Principles and Plan Development Process

The SRSAP was developed using a Vision Zero and Safe System approach, grounded in the principle that no loss of life or serious injury on the transportation network is acceptable. Rather than focusing primarily on individual road user behaviour, the Safe System approach recognizes that road safety is a shared responsibility and requires coordinated action across planners, engineers, designers, enforcement agencies, educators, policymakers, and all road users. The goal is to create a transportation system that is inherently safer and more forgiving of human error. Figure 1, adapted from the Transportation Association of Canada, illustrates the Safe System approach and highlights the key elements, principles, and action areas that together create a comprehensive, layered strategy to improve safety for all road users.



Figure 1: Safe System Approach Diagram

The Strategic Road Safety Action Plan was developed through a collaborative, multi-partner process involving the Regional Municipality of Durham, local municipalities, police services, school boards, public health representatives, road safety advocacy groups, and provincial agencies. Historical collision data, technical analysis, partner expertise, and public input were combined to identify priority safety issues, define emphasis areas, and develop targeted countermeasures. This evidence-based and coordinated approach ensured the plan reflected both leading practices and the specific road safety needs of the Region, while also fostering shared ownership and long-term commitment to Vision Zero objectives.

Figure 2 illustrates the development process of the SRSAP. While the initial plan development focused on establishing the strategy, priorities, and implementation framework, it did not include the formal evaluation component shown in the figure. A separate follow-up study was subsequently completed to address and assess the evaluation element of the framework.



Figure 2: Strategic Road Safety Action Plan Development Process

Vision and Goal

The Strategic Road Safety Action Plan established a bold and uncompromising vision: to eliminate fatalities and injuries on the Region’s transportation network. To translate this vision into measurable action, the SRSAP established a clear, time-bound performance goal of achieving a minimum 10 percent reduction in fatal and injury collisions within five years. This goal created a strong foundation for accountability, performance monitoring, and evidence-based decision-making.



Collision Emphasis Areas

Eight collision emphasis areas were identified through a rigorous, evidence-based process that combined detailed collision analysis, partner agency expertise, and public input to determine the most significant road safety risks across the Region. By prioritizing the collision types, behaviours, and user groups associated with the greatest frequency and severity of collisions, the SRSAP ensured that investments and interventions were strategically focused where they could achieve the greatest safety benefit. Figure 3 summarizes the collision emphasis areas included in the 2019-2024 SRSAP.



Figure 3: Strategic Road Safety Action Plan Collision Emphasis Areas

Strategic Road Safety Action Plan Implementation

Implementation Approach and Governing Bodies

To improve road safety across the Region, a five-year action plan was developed that brought together over 200 road safety initiatives into a single, coordinated strategy. These measures included a combination of engineering, enforcement, and education strategies that work together to improve safety for all road users. Engineering measures focused on making physical improvements to roads and intersections, enforcement measures aimed to encourage safer driving behaviours and improve compliance with traffic laws, and education measures focused on increasing public awareness and promoting safe travel habits.

The measures were selected collaboratively by the Region and its partner agencies, reflecting a shared commitment to improving safety for all road users. This integrated approach ensured initiatives were practical, well-coordinated, and delivered in a consistent and accountable manner.

To support implementation, two governing bodies were established.



Vision Zero Task Force Committee

The Vision Zero Task Force Committee provides strategic leadership and oversight for the SRSAP, monitoring progress toward collision reduction targets, evaluating program effectiveness, and guiding the implementation of engineering, enforcement, and education and engagement initiatives. The Vision Zero Task Force Committee reviews road safety performance, identifies emerging issues and best practices, coordinates with partner agencies and stakeholders, and reports regularly to Council on Durham's progress toward achieving short- and long-term road safety objectives.



Road Safety Implementation Committee

The Road Safety Implementation Committee brings together key partner agencies to coordinate and implement the countermeasures, programs, and initiatives identified in the Strategic Road Safety Action Plan in support of Vision Zero objectives.

Together, this collaborative governance structure established a strong foundation for implementing the action plan effectively and advancing a safer transportation network across the Region.

Overview of Countermeasures

During the five-year implementation period, more than 250 road safety improvements and initiatives were delivered across the Region. Several of the key engineering countermeasures implemented on the regional road network as part of the Strategic Road Safety Action Plan are highlighted below. Together with complementary enforcement and education initiatives, these improvements supported a comprehensive approach to road safety across the Region.

	21 community safety zones to support reduced speeds and improve safety in sensitive areas, including school zones Targeted emphasis area: Aggressive Driving, Distracted Driving, Pedestrians		8 buffered paved shoulders or bicycle lanes to improve separation between road users and reduce collision risk Targeted emphasis area: Cyclists
	4 pedestrian crossovers to provide clearly marked and controlled pedestrian crossing locations Targeted emphasis area: Pedestrians, Intersections		2 roundabouts to replace traditional intersections Targeted emphasis area: Intersections
	2 flashing beacons to increase awareness of all-way stop controlled intersections Targeted emphasis area: Pedestrians		7 protected left turn signal phases to reduce conflict between turning vehicles and opposing traffic Targeted emphasis area: Intersections, Aggressive Driving, Pedestrians
	26 signalized bicycle crossrides to help cyclists cross more safely Targeted emphasis area: Cyclists, Intersections		28 leading pedestrian intervals to give pedestrians a head start crossing the road Targeted emphasis area: Pedestrians, Intersections



31 mobile and 9 fixed automated speed enforcement deployments to support speed compliance

Targeted emphasis area:
Aggressive Driving



10 positive offset left turn lanes to improve sightlines for left-turning movements

Targeted emphasis area:
Intersections



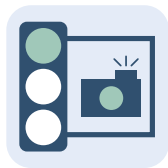
12 all-way stop controls to improve intersection control and reduce conflict between competing traffic movements

Targeted emphasis area:
Intersections



7 community 40 km/h speed limit zones to reduce vehicle operating speeds and improve safety in residential areas

Targeted emphasis area:
Aggressive Driving, Distracted Driving, Pedestrians



12 red light cameras to deter red light running

Targeted emphasis area:
Aggressive Driving,
Distracted Driving



54 educational activities to increase awareness of road safety risks and promote safe travel behaviours

Targeted emphasis area:
All



4 intersection and 3 mid-block pedestrian signals installed to provide safer, controlled crossing opportunities for pedestrians at high traffic locations.

Targeted emphasis area:
Pedestrians, Intersections



Various enforcement activities conducted to address key road safety concerns, including impaired driving, distracted driving, and speeding.

Targeted emphasis area:
Aggressive Driving, Distracted Driving, Impaired Driving, and Commercial Vehicles

Note: Pages 8 and 9 highlight the key countermeasures delivered under the five-year Strategic Road Safety Action Plan (SRSAP) across both regional and municipal road networks.

Safety Outcomes

Overall Collision Trends

Safety outcomes achieved through the implementation of the Strategic Road Safety Action Plan were identified using collision and safety performance data to assess changes before and after implementation.

The COVID-19 pandemic had a significant impact on both program implementation activities and travel behaviour across the Region. Public health restrictions and stay-at-home orders limited in-person education, outreach, and engagement initiatives, which constrained the delivery of certain program components during this period. The years most affected by the pandemic (2020–2022) were excluded from the collision analysis due to atypical traffic volumes and shifts in travel patterns.

Despite these challenges, more than 250 road safety improvements and initiatives were delivered across the Region during the five-year implementation period. Following implementation of the SRSAP, fatal and injury collisions decreased by 17 percent on Regional roads and by 11 percent across the Region overall (including both Regional and local municipal roads), exceeding the 10 percent reduction target. Figure 5 illustrates the average annual fatal and injury collisions by jurisdiction, before and after the SRSAP implementation.

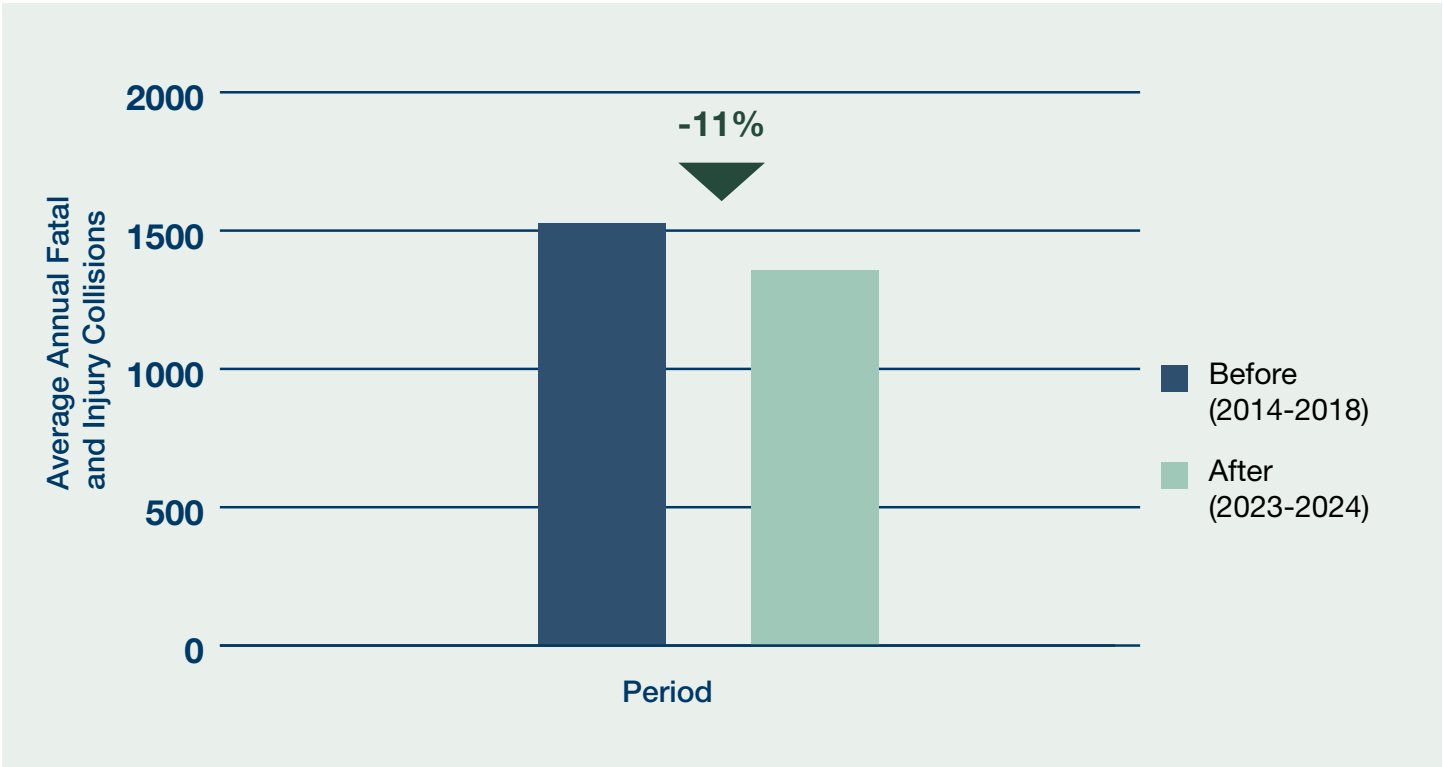
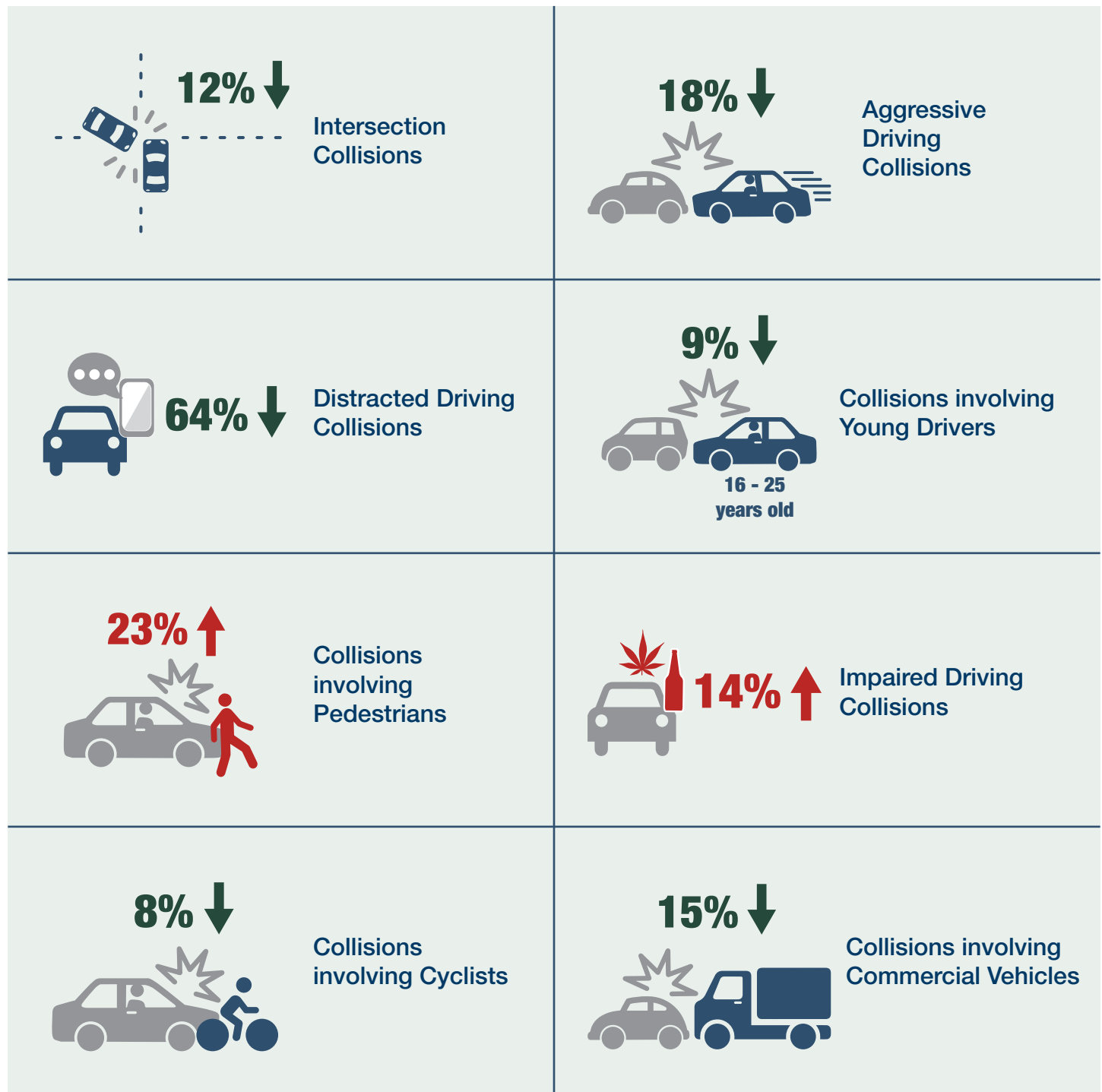


Figure 5: Average Annual Fatal and Injury Collisions by Jurisdiction, Before and After SRSAP Implementation

Trends by Emphasis Area

The average annual fatal and injury collisions, before and after the implementation of the SRSAP, by emphasis area is summarized below.

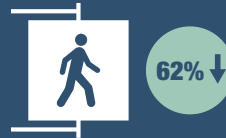


Countermeasure Effectiveness

Countermeasure effectiveness highlights the impact of key road safety improvements implemented across the Region by examining changes in collisions at locations where specific measures were introduced. The following findings were observed.



Locations with new community safety zones experienced a 38 percent reduction in pedestrian- and cyclist-related collisions.



Leading pedestrian intervals reduced pedestrian-involved collisions by 62 percent.



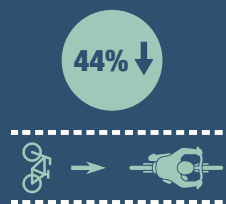
The implementation of roundabouts resulted in a 72 percent reduction in fatal and injury collisions.



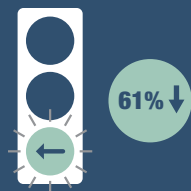
Red light cameras contributed to a 48 percent reduction in fatal and injury angle collisions.



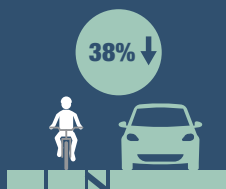
All-way stop controls reduced angle and turning movement collisions by 64 percent.



The introduction of signalized bicycle crossrides reduced cyclist-involved collisions by 44 percent.



Locations with new protected left-turn signal phasing experienced a 61 percent reduction in fatal and injury left-turning movement collisions.



Locations with new buffered paved shoulders or bicycle lanes saw a 38 percent reduction in fatal and injury collisions.

Overall, these results demonstrate that targeted, evidence-based countermeasures are effective in reducing collisions.

Lessons Learned

A supplementary benchmarking exercise was conducted to identify opportunities for improvement and inform recommendations for the next iteration of the SRSAP. This included a comprehensive review of the Region's organizational structure and operations, as well as input from key staff involved in implementation. Key recommendations from this exercise are outlined below.



Streamline the Action Plan

Focus on up to five emphasis areas based on collision data and high-risk behaviours, supported by evidence-based countermeasures and measurable targets to maximize impact and resource efficiency.



Develop a Data Collection Plan

Outline data sources, collection methods, update schedules, and quality control procedures to ensure consistent, reliable data. Explore additional sources, such as police, insurance, and hospital data, to improve completeness and analysis.



Review and Update Policies

Conduct a comprehensive review of current road safety policies and design standards to identify gaps or ambiguities that may hinder consistent application of Vision Zero principles.



Expand Staffing Capacity and Funding

Increase staffing for Vision Zero through permanent, seasonal, or temporary roles, staff reallocation, or consultants. Establish a dedicated budget line to ensure stable, predictable funding for priority initiatives and countermeasures.



Integrate Road Safety Early in Planning

Incorporate Vision Zero early in planning and design to incorporate safety at early stages of the projects life cycle by identifying high-impact locations, prioritizing projects, and allocating resources effectively.



Emphasis Area Enhanced Focus

In more recent years, pedestrian and impaired driving collisions have increased. This trend highlights the need for continued and strengthened monitoring of these collision types. Moving forward, these areas should be prioritized within future road safety planning to better understand contributing factors and support more effective prevention strategies.



Moving Forward

Key Achievements and Future Priorities

The success of the Strategic Road Safety Action Plan was driven by the strong collaboration and commitment of partner agencies, whose expertise and coordinated implementation efforts were essential to achieving the SRSAP's outcomes. This collaborative approach established a strong foundation for advancing road safety across the Region and supporting a shared commitment to Vision Zero principles.

Over the five-year implementation period, the Region exceeded its target of achieving a minimum 10 percent reduction in fatal and injury collisions. Fatal and injury collisions decreased by 17 percent on Regional roads and by 11 percent across the Region overall, demonstrating the effectiveness of coordinated, evidence-based road safety interventions.

Key achievements included the successful implementation of targeted engineering measures such as roundabouts, leading pedestrian intervals, protected left-turn phases, and community safety zones, all of which demonstrated measurable safety benefits. Expanded education and awareness initiatives reinforced safer travel behaviours, while enhanced enforcement measures improved compliance with traffic laws in high-risk areas. Supporting these efforts, the establishment of the Vision Zero Task Force and Road Safety Implementation Committee strengthened multidisciplinary collaboration among partners and reinforced the Safe System principle that road safety is a shared responsibility. Together, these governance structures improved coordination, accountability, and consistency in program delivery.

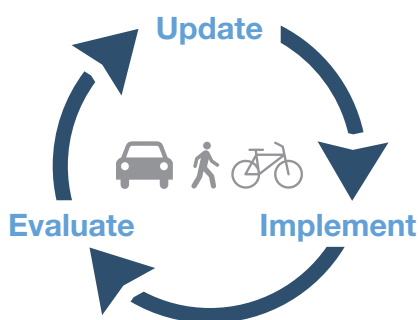


Several countermeasures demonstrated strong safety performance across the network, resulting in substantial reductions in collisions. Roundabouts were among the most effective, reducing fatal and injury collisions by 72 percent, followed by protected left-turn signal phasing (61 percent) and all-way stop controls (64 percent), which significantly reduced angle and turning movement collisions. Pedestrian-focused treatments, including leading pedestrian intervals, achieved a 62 percent reduction in pedestrian-involved collisions, while community safety zones contributed to a 38 percent reduction in pedestrian- and cyclist-related collisions.

The implementation period provided important lessons to guide the next iteration of the SRSAP. Key improvements include streamlining focus to a limited number of high-priority emphasis areas supported by evidence-based, measurable countermeasures, and strengthening data collection through more structured processes and expanded data sources. The experience also highlighted the importance of dedicated staffing, clear roles, and stable funding to support timely and coordinated delivery. In addition, integrating safety earlier in planning and using both collision-based and systemic screening approaches will help better target investments. Ongoing policy updates and regular evaluation will be essential to ensure continuous improvement and sustained safety outcomes.

Moving forward, the next SRSAP will build on proven successes by expanding effective countermeasures, strengthening partnerships, and leveraging emerging methodologies, technologies, and data sources to proactively reduce fatal and injury collisions and improve safety for all road users across the Region.

Commitment to Continuous Improvement



The Strategic Road Safety Action Plan was designed as a dynamic, living plan that is regularly evaluated and updated to ensure it remains effective and responsive to evolving road safety needs. This ongoing cycle of monitoring and evaluation allows the Region to assess progress, respond to emerging trends, and refine priorities and interventions over time.

Building on the outcomes of the 2019–2024 implementation period, the Region will carry forward key lessons learned and successful practices to strengthen the next iteration of the SRSAP.

This approach reinforces the Region's ongoing commitment to continuous improvement, evidence-based decision-making, and safer roads for all users.

What Can You Do?

Creating safer roads is a shared responsibility. While the Region continues to improve the transportation system through its Vision Zero initiatives, every road user has a role to play in helping prevent injuries and saving lives. The progress made through the first Strategic Road Safety Action Plan shows that small actions taken every day can make a meaningful difference.

Whether you are driving, walking, cycling, rolling, or taking transit, you can help make our roads safer by:

- Staying alert and adapting to changing conditions such as weather, traffic, construction, and unexpected situations.
- Following traffic signs, signals, and speed limits.
- Avoiding distractions and making sure you are fit to travel before getting behind the wheel.
- Watching for pedestrians, cyclists, children, older adults, and other vulnerable road users.
- Being patient, respectful, and considerate of others using the road.
- Encouraging safe travel habits among family members, friends, and your community.
- Supporting ongoing road safety initiatives and staying informed about ways to travel more safely.

**Every safe decision matters.
By working together, we
can continue building
on the progress made
through the first Vision Zero
program and help create
a safer transportation
system for everyone.**





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