



Strategic Road Safety Action Plan



**Vision: Zero people killed or injured
across all modes of transportation.**

**This document is dedicated to the friends and families of
the 42 people who lost their lives on Regional Roads in
motor vehicle collisions during the course of this study.**

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

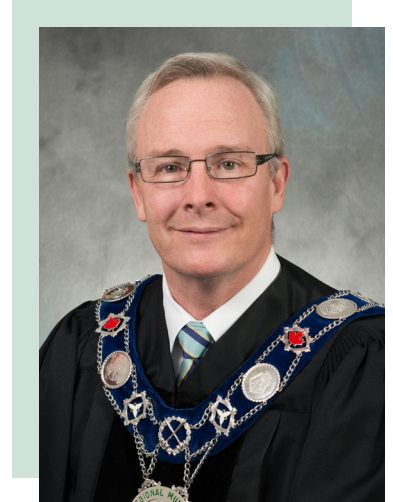
With enthusiasm, we share with you the Region of Durham's first strategic road safety action plan: Durham Vision Zero.

There is an economic toll when collisions happen in Durham Region. From the emergency response by police, fire and paramedics, to healthcare costs, and public works expenses for roadway repairs and improvements—in Durham, an average of 6,700 reported collisions per year result in an average of \$225 million in fiscal impact.

But what's more important than any fiscal expense is the dramatic effect that the loss of life, and life-altering injuries, has on families and our community at large. When a resident suddenly dies on our roadways, it is not just a traffic inconvenience. The community member we lose—the hockey coach, the teacher, the friendly neighbour who shovels your driveway—has needlessly been denied the right to celebrate their next birthday, to be at their kids' graduation, to feel the warm summer breeze as they cycle the waterfront. That's why the guiding principle of Durham Vision Zero is that no loss of life on our roads is acceptable.

Through Durham Vision Zero, Regional Council has purposefully chosen to endorse preventing collisions from happening in the first place, instead of spending money responding to them. By investing in public education, new road safety technologies, increased law enforcement and more—the investment will pay off endlessly for our community, because the cost of saving a life is priceless.

This new strategic road safety action plan is the result of collaboration with many stakeholders and partner organizations in our community. But our most important champion for Durham Vision Zero is you. Drive like you could save someone's life, and let's get everybody home to their families safely.



A Message from Paul Martin, Chief of Police, and Susan Siopis, Commissioner of Works

About 20 times each year, Durham Regional Police Service (DRPS) officers have the unfortunate task of telling families that their loved one will not be coming home, as the result of a collision.

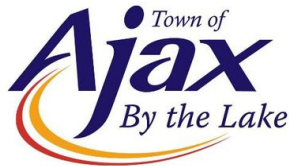
Collisions do not happen by accident, and can always be prevented—whether through reduced speed, smarter road design, or increased enforcement. Durham Region’s Works Department builds the backbone of safety—elements such as road design, traffic safety infrastructure and road maintenance. With a joint goal of safer roads for everyone, we recognize that engineering doesn’t work without enforcement, enforcement doesn’t work without education, and by working together we can create a culture of road safety in Durham Region.

Members of DRPS take great strides to educate on and enforce the laws that keep road users accountable for their actions. Despite there being more people on the road every year in Durham, collisions have stayed relatively the same or, in some cases, have lowered during the past year. This is great news as we work with community partners to implement Durham Vision Zero—a collaborative five-year plan that will continue to evolve as new technology changes the way we travel.

Road safety issues are being addressed with a great deal of collaboration among DRPS, the Region of Durham, local area municipalities and our community partners in road safety—many of those initiatives are outlined in this plan. We continue to develop meaningful opportunities to share data and resources. This kind of teamwork goes a long way to making residents safer when they travel throughout the Region, with the ultimate goal that, one day, no officer should ever have to deliver the heartbreaking news of a life lost in a collision here in Durham.



Steering Committee Members



Appreciation goes out to additional contributing parties involved in past and future plan development.



Introduction

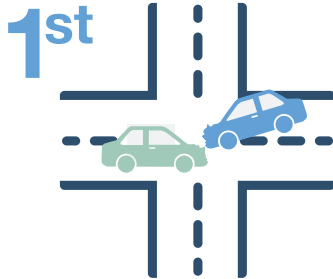
The Region of Durham is the largest geographical jurisdiction in the Greater Toronto Area, encompassing an area of approximately 2,532 square kilometers and containing 832 kilometers of arterial roadways. The population of the Region is estimated to be about 660,000 and is expected to reach almost one million people by the year 2031, which is more than double the 1991 population. Approximately 90% of the population and employment is in the local municipal areas of the City of Pickering, Town of Ajax, Town of Whitby, City of Oshawa, and the Municipality of Clarington. The Townships of Brock, Scugog, Uxbridge, and the Mississauga's of Scugog Island First Nation represent the remaining 10% of the population.

The Region experiences on average over 6,700 reported collisions per year.¹ These traffic collisions cost Regional road users and residents approximately \$225 million in direct and indirect costs every year. These collisions exact a great emotional and societal toll on all persons involved.

In the past decade, traffic safety practitioners have made significant progress in developing and maturing techniques to more accurately identify locations with the highest potential for improving road safety, diagnosing causal factors, and recommending effective countermeasures.

The Region has developed a Strategic Road Safety Action Plan (SRSAP), which incorporates Vision Zero, to reduce the number and severity of collisions in the Region. The Region wants to make sure everyone arrives safely to their destination. The SRSAP's purpose is to save lives and reduce injuries caused by motor vehicle collisions. This plan, as well as the statistics presented in this document, focus on fatal and injury collisions. This plan is structured to best coordinate a diverse set of stakeholders in engineering, enforcement, and education realms, encourage the sharing of resources, and provide the necessary oversight to ensure the integrated SRSAP is embedded within the culture of all those managing aspects of transportation in the Region.

Quick Facts²



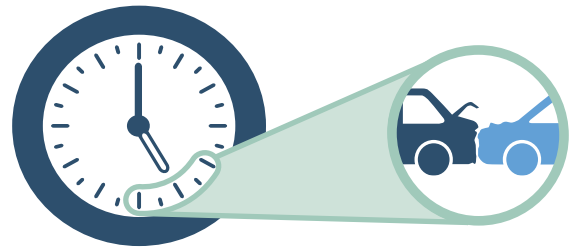
1st
Intersection collisions
are the most common
type of collision



2nd
Aggressive Driving
is the second most common
type of collisions³



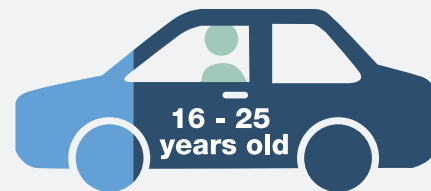
One in seven cannabis users
reported driving at least once within
two hours of using cannabis⁴



PM rush hour (4PM - 6PM)
during the week is the most
common time for collisions



44% of all pedestrians involved in
collisions are between the ages of
0 and 25 years



27% of at-fault drivers are
between the ages of
16 and 25 years



2 — Regional statistics are based on fatal and injury collisions.

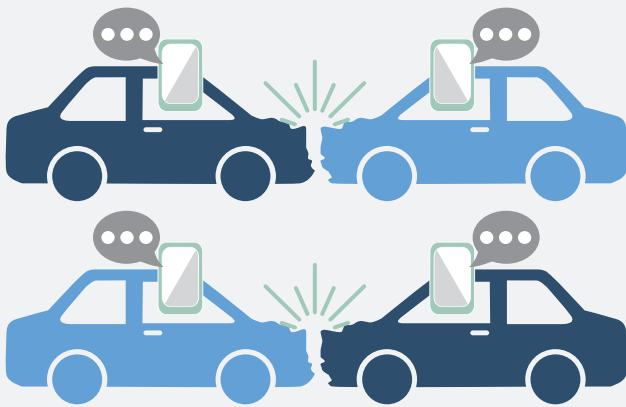
3 — Aggressive Driving is defined as following too close, disobeying traffic control, failing to yield right-of-way, speeding too fast for road conditions, and exceeding speed limit.

4 — Within a three month period - Statistics Canada's latest National Cannabis Survey (2nd quarter, 2018 - pre-legalization).

Quick Facts

Trips Made by Residents of Regional Municipality of Durham⁵

Time Period	Number of Trips	Mode of Transportation				
		Driver	Pass.	Transit	Go Train	Walk & Cycle
	298,700	67%	11%	4%	5%	8%
	1,279,200	72%	14%	3%	3%	5%



A driver using a phone is **four times** more likely to crash than a driver focusing on the road⁶



By 2016, cyclist collisions had increased **265%** (61 collisions from 2012 to 2016)⁷

5 — Durham Transportation Tomorrow Survey (TTS), 2016.

6 — MTO (2013) <https://www.ontario.ca/page/distracted-driving>.

7 — 2012 to 2016 collision data is reviewed as a part of the development of the SRSAP.

Vision and Goal for Durham Region's Vision Zero Strategic Road Safety Action Plan

Vision Zero

Vision Zero is a road safety concept that originated in Sweden in 1997 and has been adopted in various forms around the world. It can be summarized in one sentence:

No loss of life is acceptable as a result of a motor vehicle collision.

The Vision is based on the simple reality that humans make mistakes. The road system needs to keep people moving, but must also be designed to protect people at every turn. This protection can take one of two forms: preventing collisions from occurring or designing the road network to minimize the consequences of collisions that do occur.



SRSAP Vision and Goal

In order for the SRSAP to have an overall strategy for reducing motor vehicle fatalities and injuries in the Region, a vision and goal were developed. A vision is a high-level, long-term viewpoint that usually spans an extended period of time. The Region's vision for the SRSAP ties in with Vision Zero:

Vision: Zero people killed or injured across all modes of transportation.



The vision can not be achieved overnight; it will take time and effort. In order to start the process of achieving the vision of zero deaths and injuries for all modes of transportation in the Region, the following goal was established:

Goal: 10% reduction of fatal and injury collisions within five years (2019-2023).



The goal acts as a stepping stone in working towards reaching the vision.

The goal that the Region established for the SRSAP is for 5 years; after five years, the plan will be re-evaluated and a new goal will be set. This will be a repeated process for the SRSAP as the Region moves towards zero.

Strategic Road Safety Action Plan Emphasis Areas

The basis of a strategic road safety program is to apply resources to the most prominent or severe safety situations which leads to the best chance of success. An emphasis area is a type or group of collisions that has been identified as among the largest or of most concern. The selection of emphasis areas included three types of inputs: public opinion, collision data analysis, and partner agency information.

An online survey was distributed to the residents of Durham. As well, public information centres were held to obtain the public's input on road safety. The public perceives the most serious concerns to be driver behaviours of

distracted driving, impaired driving, aggressive driving, and speeding. Data analysis was conducted on collision data for 2012 to 2016 inclusive. The analysis not only looked at the overall size of various collision types, but considered trends, such as the recent increase in cycling collisions. To match the vision, only fatal and injury collision data was used. Overall, the public's road safety concerns closely matched the top emphasis areas determined by data analysis.

The emphasis areas chosen for the SRSAP are shown below (speeding was considered part of aggressive driving):



Awareness Area: School Zones

A focus on collisions in school zones was not supported by the collision data analysis but the public clearly identified schools as an area of concern. As such, these types of collisions will be considered an awareness area (an aspect to be part of the overall strategy) while developing the action plan for the eight emphasis areas.

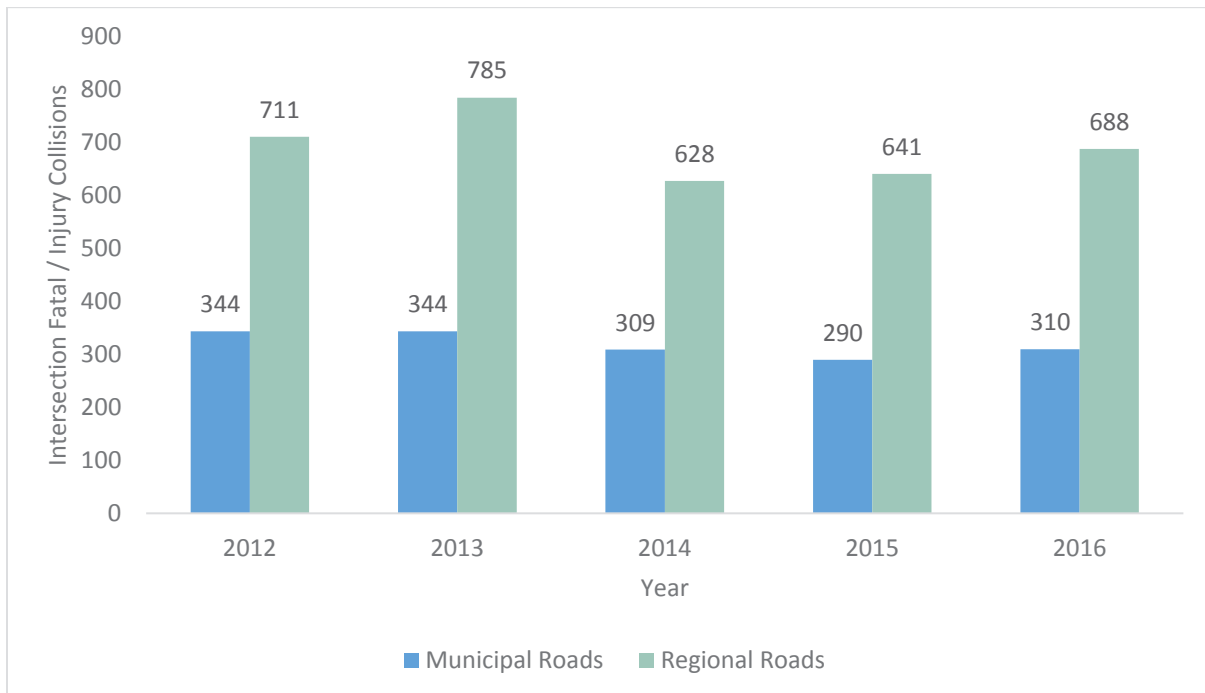


Emphasis Area 1: Intersections

Collisions at intersections form the single largest emphasis area. The graph below shows the history of intersection collisions in the Region. From 2012 to 2016, the annual average at intersections was approximately 1000 collisions. The most common impact type was turning movement. Rear-end collisions likely overlap with the aggressive and distracted driving emphasis areas. Turning movement and angle collisions best lend themselves to engineering solutions that can directly address the issues causing those types of collisions.



Collisions caused by **turning movements** are the most common types of collisions at intersections in the Region, and are approximately a third of all intersection fatal and injury collisions.



Durham Vision Zero - Strategic Road Safety Action Plan

The programs that are listed below are a sample of potential new and expanded programs that the partners of the SRSAP plan to implement.

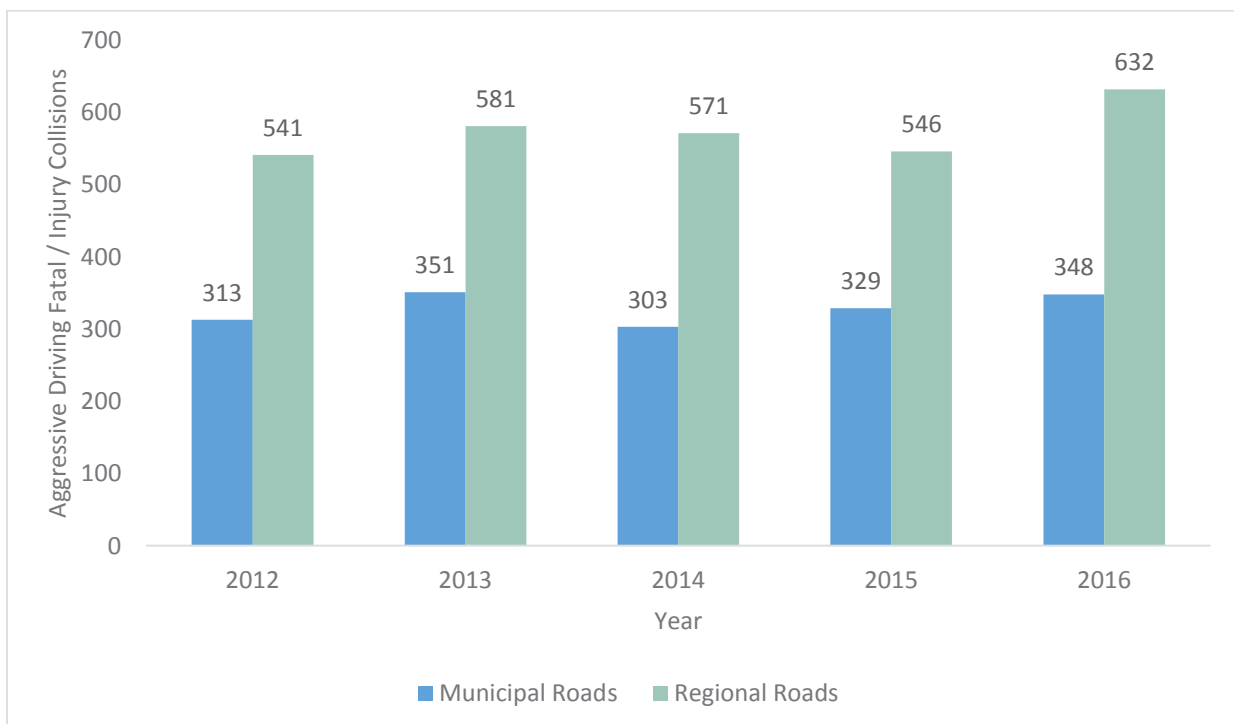
Emphasis Area 1: Intersections		
Program	Action	Targeted Collisions/ Effectiveness
Tighter Curb Radii	Smaller turning radii increase pedestrian safety by shortening crossing distances, increasing pedestrian visibility, and decreasing vehicle turning speed.	Reduction in the frequency and/or severity of turning movement collisions as well as pedestrian collisions at intersections.
Signal Head Reflective Border	Application of a yellow retroreflective border to existing signal backplates, framing the traffic signal heads. This reflective strip improves the visibility of the signal by providing a consistent and contrasting background. The border will be visible during the day with greatly increased visibility at night or under limited visibility conditions. This will be particularly helpful to the aging population and those with color blindness.	Improvement of visibility of intersections and reduction of frequency and/or severity of collisions at intersections.
Roundabouts	A roundabout is a circular intersection where two or more roads meet. Traffic flows counter-clockwise around the centre median. Vehicles entering yield to the traffic already in the roundabout. Roundabouts improve traffic flow and eliminate right-angle collisions.	Reduction in the frequency and severity of collisions at an intersection.
Protected Only Left Turn Phasing	Addition of an extra interval in the signal timing for left turns to proceed without conflict.	Reduction in frequency and/or severity of angle collisions at intersections.
Right-Turn on Red Prohibitions	Install and by-law right-turn on red prohibitions at locations identified through network screening, safety audits, and/or high pedestrian collisions.	Reduction in frequency and/or severity of pedestrian collisions and turning movement collisions at intersections.

Emphasis Area 2: Aggressive Driving

Aggressive driving actions include speeding, driving too fast for conditions, following too close, disobeying traffic control, and failing to yield the right-of-way. The history of the collisions from aggressive driving in the Region is shown in the graph below. The suggested response to aggressive driving collisions includes a balance of engineering measures, increased and/or better targeted enforcement, and educational campaigns.




The most common type of **aggressive driving** collision that causes an injury or a fatality in the Region is failing to yield the right of way (39%), followed by drivers following too closely (31%)



Durham Vision Zero - Strategic Road Safety Action Plan

The programs that are listed below are a sample of potential new and expanded programs that the partners of the SRSAP plan to implement.

Emphasis Area 2: Aggressive Driving		
Program	Action	Targeted Collisions/ Effectiveness
Roadway Design to Discourage Speeding	Designing the roads to influence drivers to operate at the safe operating speed. Installation of narrow lane widths, edge lines, curb and gutter, on-street parking, etc. are some ways to constrain the driving environment and discourage aggressive driving.	Reduction in the frequency and/or severity of collisions caused by speeding vehicles.
Automated Enforcement 	An enforcement technique that uses sensors to record images of motor vehicles that are travelling above a specified threshold or running red lights at intersections.	Reduction in the frequency and/or severity of collisions at intersections as well as collisions caused by speeding vehicles.
Flexible In-Road Warning Signs	These signs delineate traffic or guide traffic into a specific lane. They also provide warning to drivers of certain obstacles, such as pedestrian crossing areas or cycling facilities.	Reduction in the frequency and/or severity of crossover collisions.
Transverse Rumble Strips	Transverse rumble strips are used to warn drivers in rural areas that they are approaching a stop sign. The strips typically consist of grooves crossing the roadway surface to provide a tactile and audible warning for drivers.	Increases the presence of intersections and reduces the frequency and/or severity of collisions.
Centre Median Barriers	Installation of centre medians to prevent head on collisions in urban areas where necessary. The median will also restrict conflicting turning movements at entrances.	Reduction in collisions due to vehicles colliding with opposing traffic.
Targeted Enforcement Initiatives	Durham Regional Police Services (DRPS) has recently initiated a service-wide traffic initiative calendar to ensure all Divisional Leaders are aware of the Regional Traffic Targeted Enforcement initiatives and to allow other partners to align their enforcement efforts.	Increases awareness of aggressive driving behaviours and reduces the amount of aggressive driving collisions.
Anti-Aggressive Driving Campaign	Durham Vision Zero anti-aggressive driving public awareness campaign using advertising such as social media (#DurhamVisionZero), Internet videos, radio ads, and advertisements in transit/bus shelters.	Increases awareness of aggressive driving behaviours and reduces the amount of aggressive driving collisions.



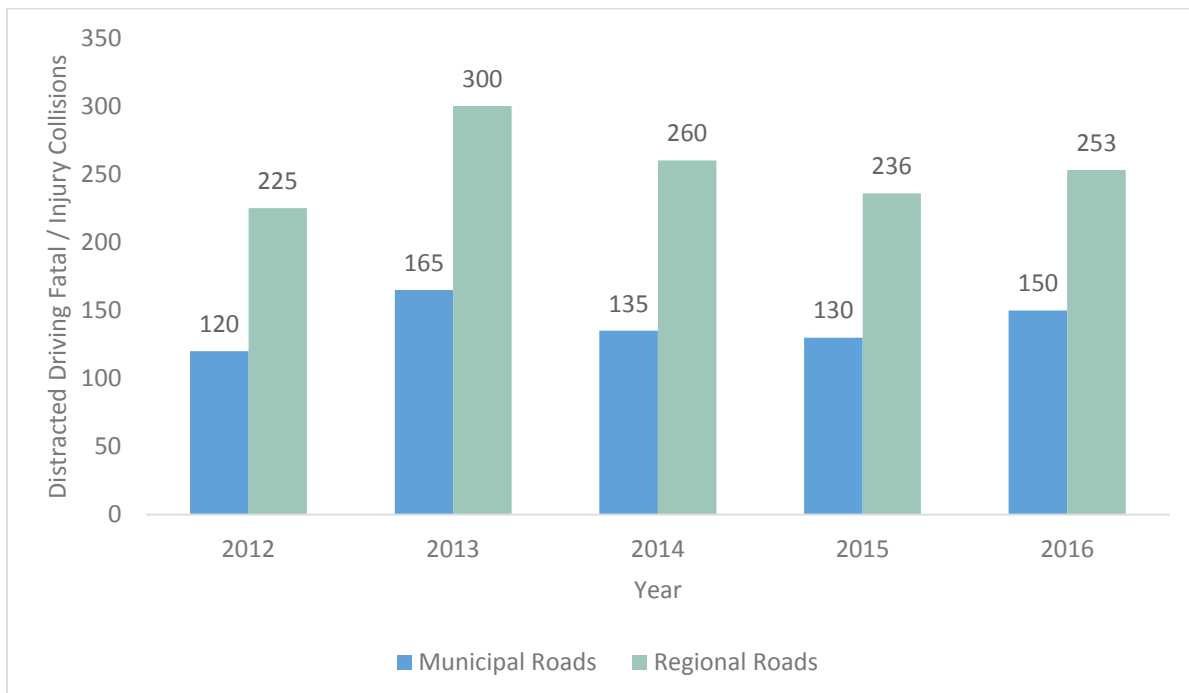
Indicates a school zone related countermeasure.

Emphasis Area 3: Distracted Driving

Collisions involving distracted driving are coded on police reports as the driver being inattentive, but it is likely that this type of collision is underreported, as it is difficult to confirm. Distraction can also be a result of the roadside environment, therefore it is important that we limit signage and other infrastructure within the right-of-way to their primary objective of transportation guidance. The history of reported distracted driving collisions is shown in the graph below.



Approximately **1/4** of all fatal and injury collisions in the Region are due to **distracted driving.**



Durham Vision Zero - Strategic Road Safety Action Plan

The programs that are listed below are a sample of potential new and expanded programs that the partners of the SRSAP plan to implement.

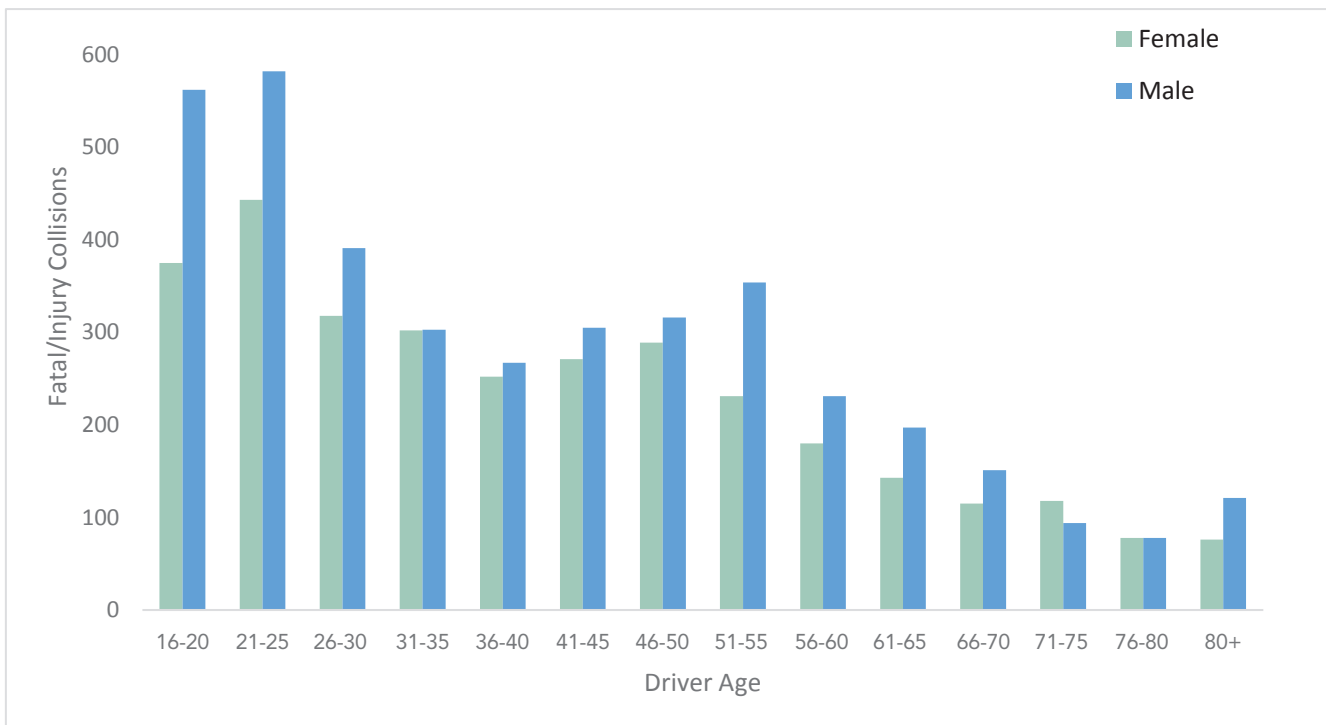
Emphasis Area 3: Distracted Driving		
Program	Action	Targeted Collisions/ Effectiveness
Spirals	Spirals are used on higher-speed curves to overcome the abrupt change in curvature from straight to turning. The spiral curve is used to gradually change the curvature of the road.	Reduction in vehicles that are involved in single motor vehicle run-off-the-road collisions.
Safety Edge	A safety edge is a construction technique in which the road edge is angled so that a driver is able to get back on to the road safely if they encroach onto the granular shoulder.	Improves the drivers ability to control the vehicle when accidentally leaving the travel lane.
Roadside Safety Signs	Install hazard markers on poles and other obstacles that are located near the edge of the travel lanes. The signs warn drivers, especially commercial vehicles, during the night to give clearance to poles or hazards.	Improved visibility of hazards and reduction in number and/or frequency of run-off-the-road collisions.
Vegetation Along Snow Drifts	Plant vegetation or install fencing alongside roadways that are at high risk for drifting snow.	Increased road surface condition and reduction in run-off-the-road collisions.
Distracted Driving Communication Campaign	Distracted and drug impaired messages in universities, commercials on Global TV Durham, posters, ads on social media, pamphlets, displays Displays at Regional Headquarters during key weeks, etc.	Increases public awareness of the consequences of distracted driving behaviour and reduces the frequency and/or severity of distracted driving collisions.

Emphasis Area 4: Young Drivers

Young drivers aged 16 to 25 years are the single age group with the largest number of collisions, as shown in the graph below (total collisions from 2012 to 2016). Inexperience and driving beyond the driver's skill level are the primary reasons why young drivers have a higher chance of being involved in a collision. The countermeasures for this emphasis areas are educational and enforcement programs.







Approximately **1/4** of all fatal and injury collisions in the Region involve **young drivers (16 – 25 years old)**.



Durham Vision Zero - Strategic Road Safety Action Plan

The programs that are listed below are a sample of potential new and expanded programs that the partners of the SRSAP plan to implement.

Emphasis Area 4: Young Drivers		
Program	Action	Targeted Collisions/ Effectiveness
Weed Out the Risk Campaign	An educational program targeting Grades 9-12 on the dangers associated with impairment by drugs. The objective is to provide knowledge on drug impairment at varying levels and periods within the calendar year. Emphasis on grades 9-10 in the fall so as to impact the newest student population as they enter high school. Educational efforts will target Grades 11 and 12 in the spring as many prepare to leave their high school and enter the world of employment or post-secondary education.	Increases public awareness of the dangers of driving impaired and reduces the frequency and/or severity of impaired driving involving young drivers.
Distracted Walking Program 	DRPS Auxiliary Unit will implement a Distracted Walking program in the elementary schools and educate the students on the dangers of texting while walking.	Increases public awareness of the dangers of walking while distracted and reduces the frequency and/or severity involving the younger demographic.
PARTY Program 	Students hear from police officers, paramedics, doctors, a coroner, nurses, the blood and tissue bank, rehabilitation professionals, and injury survivors. Students hear firsthand experiences from the people who experience them. This program is real, emotional, scientific, and lifesaving.	Increases teen awareness on the severity of driving impaired. Reduces the frequency and/or severity of collisions involving young drivers.
Driving Around Cyclist Education 	Education for drivers on how to avoid cyclist collisions. It will educate drivers on what to look for while driving near cyclists and how to expect the unexpected.	Reduction in the frequency and/or severity of cyclist collisions.
National Teen Driver Safety Week 	Educational strategies that include social media posts, positive ticketing, interactive questions and answer activities, promotional items, presentations, assemblies, contests, and more.	Increases teen awareness on driving properly and reduces the frequency and/or severity of collisions involving young drivers.



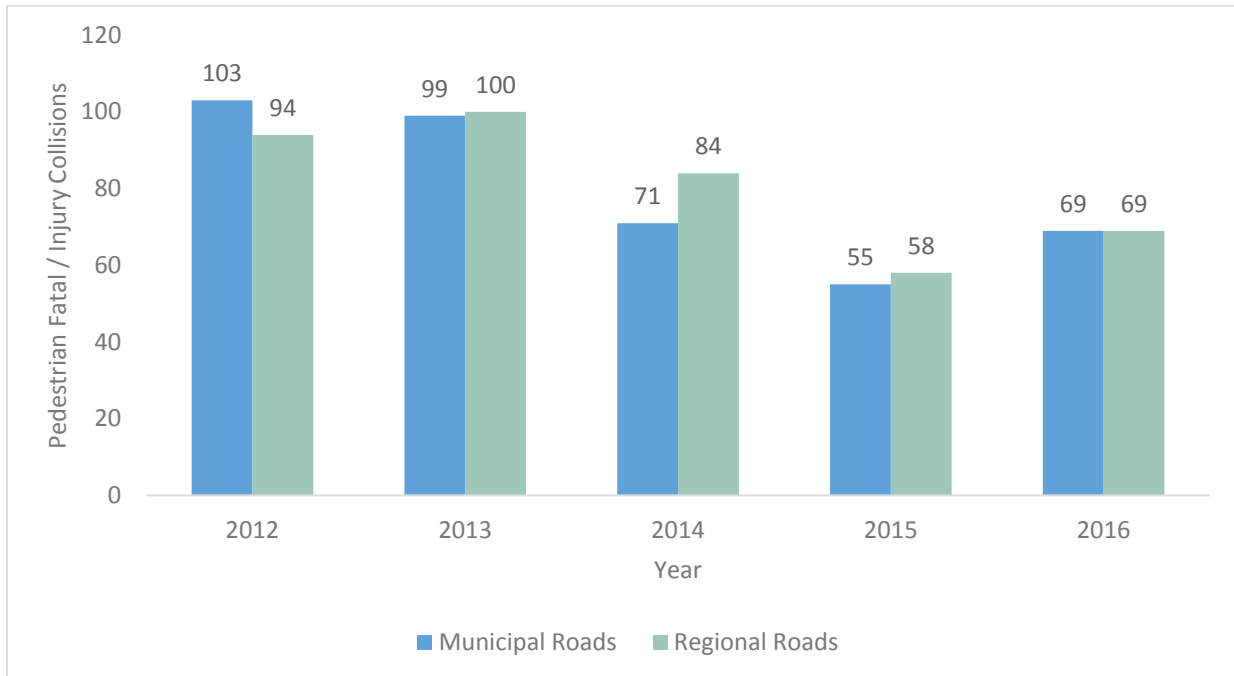
Indicates a school zone related countermeasure.

Emphasis Area 5: Pedestrians

Approximately 53% of pedestrian collisions occur at signalized intersections. In approximately 69% of pedestrian collisions, the pedestrian is walking with the right-of-way. Pedestrian collisions almost always result in injury, often serious. The graph below shows the history of pedestrian fatal and injury collisions in the Region. Many of the countermeasures for pedestrian safety are primary to other emphasis areas, such as intersections or distracted driving.









More than half of all **pedestrian** fatal and injury collisions in the Region occur at signal locations.



Durham Vision Zero - Strategic Road Safety Action Plan

The programs that are listed below are a sample of potential new and expanded programs that the partners of the SRSAP plan to implement.

Emphasis Area 5: Pedestrians		
Program	Action	Targeted Collisions/ Effectiveness
Leading Pedestrian Intervals 	Leading pedestrian phases allow pedestrians an walk signal before parallel vehicles start so that they can start crossing the street before the signal for the vehicles turns green. Through the use of network screening, candidate locations will be identified for a leading pedestrian phase pilot project.	Reduction in the frequency and/or severity of pedestrian collisions at intersections.
Pedestrian Crossovers 	A pedestrian crossover is a place designated for pedestrians to cross a road. By law, drivers and cyclists must stop and yield to pedestrians intending to cross the road, and wait for them to completely reach the other side before driving. Pedestrian crossovers are identified by specific signs, pavement markings, and sometimes lights. The law does not apply to pedestrian crosswalks at intersections with stop signs or traffic signals, unless a school crossing guard is present.	Increases the visibility of pedestrians and reduces the frequency and/or severity of pedestrians.
Zebra Crosswalks 	Raised, enhanced (i.e. ladder crosswalk markings), or textured crosswalk markings at specific areas where warranted.	Improves the visibility of the intersection and reduces the frequency and/or severity of pedestrian collisions at intersections.
Pedestrian Refuge Islands 	Construct new pedestrian refuge islands to support mid-block Transit stops, where applicable based on Region's design criteria.	Reduces the frequency and/or severity of pedestrians at mid-block locations and also intersections.
In the Zone Enforcement 	Actively enforcing public safety in school zones with targeted enforcement.	Increases public awareness of school zone safety and reduces the frequency and/or severity of pedestrian collisions.
Pedestrian Awareness Campaign 	Awareness campaigns that promote pedestrian safety such as always look before crossing the road regardless of who has the right of way.	Reduction in pedestrian collisions.



Indicates a school zone related countermeasure.

Emphasis Area 6: Impaired Driving

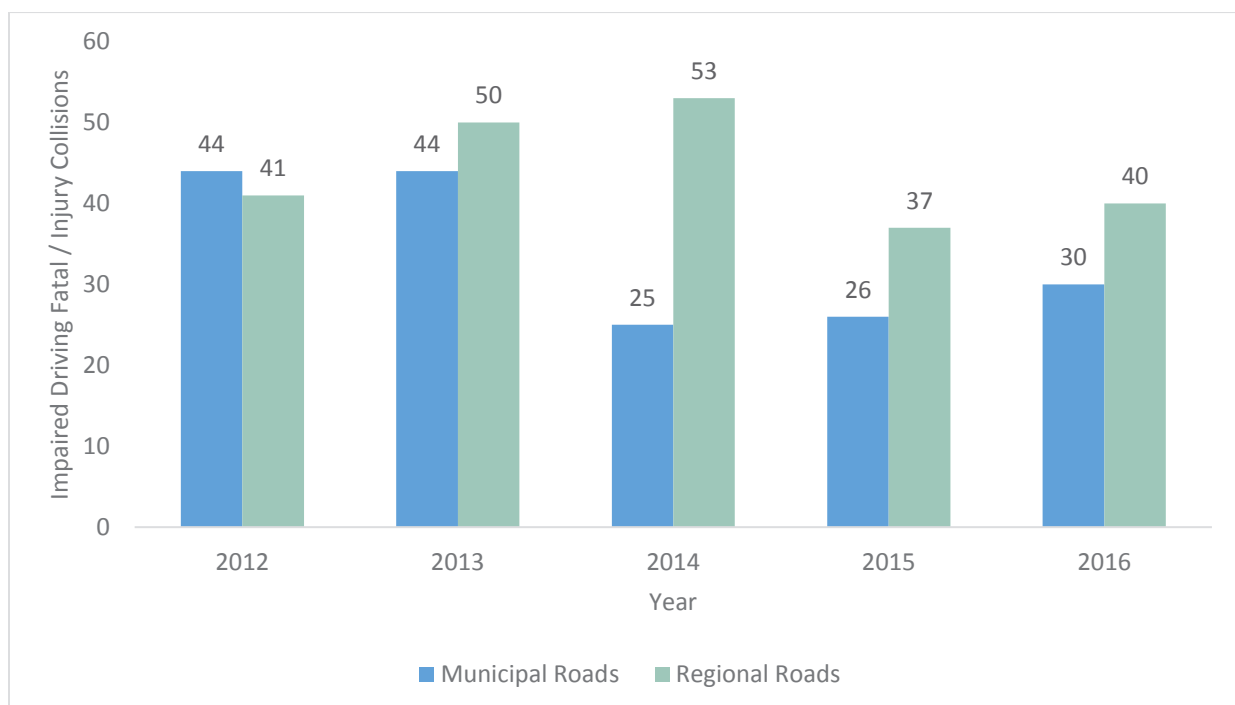
Impaired driving collisions are those coded on the police report with the following attributes:

- Driver had been drinking;
- Driver's ability impaired due to alcohol use;
- Driver's ability impaired due to drug use;
- Driver's medical or physical disability; or
- Driver is fatigued.

The history of impaired driving collisions in the Region is shown in the graph below. The graph illustrates a decrease in impaired driving collisions, however the legalization of cannabis may contribute to a rise in impaired driving collisions.



Alcohol — even one drink — can reduce your ability to react to things that happen suddenly. The effects of alcohol also include blurred or double vision, impaired attention and slowed reflexes. Alcohol-impaired driving is one of the leading causes of death on Ontario's roads.



Durham Vision Zero - Strategic Road Safety Action Plan

The programs that are listed below are a sample of potential new and expanded programs that the partners of the SRSAP plan to implement.

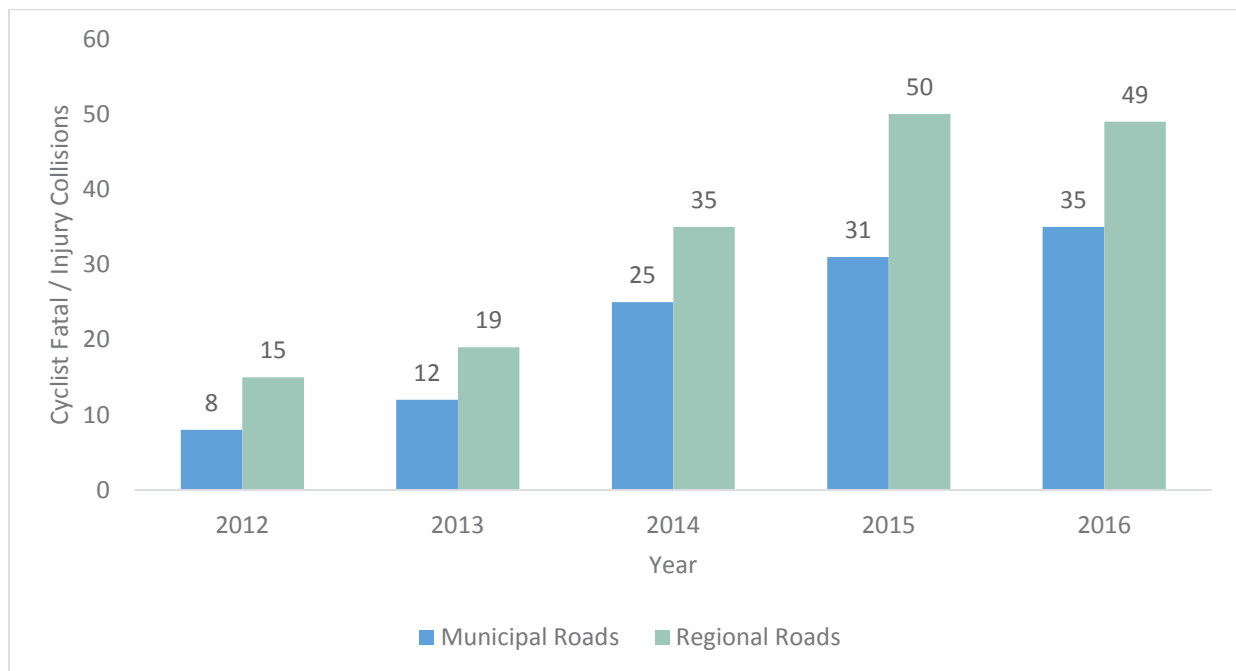
Emphasis Area 6: Impaired Driving		
Program	Action	Targeted Collisions/ Effectiveness
MADD Sign Installations	Install MADD signs that remind drivers to drive safe and to call 911 to report an impaired driver. These signs are installed in areas with high collision trends.	Increases public awareness on impaired driving and reduces the frequency and/or severity of impaired driving collisions.
Monthly Enforcement Initiatives	Operational enforcement efforts will be enhanced to support monthly enforcement initiatives, targeting all HTA and criminal code offences.	Increases public awareness on impaired driving and reduces the frequency and/or severity of impaired driving collisions.
Late Night Transit Service	Extend service operation on the DRT High Frequency Network to 24 hour / 30 minute service and offer on-demand service to areas beyond 1 km of a bus stop.	Reduces the frequency and/or severity of impaired driving collisions by offering an alternative means of travel.
Cannabis Focused Education Program	Education program for parents and youth regarding cannabis drug use and the dangers it poses when driving high.	Increases public awareness of the consequences of impaired driving and reduces the frequency and/or severity of impaired driving collisions.

Emphasis Area 7: Cyclists

There has been a steady increase of cyclist collisions from 2012 to 2016. This could be due to higher ridership within the Region. Most collisions involve young cyclists aged 11 to 20. Over 50% of the cyclist collisions occurred in June, August, and September. This is likely due to better riding weather and also the higher concentration of cyclists when school starts in the fall. The history of cyclist collisions in the Region is shown in the graph below.



Approximately **40%** of all **cyclists** in the Region who are injured or killed in a vehicle collision are 20 years old or younger.



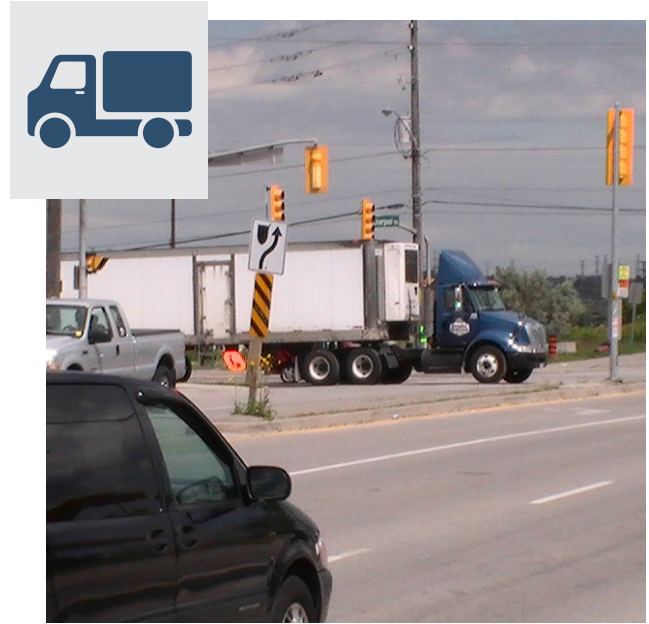
Durham Vision Zero - Strategic Road Safety Action Plan

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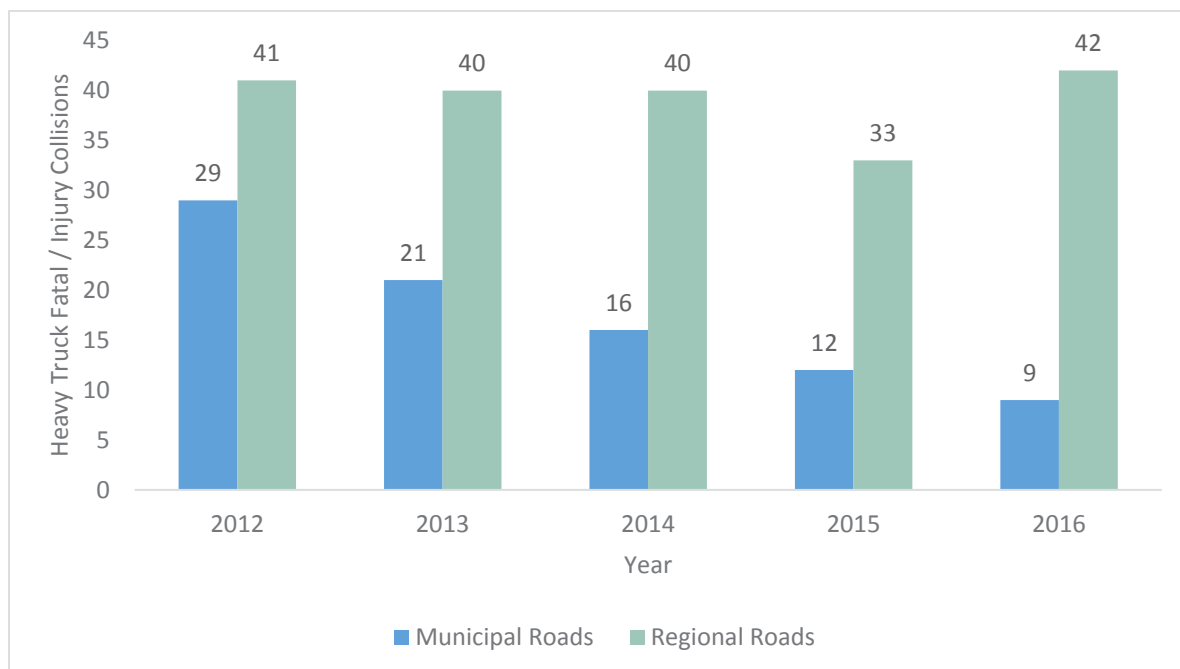
Emphasis Area 7: Cyclists		
Program	Action	Targeted Collisions/ Effectiveness
Side Inlet Catch Basins	Road catch basins to be recessed behind curb face which allows cyclists to ride closer to the curb without swerving to avoid gratings and pot holes around gratings.	Reduces the frequency and/or severity of cyclist collisions.
Bicycle Detection Program	Traffic signals that detect the presence of cyclists at an intersection and control the lights accordingly.	Reduces the frequency and/or severity of cyclist collisions at intersections.
Share the Road Signage	Develop “Share the Road” signage for cyclists on rural roads where farm vehicles travel to remind drivers to allow space for cyclists on the road.	Reduces the frequency and/or severity of cyclist collisions.
Bike Boxes	A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides cyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase.	Reduces the frequency and/or severity of cyclist collisions at intersections.
Paved Shoulder	Paved shoulder treatment on rural roads allows cyclists to ride on the shoulder as opposed to a gravel shoulder. The paved shoulders are 1.2 to 1.5 m to make roadway corridors cycling accessible even if there are no specifically designated cycling facilities.	Reduces the frequency and/or severity of cyclist collisions.
Bike Link	Bike Link programs allow cyclists to bypass problematic road segments, by allowing cyclists to ride transit with their bike for free between designated bike link stops. Generally these would be short segments of roadway, such as steep hills, or busy, fast moving segments of roadway.	Reduces the frequency and/or severity of cyclist collisions.
Cycling Education	Cycling clubs to reiterate their safe riding measures and encourage cyclists to use other routes rather than major Type A arterial roads.	Reduces the frequency and/or severity of cyclist collisions.
Crossrides	Crossrides allow cyclists to stay on their bikes while crossing through intersections. They may be located at multi-use trails or cycle tracks crossing a road.	Allows cyclists to safely cross intersections and reduces the number of cyclist collisions at intersections.

Emphasis Area 8: Commercial Vehicles

There were 370 collisions involving commercial motor vehicles in the five year study period, with a decreasing trend from 2012 to 2015, and a slight increase in 2016. The history of commercial motor vehicle collisions in the Region is shown in the graph below.



20% of fatalities in Ontario involve a **commercial motor vehicle**.⁸



Durham Vision Zero - Strategic Road Safety Action Plan

The programs that are listed below are a sample of potential new and expanded programs that the partners of the SRSAP plan to implement.

Emphasis Area 8: Commercial Vehicles		
Program	Action	Targeted Collisions/ Effectiveness
Lane Widening	Implement wider lanes as required through turning or curved roadways to prevent trucks from deviating out of designated travel lanes and/or wandering into opposing lanes.	Reduces commercial motor vehicle collisions, mainly at intersections.
Designated Truck Routes	Identification of truck designated routes and determine high collision locations through the use of network screening.	Reduces commercial motor vehicle collisions.
Safety Blitzes	Conduct enforcement safety blitzes across the Region. Currently running approximately 40-45% vehicle removal rate from operation when safety inspections conducted at the roadside. Offence notice rates are almost 100% for operators of commercial motor vehicles during roadside inspections.	Reduces commercial motor vehicle collisions due to poorly maintained commercial vehicles.
Public Awareness Campaigns	Educational campaign focused on commercial motor vehicle collisions and public awareness on truck safety.	Increases public awareness of driving safely with trucks and reduces and frequency and/or severity of commercial motor vehicle collisions.

Traffic Safety Culture

The SRSAP forms the framework for developing a road safety program for the Region of Durham. The plan requires commitment of resources by the Region and partner agencies.

Before the plan can be implemented, it is necessary to establish a foundation for the SRSAP so that the plan can be implemented and monitored properly. There are several actions required. One of the steps is creating a Vision Zero Task Force and an Implementation Committee.

The Task Force will be responsible for guiding the program, delivering the countermeasures, and be directly responsible for the management and success of the SRSAP. Partners from the Region, Durham Regional Police Service, Road Safety Group, Health Department, and Communications will be members of this Task Force.

The Implementation Committee will be responsible for directly delivering the road safety programs. It is key to have partners who are monitoring the road safety programs and coordinating the efforts of all partners in

order to reach the goal. Representatives from all agencies who deliver road safety programs in the Region are welcome members of this committee.

A Durham Safety Stakeholders & Ambassadors group is another group that will be formed as a part of this plan and will consist of internal staff and community/ advisory groups. This group is meant to advocate for road safety within the Regions.

A second step is significant additional data collection and analysis to better understand the exact nature of the collisions and demographics.

Third, while road safety has always been recognized as a top priority for the Region and the SRSAP partner agencies involved, road safety must be integrated into the decision making process throughout the Region, local municipalities, and agencies that are involved with the road system. Enhancing the traffic safety culture means creating a social climate where traffic safety is highly valued and rigorously pursued.



Moving Forward

The Region's SRSAP provides a strategy to address specific road safety challenges and builds partnerships with stakeholders to work towards the common goal of improving road safety. The overall vision of the SRSAP is to eliminate death and injury on the Region's roadways. In order to do that, partners must work together to implement safety programs (countermeasures) and to advocate for road safety in the Region. The partners of the SRSAP plan to establish a task force and an implementation and monitoring committee in order to effectively implement the plan and ensure the coordination of all of the partners. It is also the public's responsibility to improve road safety. Three of the eight emphasis areas are based on human behaviour; changing driver habits will have the greatest impact on those emphasis areas. Some collision prevention can be achieved by engineering actions, but changing behaviours form a large aspect of preventing fatal and injury collisions in the Region.

The SRSAP is an ongoing program and will have to be monitored and evaluated. If the proposed countermeasures are implemented, then there is an excellent chance that the 10% collision reduction goal (which is approximately 150 fewer fatal and injury collisions) will be met.

What Can You Do?

Whether driving, walking, cycling, or using transit, you, as a roadway user, need to be aware of what to expect when using the transportation network. There are many situations that may be dangerous to roadway users. The following are actions that you, as a roadway user, can take to help the Region achieve its goal and work towards the vision:

- Be able to adapt to changing conditions, such as weather, construction zones, etc.;
- Educate yourself (and others) about proper driving behaviours;
- Know, respect, and follow the rules of the road
- Respect other road users around you;;
- Be aware of your condition, your vehicle's condition, and any distractions before you start driving, and ultimately;
- **Be safe.**

