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Item No. 11.1
Halifax Regional Council
September 1, 2020
Transportation Standing Committee
September 17, 2020

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY: Original Signed
Brad Anguish, P.Eng., Director, Transportation and Public Works
Original Signed 
Jacques Dubé, Chief Administrative Officer

DATE: August 10, 2020

SUBJECT: Strategic Road Safety Framework Annual Information Report

INFORMATION REPORT

ORIGIN

Item 14.2.2 of the July 17, 2018 session of Halifax Regional Council; MOVED by Councillor Nicoll, seconded by Councillor Cleary THAT Halifax Regional Council direct staff to provide annual information reports to Transportation Standing Committee regarding the implementation of the Strategic Road Safety Framework.

Due to the ongoing Covid-19 pandemic, meetings of the Transportation Standing Committee have been cancelled indefinitely. Therefore, this information report is being submitted by staff directly to Halifax Regional Council.

LEGISLATIVE AUTHORITY

Section 4(g) of the Terms of Reference for the Transportation Standing Committee provides that the duties and responsibilities of the Committee include "providing input and review of road and pedestrian safety".

BACKGROUND

The Strategic Road Safety Framework (Framework), adopted by Regional Council in July 2018, is a five-year (2018-2023) framework that focuses on reducing transportation related fatalities and injuries on roadways within the Halifax Regional Municipality. The Framework incorporates a Towards Zero approach with the aim to reduce transportation fatalities and injuries to zero by the year 2038. The Framework sets a short-term goal of a 20% reduction of fatal and injury collisions within 5 years.

To achieve this goal, the Framework identifies seven (7) emphasis areas which will have the greatest impact to reducing the frequency and severity of collisions in the Halifax Region. The 7 emphasis areas defined in the Framework are:

- Intersection-Related
- Young Demographic
- Pedestrian Collisions
- Aggressive Driving
- Distracted Driving
- Impaired Driving
- Bicyclist Collisions

In the first year of the Framework, a significant amount of work went into defining the Road Safety Steering Committee and developing the collision database. These two pieces were critical to ensure that data-driven decisions can be made to reach the 20% reduction goal by 2023.

The Municipality has made numerous upgrades to pedestrian crosswalks and intersections; and continues to make improvements to pedestrian and bicyclist facilities through the implementation of the *Integrated Mobility Plan (IMP)*, the *Active Transportation Priorities Plan*, and the adoption of a complete streets design philosophy. The Tactical Urbanism program continues to test pilot projects to enhance the pedestrian realm in advance of street recapitalization projects, and in recent months resources have been focused on public health considerations by increasing space for pedestrians as the economy re-opens.

Development of the collision database provides the opportunity to evaluate the effectiveness of many different countermeasures through implementation at strategic locations based on the collision data. The impact of the countermeasures being implemented today will be reflected in the data of future years as we progress towards zero.

For this report, the benchmark statistics obtained through the municipality's collision database are presented and the recommended actions to move towards our goal are defined. The actions and countermeasures achieved in 2019, as well as those ongoing through 2020, are outlined as they relate to each of the 3 E's of Road Safety – Engineering, Enforcement and Education. These data-driven actions transition the Framework into the Strategic Road Safety Plan.

DISCUSSION

Baseline Collision Statistics

Since the development of the internal collision database, we have been able to establish a baseline to measure overall progress towards achieving the five-year goal of 20% reduction in fatal and injury collisions on roadways within the Halifax Region. During the development of the Framework, the consultant had recommended that progress be measured against a three-year average of fatal and injury collisions. The baseline has since been defined as the average of fatal and injury collisions occurring within the road right-of-way (ROW) from the two calendar years prior to implementing countermeasures through the Framework (2018-2019); and does **not** include collisions which have occurred on private property. Data from 2017 was removed from calculating the baseline average because there were insurmountable data quality issues related to the early stages of transitioning from paper copies of collision reports completed by hand to a digital collision reporting system. References to data within this report follow the baseline definition above

and are based on closed collision reports from Halifax Regional Police (HRP) and RCMP as of June 30, 2020. These numbers are subject to change in future collision reporting as case files are closed.

When considering the above noted baseline period (January 1, 2018 to December 31, 2019), there were 28 fatal and 1555 injury collisions. On average this equates to 14 fatal and 778 injury collisions per year. A reduction of 20% by 2023 would translate to 158 fewer collisions resulting in either injury or fatality occurring on roadways within the Halifax Region.

Table 1: Fatal and Injury Collisions (2018-2019)

Year	Fatal Collisions	Injury Collisions	Total Fatal + Injury Collisions
2018	14	745	759
2019	14	810	824
TOTAL	28	1555	1583
AVG	14	778	792

For comparison purposes, recently available public data was obtained from a selection of Canadian jurisdictions. The table below provides fatal and injury collisions for 2018, normalized by 100,000 population. The same data for 2019 was not yet publicly available. This shows the Halifax Region is performing well with respect to all casualty collisions.

Table 2: Summary of Fatal and Injury Collisions for Various Canadian Cities

Region	Population	Fatal Collisions	Injury Collisions	Fatal+ Injury Collisions per 100,000 population
Canada	37,058,856	1743	108,371	297.1
Halifax Region	430,601	14	745	176.3
City of Ottawa	1,070,338	26	2670	251.9
City of Hamilton*	572,575	11	1551	272.8
City of Saskatoon	268,188	1	709	264.7
City of Edmonton	977,600	19	2610	268.9
City of Calgary	1,267,344	16	2496	198.2

*Collision data excludes provincial highways

Breakdown of Collisions by Emphasis Area

The following chart provides the two-year average collisions representing each of the emphasis areas identified in the Framework. There is crossover between emphasis areas (i.e. one collision could occur at an intersection, as well as involve aggressive driving and a pedestrian), therefore these values do not add up to the total average number of fatal and injury collisions. Similarly, countermeasures targeting one emphasis area may have an impact on others as well.

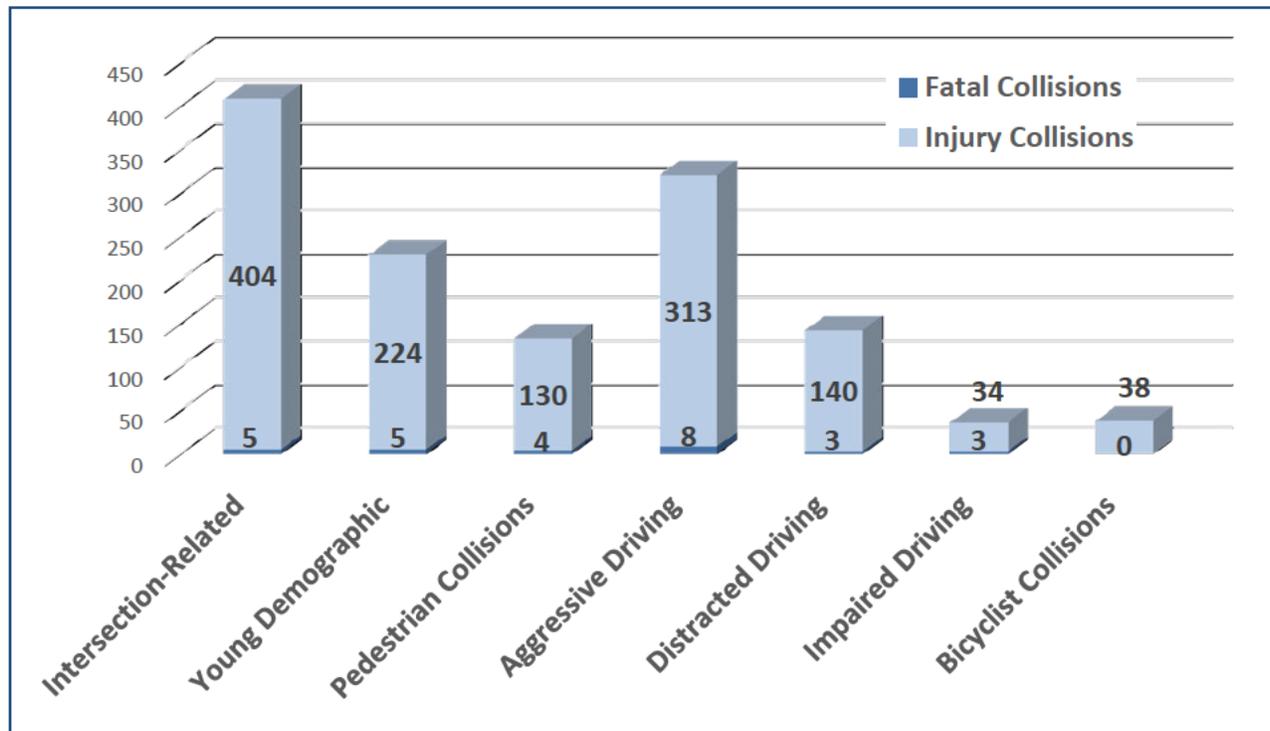


Figure 1: Average Fatal and Injury Collisions Representing Each Emphasis Area

Road Safety Update

The following sections will examine the seven emphasis areas and summarize the strategies undertaken in 2019 to improve road safety within each one.

1. Intersection-Related

Intersection-related collisions accounted for 52% of the fatal and injury collisions. These collisions include those occurring at roundabouts, as well as at intersection locations with a private roadway or access (but occurring within the road right-of-way). Normal practice within Traffic Management is to review the safety and operation of intersection locations based on resident requests. These reviews often result in safety improvements at intersections such as new signalized intersections or improved signal phasing at existing signals, new marked crosswalks or enhancements to existing marked crosswalks, new or improved signage or road markings. Under the reactive model these safety measures have not been tracked specifically in terms of contributing to the Framework. Now, moving towards implementing a pro-active set of countermeasures, while still responding to resident concerns, we are taking a more holistic approach to intersection safety.

Actions Initiated/Completed in 2019

Engineering

- Completion of In-Service Safety Reviews at high frequency collision intersections – 13 locations
 - Short, medium, and long-term countermeasures targeting all road users have been identified for each location.
- Leading pedestrian intervals (LPI):
 - Initiated development of implementation guidelines (completed in 2020)
 - Review of two additional LPIs to be implemented, bringing the total to 10 locations (implemented in 2020)

Education

- HRP aligns their public messaging each month with the province's road safety theme. Through HRP's corporate social media accounts, several static posts with graphics and text are shared each month. When possible, a short video featuring HRP Traffic Services Unit members is also created and shared. "Intersection Safety" is the theme for January and October.

2. Young Demographic

The young people involved in these collisions represent both victims and drivers alike. Education and outreach activities targeting the young demographic, therefore, are intended for all road user types. Many of the activities completed in 2019 are ongoing programs undertaken by the Municipality.

Actions Initiated/Completed in 2019

Education

- Several traffic talks by HRP to a variety of community members including driver training classes and high school students
- "Back to School Safety" is the provincial road safety theme for September. HRP created a video for the theme which is circulated during September.
- The *Heads Up Halifax* education and outreach approach is expanded to reach a broader demographic and covers road safety for all users: social media campaigns implemented which will have a greater impact on the young demographic.
- Halifax Regional Centre for Education (HRCE) is working with partners to improve pedestrian facilities on school sites where possible.
- HRCE has created an in-house transportation team to address all aspects of student transportation.
- A six-month pilot was initiated (September 30, 2019 – March 31, 2020) for kids to ride Halifax Transit for free.
- "How to Use Halifax Transit" guides and videos were developed.
- Halifax Bike Week – support provided to several schools through Bike to School Day (where many hosted skills workshops, safety quizzes, etc.)
- The municipality supports programs for youth and post-secondary students through grants to the Ecology Action Centre's (EAC) Making Tracks program and the Dalhousie University Office of Sustainability.

3. Pedestrian Collisions

Three fatal collisions and 196 injury collisions involving pedestrians occurred at intersections over the two-year period. This represents 75 percent of the total fatal and injury collisions involving pedestrians. Most fatal and injury collisions involving pedestrians occur within the Regional Centre where there are increased volumes of both pedestrians and motorists.

Actions Initiated/Completed in 2019

Engineering

- Pedestrian Crosswalk Improvements:
 - Rectangular Rapid Flashing Beacons (RRFB): 3 additional locations, bringing the total to 12 completed. A standing offer was set up which results in improved efficiency and reduced cost for purchasing RRFB equipment;
 - Tender awarded for three new RA-5 locations;
 - Installed temporary 'bump-outs' at the intersections of Agricola Street at Charles Street and Ochterloney Street at Wentworth Street, reducing the pedestrian crossing distances at those locations;
 - Curb extensions added to 12 capital rehabilitation project locations to shorten pedestrian crossing distances and improve visibility between pedestrians and motorists;
 - Reflective strips added to poles/posts at all basic marked crosswalks (352) to improve visibility
 - Installation of 1056 tactile walking surface indicator plates.

- Leading pedestrian intervals (LPI):
 - Development of implementation guidelines initiated (completed in 2020);
 - Review of two additional LPIs to be implemented bringing the total to 10 signalized intersection locations (implemented in 2020).
- Accessible pedestrian signals (APS): Six additional signals equipped with APS, bringing the total number completed to 89 (32%).
- Seven locations have been equipped with advance yield lines and signage. Effectiveness of these installations on driver yielding will be evaluated to determine if more locations should be considered.
- 3.5 km of new sidewalk and 5.6 km of sidewalk renewal.
- 10.1 km of new Multi-use pathways completed.

Education

- Each month, HRP and Halifax District RCMP releases a pedestrian/vehicle collision report with an accompanying media release to provide both police and citizens with more contextual information on this issue.
- Public Service Announcements and social media promotion of pedestrian crosswalk improvements.
- *Heads Up Halifax* campaign resulted in community groups receiving funding for pedestrian safety initiatives.

4. Aggressive Driving

Aggressive driving was identified as contributing to 40% of the fatal and injury collisions from the previous two years. Aggressive driving behaviour includes actions such as failing to yield right-of-way, exceeding speed limit or driving too fast for conditions, and following too closely. Failing to yield right-of-way contributed to 32% of the aggressive driving collisions.

Actions Initiated/Completed in 2019

Engineering

- Traffic Calming on 13 residential roadways to address speeding concerns
- Introduced reduced speed limit of 40 km/h in one Halifax neighbourhood where supported by data
- Ongoing updates to the Municipal Design Guidelines (Red Book) to incorporate best practices in transportation design for all modes.

Enforcement

- HRP traffic violation statistics under aggressive driving include:
 - 1679 charges for driving at speeds above the posted limit
 - 62 dangerous driving charges under the criminal code
 - 28 charges of stunting (over 50 km/h above speed limit)
 - 201 charges for failing to yield right of way
- RCMP issued 2501 Summary Offense Tickets related to aggressive driving; 2156 of these were for speeding.

Education

- The provincial road safety theme for April is “Speeding and Aggressive Driving”. HRP created a video regarding this theme which is shared during the month of April.
- Public Service Announcements and social media promotion around the reduced speed limit to 40 km/h in the Fairmount neighbourhood.

5. Distracted Driving

The data has shown most distracted driving collisions are attributed to general inattentiveness which may or may not include distractions by passengers, vehicle controls, entertainment and communication devices. There would be few cases of self-reporting on cell phone use while driving.

Actions Initiated/Completed in 2019

Enforcement

- Checkpoints to identify and raise public awareness to the dangers of cell phone usage while driving. The goal was to provide consistent application to change the behaviour of cell phone usage in the Halifax region.
- HRP issued 907 tickets for using hand-held telephone/text.
- RCMP issued 688 tickets for using hand-held telephone/text.

Education

- “Distracted Driving” is the monthly road safety theme for February and June which includes a video by HRP regarding this theme being shared.

6. Impaired Driving

Impaired driving includes impairments by alcohol, cannabis, illicit drugs, and other medications. The collision reporting system categorizes general fatigue and the onset of sudden illness, including unconsciousness as “impaired” as well; though for our purpose the focus is on impairments by substances.

Actions Initiated/Completed in 2019

Enforcement

- 451 impaired driving violations under the criminal code
- 93 7-day suspensions for alcohol
- 36 charges for cannabis in vehicle/illegal possession/smoke in vehicle
- RCMP laid 286 charges of impaired driving; 18 involved drug impairments

Education

- Operation Christmas, the impaired operation theme by HRP for the year was re-structured with new training, supervision and skill sets.
- HRP releases monthly impaired driving statistics. In the impaired driving media release, HRP always includes how to spot an impaired driver and what you need to know when calling 911.
- The provincial road safety theme for August and December is “Impaired Driving”.

7. Bicyclist Collisions

Sixty-five percent (65%) of the collisions involving bicycles occurred at intersections. Most bicyclist collisions occur within the Regional Centre where there are increased volumes of both motor vehicles and bicycles. It is expected that the continuous development of the AAA bicycle network in the Regional Centre will help to reduce conflicts between bicyclists and motorists and, therefore, result in fewer injury collisions.

Actions Initiated/Completed in 2019

Engineering

- Secured \$25 million in infrastructure funding to build more/safer bike facilities
- The tender was awarded for construction of the Hollis Street protected bicycle lane from Cogswell to Terminal Road (Construction in 2020).
- The tender was awarded for the Herring Cove Road Complete Streets project which includes new bike lanes.

- Phase 1 of the South Park Street bike lane was completed (1 km).
- 10.1 km of multi-use pathways were completed.

The Local Street Bikeway network was expanded by 1.5 **Education**

- Bike Map updated: on-line version of Bike Map developed and made public.
- Public Service Announcements and social media promotion of new bike lanes and multi-use pathways on Barrington Street, South Park Street, Forest Hills Parkway, and Herring Cove Road.
- Media relations efforts to facilitate interviews and support key messaging related to newly installed bicycle lanes and multi-use pathways.
- Sandwich board signage was placed along the Barrington St. multi-use pathway to educate users about pathway etiquette.
- The Active Transportation team hosted a pop-up on the Barrington St. multi-use pathway once it opened to educate users about pathway etiquette and how to travel safely.
- The Active Transportation team hosted a pop-up on South Park Street once the new protected bike lanes opened to educate users about the new infrastructure, bicycle turn boxes and the shared-bike-lane-bus-stop.
- Online material was created to educate users about new bikeway treatments, such as bicycle turn boxes and shared-bike-lane-bus-stops.
- Bike Week – close to 50 events throughout the Halifax region:
 - Public Service Announcement, social media promotion, testimonials from bicyclists, online, print and radio advertising, posters for local businesses and digital screen promotion;
 - Messaging shared with municipal employees through internal channels (Employee Hub and Weekly Employee Bulletin email).

Strategic Road Safety Plan 2020

The proposed evidence-driven actions outlined for 2020 transition the Framework into the Strategic Road Safety Plan (The Plan). These countermeasures, including engineering, education and enforcement components, will be evaluated and expanded on in subsequent years as we progress towards zero injury and fatality collisions. Continuous analysis of the database will ensure appropriate countermeasures are applied where they will have the greatest impact in reducing injury and fatality collisions. For instance, analysis of the collision database will enable greater focus on contributing factors of collisions at intersections. Engineering countermeasures will be recommended where there are safety or design deficiencies identified; and education and enforcement efforts related to intersections can be targeted towards specific behaviours contributing to collisions. Many of the engineering countermeasures outlined below are expected to enhance safety within more than one emphasis area.

The Road Safety Steering Committee has also developed a public road safety website and dashboard which will highlight the progress and effectiveness of the plan moving forward. The dashboard will include updated collision statistics within each emphasis area and updated progress on the engineering countermeasures being implemented through The Plan. Phase one of the dashboard is now open to the public at www.halifax.ca/roadsafety.

Engineering

Leading Pedestrian Intervals (LPI)

LPIs are most effective at signalized intersections where there is a significant amount of turning traffic, especially left turns, travelling over a crosswalk. Left turning conflicts with pedestrians are found to be the most common pedestrian collision type at signalized intersections. LPIs will be implemented as per the new guidelines. The Plan includes prioritized implementation of leading pedestrian intervals at T-intersections and where there is a history of turning conflicts with pedestrians. The Plan is targeting 10 new signalized intersection locations to be equipped with LPIs in 2020.

Rectangular Rapid Flashing Beacon (RRFB)

RRFBs can enhance safety at unsignalized intersections and mid-block pedestrian crossings by increasing driver awareness of potential pedestrian conflicts and by improving driver yielding behavior. The Plan includes installation of RRFBs at 12 crosswalk locations, which would bring the total number of locations to 24.

Accessible pedestrian signals (APS)

APS improve the safety of signalized intersections for pedestrians with visual impairments. The Plan includes APS installations at all new and rehab locations; as well as retrofitting 5 locations/year to include APS.

40 km/h Residential Speed Limits

In absence of revised legislation to allow for a default speed limit of 40 km/h, the only available recourse for reducing speed limits is to submit neighbourhood applications to the provincial traffic authority for approval. The Plan includes review and application to the Province for four additional neighbourhoods.

Speed Display Signs

Speed display signs are designed to reduce speeding by alerting motorists of their speed. By providing information in real time, the signs provide motorists the opportunity to alter their behaviour regarding compliance to posted speed limits. The Plan includes implementation of speed display signs in strategic locations throughout the Halifax region where they are thought to be most effective. Initial implementation focuses on gateway locations into the urban environment where there are speed transitions from the rural setting. The Plan is targeting 10 locations to be implemented in 2020.

Traffic Calming

Traffic calming installations on residential roadways follow the *Traffic Calming Administrative Order*. The traffic calming budget has been increased to address speeding concerns on residential roadways. Implementation for 2020 includes various traffic calming measures being designed and tendered for 14 residential streets. School zone specific implementation of speed humps is also being tendered for 10 school zone locations.

RA-8 In-Ground Crosswalk Signs

The in-ground crosswalk signs are being implemented on a trial basis at five school crosswalk locations. This trial period will test the durability of the signs when left in place for long periods of time. If, during the trial, it is determined these signs could withstand impacts by snowplows, vehicles, etc. they may be considered for other school crosswalk locations to enhance conspicuity where there is a demonstrated need.

Curb Extensions

Curb extensions are put in place for localized, short sections of road narrowing to achieve impacts to vehicle speeds, reduced pedestrian crossing distances and improved visibility between pedestrians and motorists. The plan includes 12 curb extensions incorporated into capital road rehabilitation projects being tendered. The plan also involves 17 temporary curb extensions being implemented through the tactical urbanism program.

Protected Bike Lanes

Expanding the All Ages and Abilities (AAA) bike network within the municipality, including the construction of additional protected bike lanes, helps promote safe, active transportation by increasing the physical separation between bicyclists and motorists. The Plan includes 1.5 km of protected bike lane being constructed in 2020.

Multi-Use Pathways

Expanding the multi-use pathway network within the municipality increases the physical separation between vehicles and vulnerable road users; and promotes active transportation for all ages and abilities. An additional 3.1 km of multi-use pathway is budgeted for construction.

Local Street Bikeways

It is not expected that the network of local street bikeways will be expanded in 2020; however, projects are planned which will enhance the quality of existing local street bikeways. Signal controlled crossings at major intersections on the Vernon Street Bikeway and Allan Street Bikeway will improve the safety of those existing facilities.

Sidewalks

Improvements to the municipal sidewalk network increases the physical separation between pedestrians and vehicles. The Plan involves budgeting for 2.88 km of sidewalk renewals; and 2.80 km of new sidewalk construction.

Tactile Walking Surface Indicators

The use of tactile walking surface indicator plates follows universal standards in order to provide consistent safety information to all persons with low or no vision. The Plan includes budget for 1200 additional plates to be installed.

In-Service Safety Reviews

Prioritized implementation of improvements recommended from the 2019 In-Service Safety Reviews is currently underway. The short-term recommendations are being implemented at each of the subject intersections. Longer-term recommendations will be considered with upcoming capital projects. In some cases, temporary measures will be installed prior to a capital project through the tactical urbanism program. Additional high collision frequency intersection locations will be identified for subsequent in-service safety reviews. Road safety staff also conduct detailed safety assessments of intersections where fatalities or serious injuries have occurred to recommend safety improvements where applicable.

Right Turn on Red (RTOR) Restrictions

System-wide implementation of RTOR restrictions is not recommended. The Plan includes review of intersection locations for right turn on red restrictions including where LPIs are implemented and where there is a history of right turn on red conflicts. The number and locations of these restrictions will be determined by data analysis.

Advanced Yield Lines

At multi-lane RA-5 locations, advanced yield lines are intended to provide guidance to motorists on safe yielding behaviours. Once evaluation of the current seven installations is complete, and if these are proven effective, considerations will be made for expanding to other locations.

Street Improvement Projects (Tactical Urbanism)

The Street Improvement Pilot Project program (Tactical Urbanism) will use a toolkit of materials and designs to test and evaluate innovative ideas. Using a palette of simple, inexpensive materials, this program allows the municipality to be nimble in its response to opportunities/ challenges that are presented. The plan includes several projects to test ideas around improved road safety for all users.

Municipal Design Guidelines (Red Book)

The ongoing updates to the Municipal Design Guidelines incorporate best practices for transportation design elements. The Complete Streets design approach being adopted in the update to the Red Book will improve safety for all road users on all new and rehabilitation projects being constructed in the region. Since the approval of the IMP, a Complete Streets lens is being applied to all capital projects; however, the update to the Red Book will help to outline the process and design elements. Consultation with external stakeholders regarding the updates to the Red Book is expected to be completed in summer 2020, with the final updates expected late 2020.

Education

"Get There by Bike Community Grants Program" will support community projects on safety and promotion of cycling and will include events focused at youth.

Heads Up Halifax

Plans to expand the scope and scale of the annual *Heads Up Halifax* campaign were completed in December 2019. The evolution of the campaign was developed by Corporate Communications in collaboration with Transportation and Public Works and endorsed by the Road Safety Steering Committee.

The expanded campaign is designed to not only increase efforts to promote crosswalk safety but also encompass the broader scope of road safety – and the importance of shared responsibility amongst all road users — whether they be walking, driving, rolling or cycling.

There are three main streams of communications efforts included in the *Heads Up Halifax* Campaign:

1. **Increasing road safety awareness.** Changing behaviours is not easy; however, effective education efforts can be a contributing factor to reducing collisions. Focus will be placed on educating residents about safe practices on the road, rules for crosswalks, and information on how to use new infrastructure such as two-stage bicycle turn boxes. The *Heads Up Halifax* campaign will reflect a sustained, long-term approach and the expanded approach will benefit from an extended reach through increased collaboration with key partners (e.g. HRP, Halifax Regional Centre for Education, Nova Scotia Health Authority, etc.). For example, Corporate Communications will work with colleagues at HRP on social media efforts that will leverage road safety themes at different times of the year. Analysis of the data will inform messaging for upcoming media releases in order to target specific behaviours contributing to collisions.
2. **Highlighting municipal road safety initiatives.** It is important that residents understand the municipality's demonstrated commitment to improving road safety. At the direction of Regional Council, and in keeping with the Strategic Road Safety Plan, the municipality has invested in infrastructure that is helping to improve road safety across the Halifax region. These initiatives range from innovative pilot projects and simple, cost-effective installations (e.g. temporary bump-out bollards at street corners) to larger capital projects (e.g. network of protected bike lanes).
3. **Engaging citizens.** This is about encouraging community-based action so that residents get directly involved in the adoption of safer behaviors. Community engagement for the *Heads Up Halifax* campaign has two components: one is participation in Crosswalk Safety Awareness Day (scheduled for early fall when students return to classes) and the other is participating in the *Bright Ideas Challenge*. Building on the experience of last year, when *Bright Ideas* was first launched, we will be asking citizens to partner with a non-profit organization to submit proposals on how they can take action to increase road safety.

NOTE: Due to the impacts of COVID-19, the *Bright Ideas Challenge* has been postponed for this year. Pending the status of public health restrictions, plans for a Crosswalk Safety Awareness Day will be further assessed.

Enforcement

RCMP and HRP will continue to address aggressive driving practices, including speeding. Data will be analyzed to focus enforcement in areas that contribute to fatal and injury motor vehicle collisions, taking into consideration neighbourhood and councilor concerns.

RCMP and HRP will continue a strong stance against impaired driving. Pro-active strategies are used to identify and monitor potentially impaired drivers, intercepting them as quickly as possible before they can travel on 100-series highways or other roadways.

RCMP and HRP will continue targeting distracted driving through consistent application of checkpoints to change behaviours around cell phone use while driving.

HRP analysts now have access to the collision database. Together, HRP and the Road Safety Steering Committee will work towards identifying data-driven enforcement efforts to target higher risk behaviours.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report. All activities are anticipated to be carried out as part of existing capital and operating budgets.

COMMUNITY ENGAGEMENT

Community engagement was not undertaken as part of this report as there are ongoing engagement initiatives with the public through education campaigns and enforcement programs.

ATTACHMENTS

1. Strategic Road Safety Plan Annual Report 2020

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

Report Prepared by: Jill Morrison, P.Eng., Transportation & Road Safety Engineer 902.490.4380

Attachment 1

STRATEGIC **ROAD SAFETY** PLAN

ANNUAL REPORT 2020

HALIFAX





Towards Zero Approach

The Strategic Road Safety Framework (the Framework) was adopted by Regional Council in July 2018. The Framework had outlined the Towards Zero road safety approach which will move us closer to reducing fatalities and injuries to zero on roadways within the Halifax Regional Municipality by focusing on continuous shorter-term action plans and evaluations.

The Framework set the first short-term goal of a 20% reduction of fatal and injury collisions within five years. To achieve this, the Framework identified seven emphasis areas which will have the greatest impact to reducing the frequency and severity of collisions in the Halifax region.

Seven emphasis areas:

- » Intersection-Related Collisions
- » Young Demographic
- » Pedestrian Collisions
- » Aggressive Driving
- » Distracted Driving
- » Impaired Driving
- » Bicyclist Collisions

To achieve the 20% goal, staff have developed specific, evidence-based action items which address each emphasis area. These action items transition the Framework into the Strategic Road Safety Plan.



Where We Are

One of the actions identified in the Framework was the development of an internal collision database. Continuous analysis of the data will ensure we are improving the safety of our roadways through a holistic, evidence-based approach and the three E's of Road Safety: Engineering, Enforcement and Education. The impact of the countermeasures being implemented within each of the emphasis areas today will be reflected in the data of future years as we progress Towards Zero.

BASELINE COLLISION STATISTICS

Analysis using the collision database has established a baseline to measure overall progress towards achieving the five-year goal. The baseline is the average number of fatal + injury collisions occurring within the road right-of-way from the two calendar years prior to implementing countermeasures through the Framework (2018-2019). This does not include collisions which have occurred on private property. On average there were 14 fatal and 778 injury collisions per year. Looking at the total fatal and injury collisions per 100,000 population, the Halifax region saw a rate of 176.3 in 2018, compared to the national rate of 297.1¹² for the same year. A reduction of 20% by 2023 would result in 158 fewer collisions causing injury or fatality on roadways within the Halifax region.

✓ TABLE 1: FATAL AND INJURY COLLISIONS (2018-2019)

YEAR	FATAL COLLISIONS	INJURY COLLISIONS	TOTAL FATAL + INJURY COLLISIONS
2018	14	745	759
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» *These totals are based on closed collision reports from Halifax Regional Police as of June 30, 2020. These numbers are subject to change in future collision reporting as case files are closed.

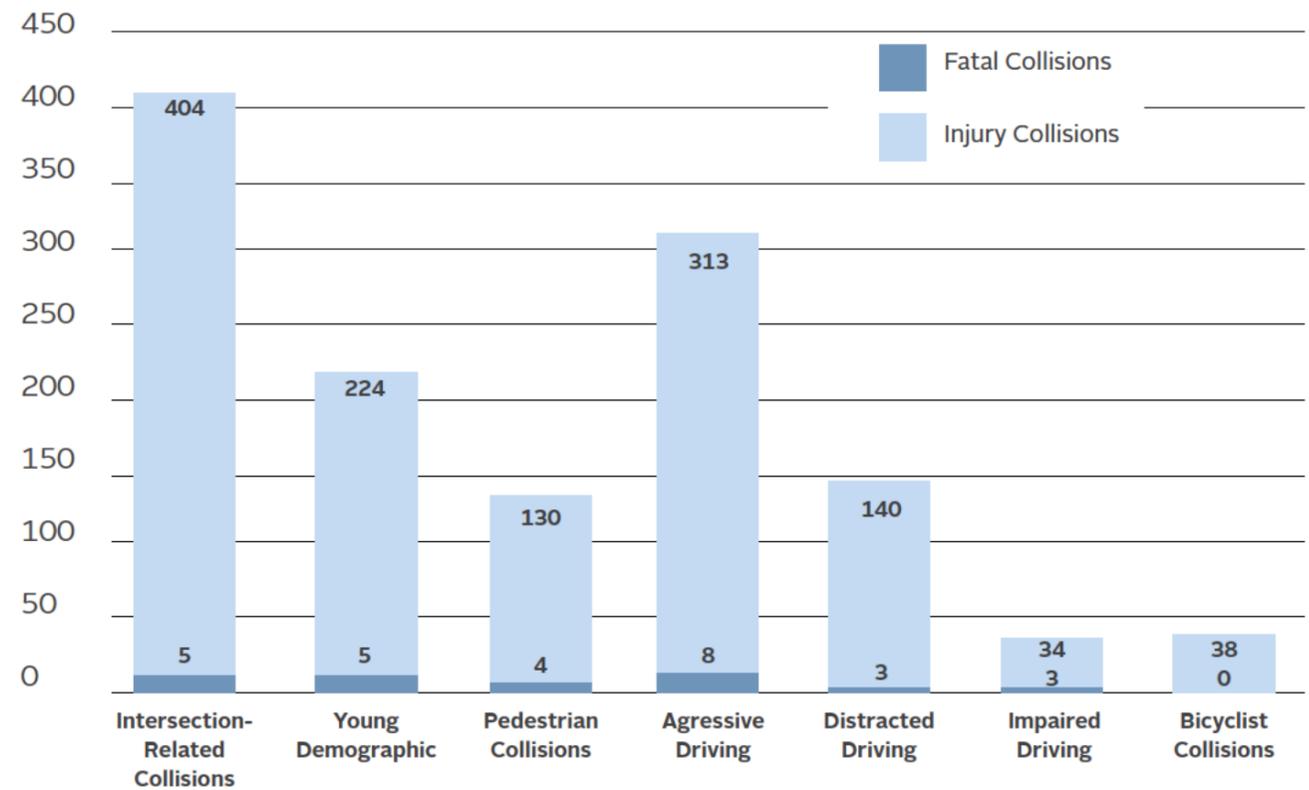
1 Transport Canada, Canadian Motor Vehicle Traffic Collision Statistics: 2018, Catalogue No. T45-3E-PDF

2 Statistics Canada, Annual Demographic Estimates: Canada, Provinces and Territories, 2018, Catalogue No. 91-215-X.

COLLISIONS BY EMPHASIS AREA

The average collisions over the past two years for each of the emphasis areas are presented below. There is crossover between emphasis areas (e.g. one collision occurring at an intersection may also involve aggressive driving and a pedestrian), therefore these values add up to more than the total average number of fatal and injury collisions. Similarly, countermeasures targeting one emphasis area may have an impact on others as well.

✓ FIGURE 1: AVERAGE FATAL AND INJURY COLLISIONS REPRESENTING EACH EMPHASIS AREA



INTERSECTION-RELATED COLLISIONS

Intersection-Related collisions make up 52% of the fatal and injury collisions. Focusing efforts on improving intersection safety targets all road users and is paramount in achieving our road safety goals. Improving intersections for pedestrians and bicyclists is of particular importance.

Intersection collisions included three fatalities and 196 injuries to pedestrians; and 50 injuries to bicyclists over the two-year period.

Intersection-Related: Highlighted Actions in 2019

- » Completion of In-Service Safety Reviews at high frequency collision intersections (13 locations)
- » Leading Pedestrian Intervals (LPI):
 - » Development of implementation guidelines
 - » Two additional locations with LPI

Leading Pedestrian Intervals (LPIs)
 Leading Pedestrian Intervals (LPIs) give people crossing the street a head start. The WALK signal begins a few seconds before the green light for vehicles. This improves visibility of pedestrians in the crosswalk.



YOUNG DEMOGRAPHIC

The young people represented in this emphasis area are both victims and drivers alike. Educational and outreach activities targeting the young demographic, therefore, are intended for all road user types.

Young Demographic: Highlighted Actions in 2019

- » Continuous work towards completing the AAA Bicycle Network
- » Traffic talks by Halifax Regional Police (HRP) to community members (e.g. driver training classes and high school students)
- » “Back To School Safety” video created by HRP
- » Greater focus on social media to reach a wider demographic
- » Halifax Regional Centre for Education (HRCE) is working with partners to improve pedestrian facilities on school sites
- » Halifax Bike Week – support provided to several schools through Bike To School Day (where many of them hosted skills workshops, safety quizzes, etc.)
- » The municipality supports programs for youth and post-secondary students through grants to the Ecology Action Centre’s (EAC) Making Tracks program and the Dalhousie University Office of Sustainability



AAA Bicycle Network

A network for all ages and abilities (AAA) includes local street bikeways, multi-use pathways and protected bike lanes.

PEDESTRIAN COLLISIONS

The majority of fatal and injury collisions involving pedestrians occur in the regional centre and other densely developed areas. Focusing countermeasures where we see the highest volumes of pedestrians and vehicles will have the greatest impact to reducing pedestrian collisions.

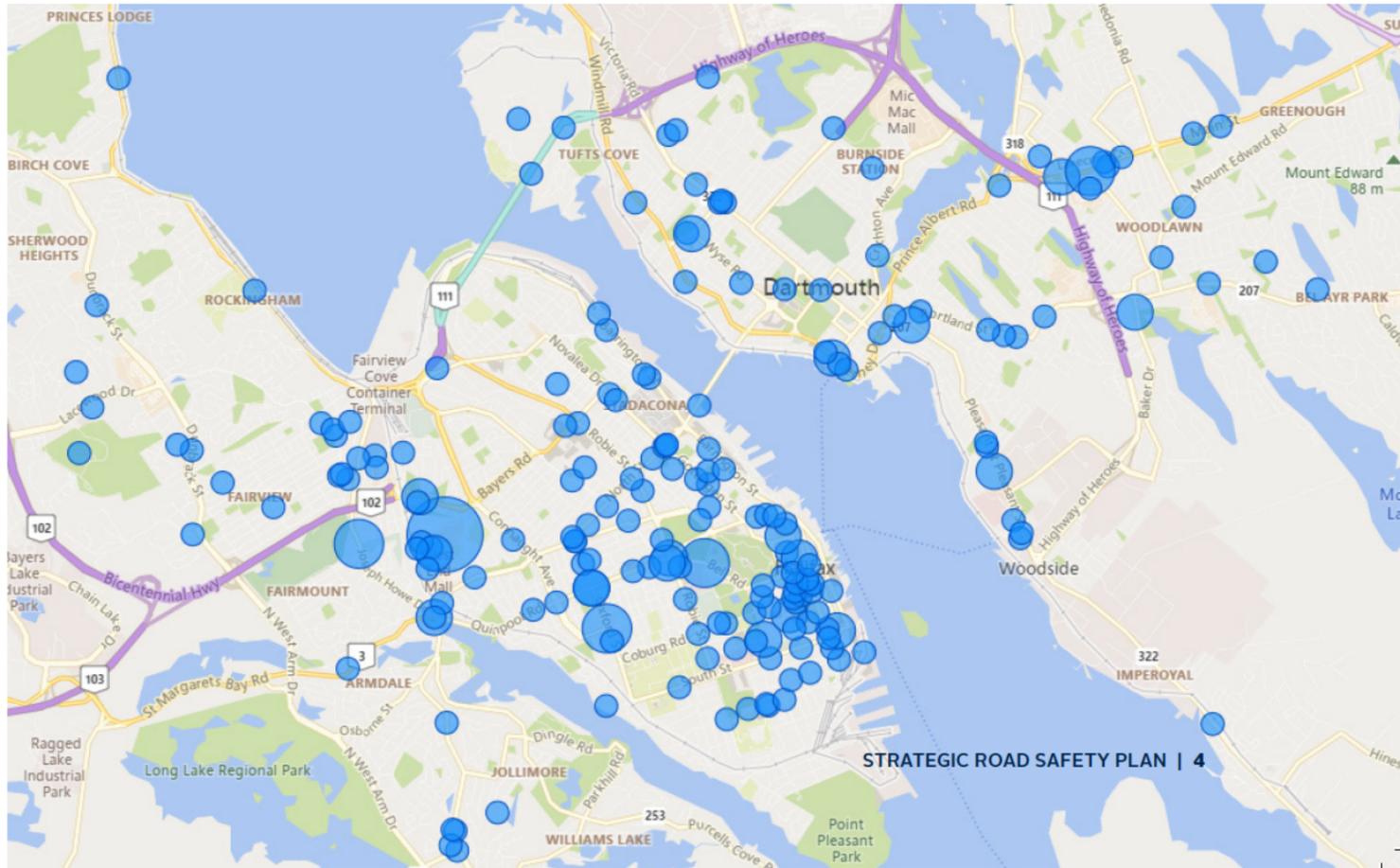
Pedestrian Collisions: Highlighted Actions in 2019

- » Continuous pedestrian crosswalk improvements:
 - » Rectangular Rapid Flashing Beacons (RRFB): three new locations
 - » Three new RA-5 locations tendered
 - » Installed two temporary ‘bump-outs’ and 12 permanent curb extensions at various locations to reduce pedestrian crossing distances and improve visibility
 - » Reflective strips added to poles/posts at all basic marked crosswalks
 - » Installation of 1,056 tactile walking surface indicator plates for persons with visual impairments
- » Leading Pedestrian Intervals (LPI):
 - » Development of implementation guidelines
 - » Two additional LPI locations
- » Accessible pedestrian signals (for persons with visual impairments): six additional signals completed
- » Completed 3.5 km of new sidewalk and 5.6 km of sidewalk renewal
- » Completed 10.1 km of new multi-use pathways



RA-5 crosswalks
 RA-5 crosswalks are those which include zebra pavement markings, side-mounted pedestrian signs, and internally illuminated overhead signs with downlighting. The majority of these crosswalks include pedestrian push buttons to activate side-mounted and overhead alternating amber flashing beacons.

✓ FIGURE 2: LOCATIONS OF FATAL AND INJURY PEDESTRIAN COLLISIONS



AGGRESSIVE DRIVING

Aggressive driving was identified as contributing to 40% of the fatal and injury collisions from the previous two years. Aggressive driving behaviours include actions such as failing to yield right-of-way, exceeding the speed limit or driving too fast for conditions, and following other vehicles too closely. Failing to yield right-of-way contributed to 32% of the aggressive driving collisions in 2018 and 2019. These types of aggressive driving behaviours contribute to collisions involving the other emphasis areas.

Aggressive Driving: Highlighted Actions in 2019

- » Traffic calming on 13 residential roadways to address speeding concerns
- » Introduced reduced speed limit of 40 km/h in one Halifax neighbourhood
- » Ongoing updates to the Municipal Design Guidelines
- » Continuous, evidence-based enforcement by RCMP and HRP, targeting speeding and right-of-way violations at areas identified through data analysis

DISTRACTED DRIVING

Analysis of the collision data shows most distracted driving collisions are attributed to general inattentiveness; which may or may not include distractions by passengers, vehicle controls, entertainment and/or communication devices.

Distracted Driving: Highlighted Actions in 2019

- » HRP checkpoints to identify and raise public awareness to the dangers of cell phone usage while driving
- » HRP issued 907 tickets for cell phone usage while driving
- » RCMP issued 688 tickets for cell phone usage while driving

IMPAIRED DRIVING

RCMP and HRP continue to target impaired drivers within the Halifax region. Times and locations for targeted enforcement are based on analysis of historic data.

Impaired Driving: Highlighted Actions in 2019

- » 451 impaired driving violations (criminal code) by HRP
- » 93 seven-day suspensions for alcohol by HRP
- » 36 charges for cannabis in vehicle/illegal possession/smoke in vehicle by HRP
- » RCMP laid 286 charges of impaired driving; 18 involved drug impairments
- » RCMP engaged in pro-active strategies related to impaired drivers. As an example, members monitor drinking establishments to identify and intercept impaired operators, before they travel onto the 100 series highways or other roadways
- » Operation Christmas, the impaired operation theme by HRP, was re-structured with new training, supervision and skill sets
- » RCMP and HRP released monthly impaired driving statistics
- » Impaired driving media releases by HRP and RCMP included how to spot an impaired driver and what you need to know when calling 911
- » The provincial road safety theme for August and December was "Impaired Driving"



Operation Christmas

Operation Christmas is an annual campaign that aims to reduce impaired driving and encourage motorists to practice safe winter driving.

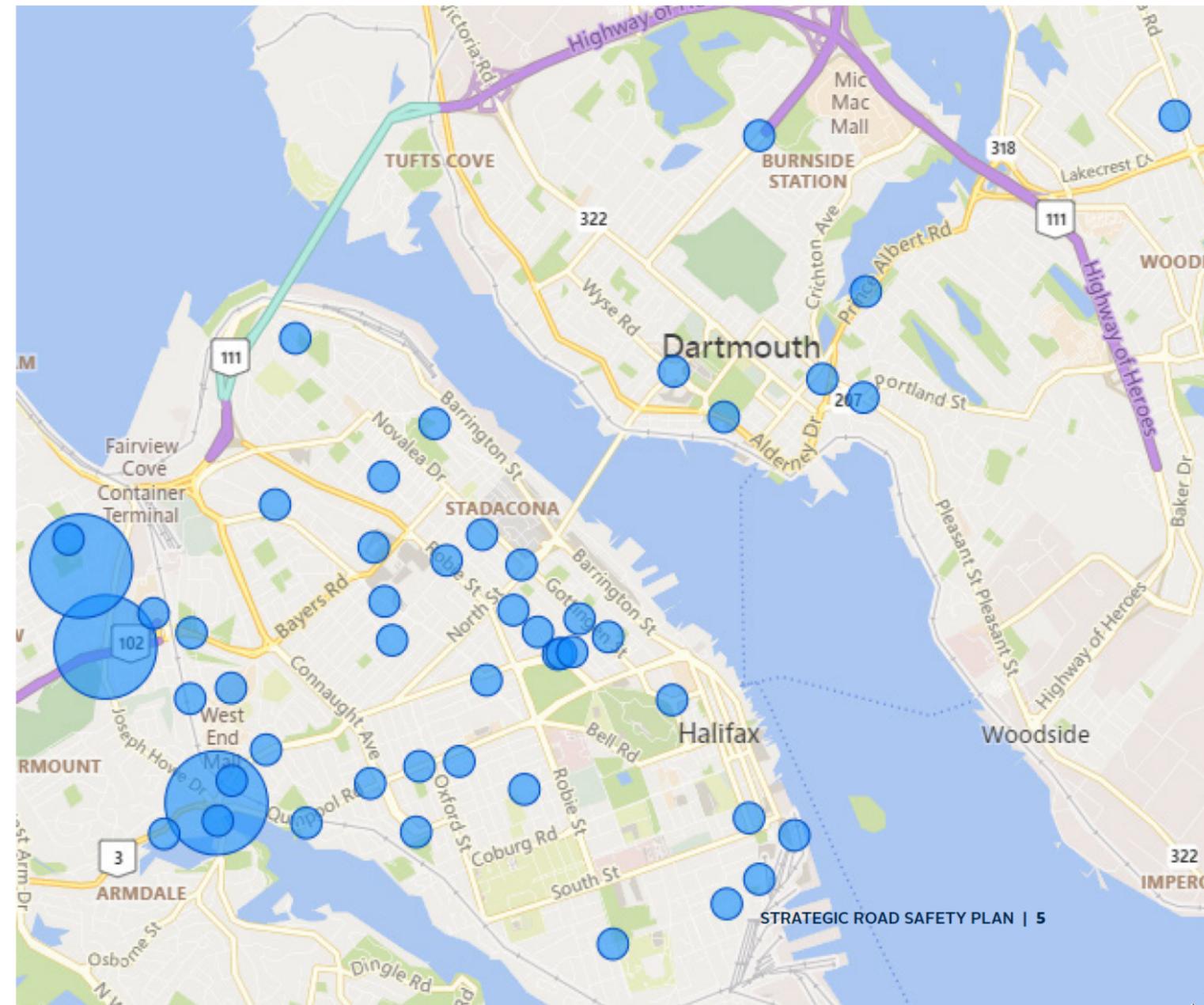
BICYCLIST COLLISIONS

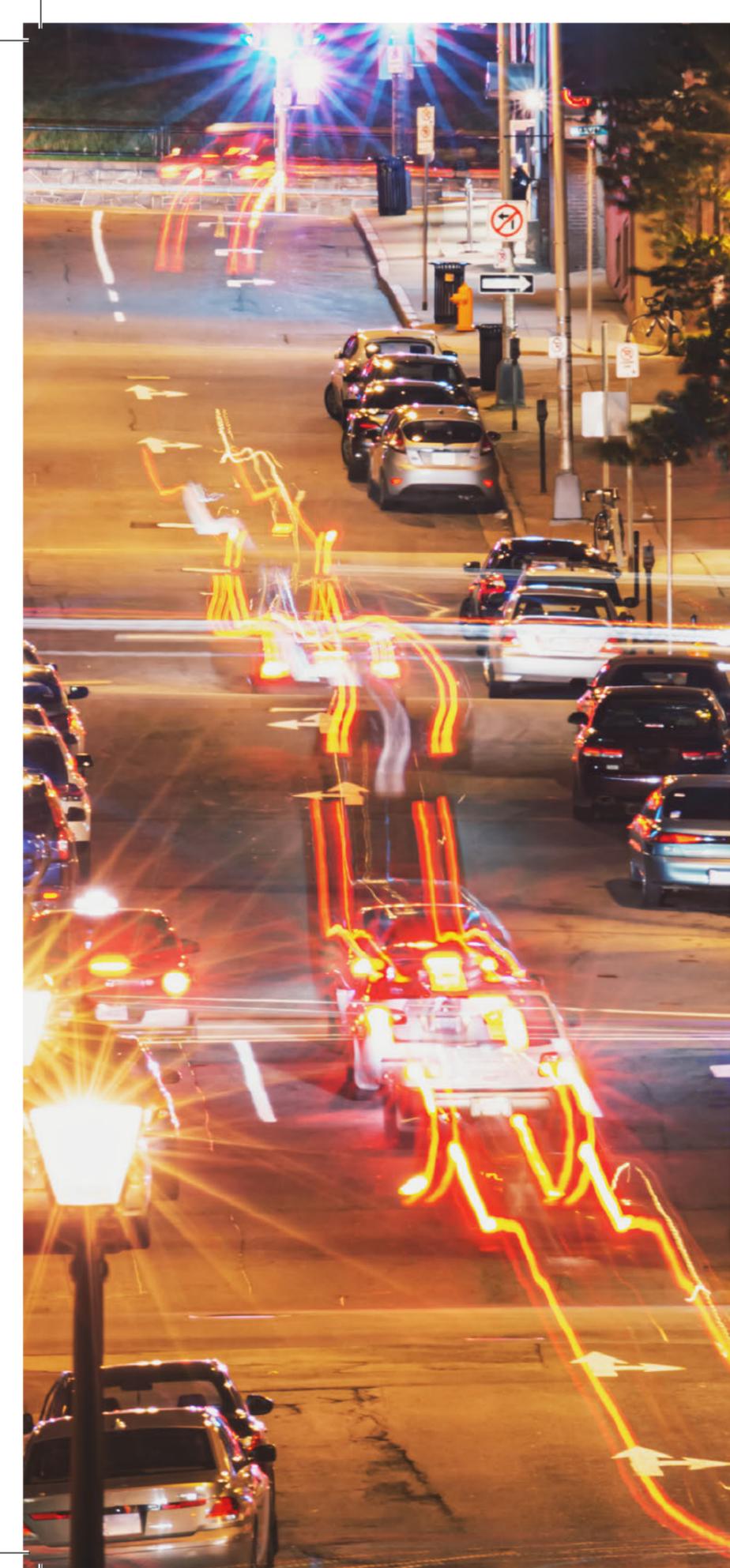
Similar to pedestrian collisions, the majority of bicyclist collisions occur in the regional centre where we see the largest numbers of bicyclists and motor vehicles. It is expected that the continuous development of the AAA bicycle network in the regional centre will help to reduce conflicts between bicyclists and motorists and, therefore, result in fewer injury collisions.

Bicyclist Collisions: Highlighted Actions in 2019

- » \$25 million in infrastructure funding secured to build more/safer bike facilities
- » Bike Week – close to 50 events throughout the Halifax region
- » AAA bikeway projects completed (1 km of protected bike lane and 1.5 km local street bikeway)
- » 10.1 km of multi-use pathways completed
- » Active Transportation pop-ups hosted to educate on the use of new facilities

✓ FIGURE 3: LOCATIONS OF INJURY BICYCLIST COLLISIONS





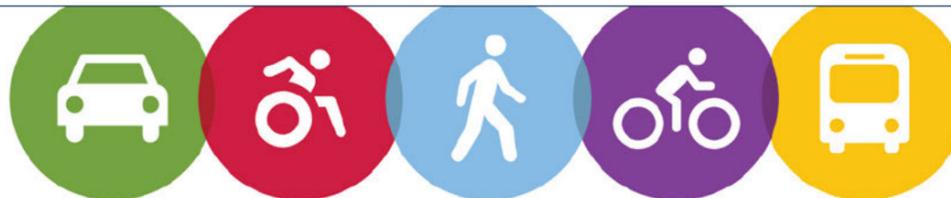
Heads Up Halifax

Plans to expand the scope and scale of the annual Heads Up Halifax campaign were completed in December 2019. The evolution of the campaign was developed by Corporate Communications in collaboration with Transportation and Public Works and endorsed by the Road Safety Steering Committee.

Previously, the public awareness campaign ran for several months each year with a focus on crosswalk safety. The campaign, now running year-round, not only increases efforts to promote crosswalk safety but also encompasses the broader scope of road safety — and the importance of shared responsibility for everyone, whether you're walking, driving, rolling or cycling.

There are three main streams of communications efforts included in the Heads Up Halifax Campaign:

- 1. Increasing road safety awareness.** Focus will be placed on educating residents about safe practices on the road, rules for crosswalks, and information on how to use new infrastructure such as two-stage bicycle turn boxes. The Heads Up Halifax campaign will reflect a sustained, long-term approach and the expanded scope will benefit from an extended reach through increased collaboration with key partners (e.g. HRP, Halifax Regional Centre for Education, Nova Scotia Health Authority, etc.).
- 2. Highlighting municipal road safety initiatives.** It is important that residents understand the municipality's demonstrated commitment to improving road safety. At the direction of Regional Council, and in keeping with the Strategic Road Safety Plan, the municipality has invested in infrastructure that is helping to improve road safety across the Halifax region. These initiatives range from innovative pilot projects and simple, cost-effective installations (e.g. temporary bump-out bollards at street corners) to larger capital projects (e.g. network of protected bike lanes).
- 3. Engaging citizens.** An important part of the Heads Up Halifax campaign is encouraging community-based action so that residents get directly involved in the adoption of safer behaviors. Community engagement for the Heads Up Halifax campaign includes two initiatives: Crosswalk Safety Awareness Day and the Bright Ideas Challenge (asking citizens to partner with a non-profit organization to submit proposals on how they can take action to increase road safety). Due to the impacts of COVID-19, the 2020 Bright Ideas Challenge is postponed. Pending the status of public health restrictions, plans for a 2020 Crosswalk Safety Awareness Day continue to be assessed.



Make road safety a priority.

halifax.ca/roadsafety



Where We're Going

We're making important progress and more work is required to achieve our five-year goal of 20% reduction in fatal and injury collisions. Working together with our partners, the municipality will continue to expand on countermeasures being implemented within the emphasis areas through Engineering, Education and Enforcement.

The development of specific evidence-based action items has transitioned the Strategic Road Safety Framework into the Strategic Road Safety Plan. The actions for 2020 are guided by the issues and trends identified through analysis of the collision data and are the first steps Towards Zero. Progress and success of countermeasures will be available on the newly developed Road Safety Dashboard. Stay informed on road safety measures being implemented in the municipality at halifax.ca/roadsafety.

2020 ACTION ITEMS	INTERSECTION-RELATED	YOUNG DEMOGRAPHIC	PEDESTRIANS	AGGRESSIVE DRIVING	DISTRACTED DRIVING	IMPAIRED DRIVING	BICYCLIST COLLISIONS
ENGINEERING							
LEADING PEDESTRIAN INTERVALS 10 new locations	✓		✓				
RECTANGULAR RAPID FLASHING BEACON 12 new installations	✓		✓				
ACCESSIBLE PEDESTRIAN SIGNALS 5 upgraded signal locations	✓		✓				
40 KM/H RESIDENTIAL SPEED LIMIT 4 neighbourhood reviews	✓	✓	✓	✓			✓
SPEED DISPLAY SIGNS 10 strategic locations				✓	✓		
TRAFFIC CALMING 14 residential streets plus 10 school zone locations	✓	✓	✓	✓			✓
IN GROUND CROSSWALK SIGNS (RA-8) 5 school crosswalk locations		✓	✓	✓	✓		

2020 ACTION ITEMS	INTERSECTION-RELATED	YOUNG DEMOGRAPHIC	PEDESTRIANS	AGGRESSIVE DRIVING	DISTRACTED DRIVING	IMPAIRED DRIVING	BICYCLIST COLLISIONS
ENGINEERING							
CURB EXTENSIONS 12 locations budgeted for construction 17 temporary installations	✓	✓	✓	✓			
PROTECTED BIKE LANES 1.5 km being constructed		✓					✓
MULTI-USE PATHWAYS 3.1 km budgeted for construction		✓	✓				✓
SIDEWALKS 2.88 km budgeted for sidewalk renewal 2.01 km budgeted for new sidewalk construction		✓	✓				
TACTILE WALKING SURFACE INDICATOR PLATES 1,200 budgeted for construction	✓		✓				
EDUCATION							
EXPANDED HEADS UP HALIFAX CAMPAIGN	✓	✓	✓	✓	✓	✓	✓

2020 ACTION ITEMS	INTERSECTION-RELATED	YOUNG DEMOGRAPHIC	PEDESTRIANS	AGGRESSIVE DRIVING	DISTRACTED DRIVING	IMPAIRED DRIVING	BICYCLIST COLLISIONS
ENFORCEMENT							
CONTINUOUS ENFORCEMENT OF IMPAIRED DRIVING						✓	
DATA-BASED ENFORCEMENT	✓		✓	✓	✓	✓	✓



HALIFAX