

# HALIFAX

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**Item No. Info 2**  
**Transportation Standing Committee**  
**July 22, 2021**

**TO:** Chair and Members of Transportation Standing Committee

**SUBMITTED BY:**  (Original Signed)

David Hubley, Acting Executive Director, Transportation and Public Works

 (Original Signed)

Brad Anguish, Acting Chief Administrative Officer

**DATE:** July 15, 2021

**SUBJECT:** Strategic Road Safety Plan

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## 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:

3. Direct staff to provide annual information reports to Transportation Standing Committee regarding the implementation of the Strategic Road Safety Framework.

MOTION AS AMENDED PUT AND PASSED UNANIMOUSLY.

### 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 had set an initial 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

Defining the Road Safety Steering Committee and development of an internal collision database were critical first steps to ensuring that data-driven decisions are made to reach the 20% reduction goal by 2023. With those pieces in place, the baseline collision statistics were established, from which to measure our overall progress.

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. 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 March 31, 2021. 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 35 fatal and 1565 injury collisions. On average this equates to 18 fatal and 783 injury collisions per year. A reduction of 20% by 2023 would translate to 160 fewer collisions resulting in either injury or fatality occurring on roadways within the Halifax Region.

Evidence-driven countermeasures had been outlined for the 2020/2021 fiscal year which included engineering, education and enforcement actions aimed to reduce fatal and injury collisions within each of the emphasis areas. These actions had transitioned the Framework into the Strategic Road Safety Plan 2020 (SRSP 2020). The progress achieved with the SRSP 2020, as well as the planned actions and countermeasures which form the Strategic Road Safety Plan for 2021/2022 are presented herein.

## **DISCUSSION**

### **1. Road Safety Update**

This annual report presents the first year of evaluating the progress towards the goal (i.e. 2020 is the first year following the years comprising the benchmark statistics). In 2020 there were 5 fatal collisions and 607 injury collisions which had occurred on roadways within the Halifax region including roadways under provincial jurisdiction. Table 1 presents the annual fatal and injury collision statistics from 2018 to 2020.

This indicates for 2020, despite a steady increase in the estimated population, we have seen a drop in the total number of fatal and injury collisions occurring in the region.

**Table 1: Fatal and Injury Collisions (2018 - 2020)**

Year	Population Estimate	Fatal Collisions	Injury Collisions	Fatal + Injury Collisions per 100,000 population
2018	429895	18	749	178.4
2019	439529	17	816	189.5
2020	448544	5	607	136.4

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 and 2019, normalized by 100,000 population. The same data for 2020 was not yet publicly available. This shows the Halifax Region is performing relatively well with respect to all casualty collisions.

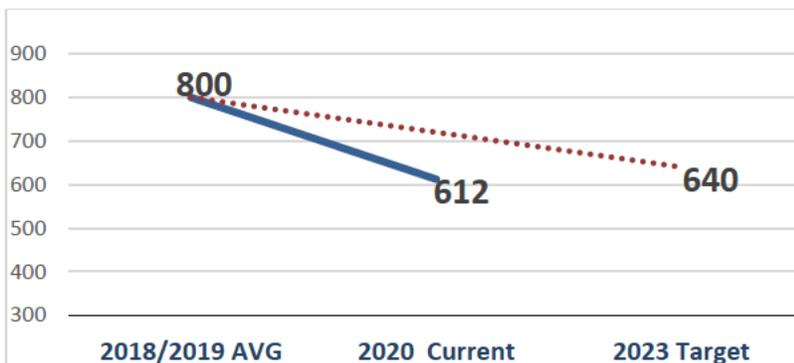
**Table 2: Summary of Fatal and Injury Collisions for Various Canadian Cities (2018 - 2019)**

Region	Population		Fatal Collisions		Injury Collisions		Fatal+ Injury Collisions per 100,000 population	
	2018	2019	2018	2019	2018	2019	2018	2019
Halifax Region	429,895	439,529	18	17	749	816	178.4	189.5
City of Ottawa	1,004,802	1,025,425	27	27	3486	3577	349.6	351.5
City of Hamilton*	566,144	574,265	11	14	1560	1463	277.5	257.2
City of Saskatoon	268,188	272,200	1	4	709	888	264.7	327.7
City of Edmonton	973,100	993,100	19	14	2610	2066	270.2	209.4
City of Calgary	1,267,344	1,285,711	16	19	2496	2353	198.2	184.5

\*Collision data excludes provincial highways

Figure 1 compares the 2020 collision data to the baseline and target values. The total number of fatal and injury collisions for 2020 is shown to be 23% less than the baseline average, compared to the 20% target reduction value for 2023.

**Figure 1: 2020 Road Safety Progress**



Coincidentally, this reduction also corresponds with the COVID-19 pandemic, so it was assumed results are at least partially impacted by the modifications to travel behaviour and reduced traffic volumes. The road safety team completed an analysis to compare the reduction in number of fatal and injury collisions against the reduction in regional traffic volumes to get a better sense of the impact the public health restrictions associated with the pandemic have had on collision results. Using traffic volumes from the Halifax Harbour Bridges as a proxy for regional traffic volumes, a 25% reduction in the average daily traffic (ADT) was found for the eight-month period of April through December from 2019 to 2020. In comparison, the fatal and injury collisions reported by HRP and RCMP for that same period were reduced by 35% from 2019.

## **2. Breakdown of Collisions by Emphasis Area**

Figure 2 provides the annual fatal and injury collisions compared to the baseline average for each of the emphasis areas which had been 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 number of fatal and injury collisions presented above. Similarly, countermeasures targeting one emphasis area may have an impact on others as well. As seen in Figure 2 collisions have decreased from the baseline average of the previous two years across all emphasis areas.

Intersection-related collisions accounted for over 51% of the total fatal and injury collisions that occurred in 2020. These collisions include both signalized and unsignalized intersection locations; as well as those occurring at roundabouts. Intersections include those with a private roadway or access that have occurred within the road right-of-way.

The young demographic represents 29% of the total fatal and injury collisions that occurred in 2020. This emphasis area includes both victims and drivers alike.

Pedestrian collisions account for 15% of the fatal and injury collisions that occurred in 2020. Nearly 75% of the collisions involving pedestrians occurred at intersections. Most fatal and injury collisions involving pedestrians occur within the Regional Centre where there are increased volumes of both pedestrians and motorists.

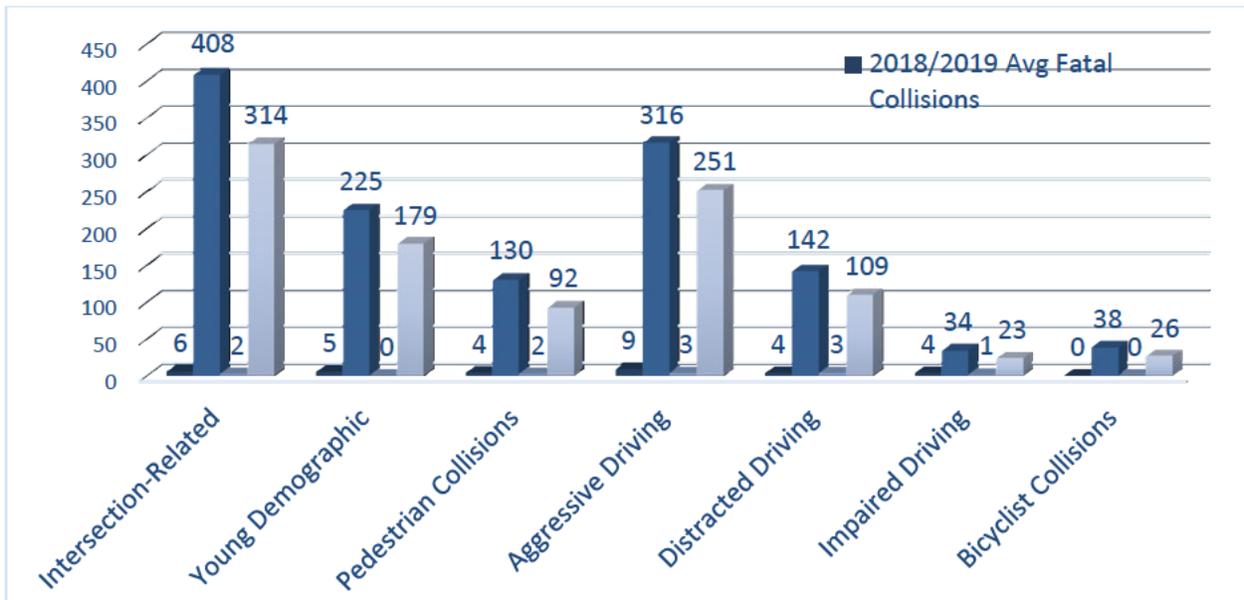
Aggressive driving was identified as contributing to 41% of the fatal and injury collisions in 2020. Aggressive driving includes actions such as failing to yield right-of-way, exceeding speed limit, driving too fast for conditions, and following too closely.

Distracted driving, including general inattentiveness, as well as distractions by passengers, cell phones, etc., is shown to have contributed to 18% of total fatal and injury collisions in 2020.

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. Impaired driving was identified in nearly 4% of the total fatal and injury collisions in 2020, none of which were fatalities with impaired driving identified as a contributing factor.

Bicyclist collisions account for nearly 4% of the total fatal and injury collisions that occurred in 2020. Fifty-eight percent (58%) of the injury-causing collisions involving bicycles occurred at intersections in 2020. This is down from an average of 64% percent in 2018-2019. Most bicyclist collisions occur within the Regional Centre where there are increased volumes of both motor vehicles and bicycles.

Figure 2: Fatal and Injury Collisions - All Emphasis Areas (2018-2020)



### 3. Countermeasures Update

The evidence-driven actions outlined for 2020/2021 in the SRSP 2020 included engineering, education and enforcement countermeasures aimed to reduce fatal and injury collisions within each of the emphasis areas.

#### 3.1 Engineering Countermeasures

Progress on many of the engineering countermeasures included in the SRSP 2020 had been tracked throughout the year on the new [Road Safety Dashboard](#), which will be discussed in the next section. A final update on the full list of engineering countermeasures included in the SRSP 2020 that were completed in 2020/2021 is provided in Table 3.

**Table 3: 2020/2021 Engineering Countermeasures**

Action Item	2020/2021 Target	2020/2021 Completed
Leading Pedestrian Intervals (LPI)	10	15
Rectangular Rapid Flashing Beacon (RRFB)	12	12
Accessible Pedestrian Signals (APS)	5	5
Speed Display Signs (SDS)	10	13
Traffic Calming Installations	24	30
40 km/h Neighbourhoods	4	6
In-Ground School Crosswalk Signs (RA-8)	5	5
Concrete Curb Extensions	12	16
Tactical (Temporary) Curb Extensions	17	20
Protected Bike Lanes (km)	1.5	1.4
Tactical Bike Lanes (km)	-	1.2
Multi-Use Pathways (km)	3.1	2.4
Sidewalks - New (km)	2.0	2.4
Sidewalks - Renewal (km)	2.9	2.2*
Tactile Walking Surface Indicator Plates	1200	1602

\*Includes full block renewal only; there are additional spot repairs completed with capital paving projects.

This list does not include countermeasures implemented based on consultant recommendations from the In-Service Road Safety Reviews of the top 10 signalized intersections with high frequency of injury collisions, completed in 2019. Based on those recommendations more than 50 improvements were completed ranging from signage improvements (replacing worn/non-reflective signs, removing sign clutter); new signs and pavement markings installed; lighting improvements, and new signal equipment.

There had also been three sections of arterial roadway identified for a reduction in speed limit. Larry Uteck Blvd from Hammonds Plains Road to Bluewater Road was reduced from 80 km/h to 70 km/h. Cole Harbour Road/Portland Street from Ritcey Cres to Portland Hills Drive was reduced from 60 km/h to 50 km/h. Forest Hills Parkway from Cole Harbour Place to Cole Harbour Road was reduced from 70 km/h to 60 km/h. Bissett Road, a major collector, was also reduced from 70 km/h to 60 km/h from the Salt Marsh Trail to the end at Cow Bay Road.

An additional 10 signalized locations were put forward for a national grant project through Aviva Canada. This project uses emerging video analytics technology from the company MicroTraffic to analyze near misses at intersections as a means of identifying potential safety issues. Recommendation reports have been submitted to HRM. Staff are currently reviewing the reports and will draft mitigation plans based on the recommendations. Upgrades will be implemented within short- and long-term budget availability.

### 3.2 Road Safety Dashboard

Traffic Management staff had worked closely with staff from Information, Communication and Technology (ICT) and Corporate Communications on the development of the first iteration of the online Road Safety Dashboard (the dashboard). The dashboard provides a public, centralized location for accessing regular updates on the progress of the Road Safety Plan, including updated collision data for each of the emphasis areas, as well as progress on the engineering countermeasures implemented. These efforts also resulted in the traffic collision data being released to Open Data, providing the public with an increased level of access to collision information.

### 3.3 Mobility Response Plan

The COVID-19 pandemic in 2020 had resulted in a shift in resources to respond to the changing needs of the road right-of-way in the region. The initial temporary adjustments to the transportation network to help reduce the spread of COVID-19 had evolved to support the mobility of residents, create more space for local businesses, and take into consideration changing traffic patterns. The highlights of projects from the 2020 [Mobility Response Plan](#), which also contributed to road safety in the region, include:

- Addition of temporary expanded sidewalks on Spring Garden Road and Quinpool Road
- Implementation of 16 km of Slow Streets in the Regional Centre
- Addition of temporary loading spaces in front of businesses to support curbside pick-ups and deliveries
- Accelerated implementation of tactical protected bicycle lane on Lower Water Street

### 3.4 Education

The education efforts included in the SRSP 2020 involved the expansion of the Heads-Up Halifax campaign in both scope and scale. The expanded campaign had been designed to not only increase efforts to promote crosswalk safety but also encompass the broader scope of road safety for all road users and the importance of shared responsibility for road safety, whether someone is walking, driving, rolling or cycling.

There had been three main streams of communication efforts identified for the 2020 Heads Up Halifax Campaign. These were: *Increasing road safety awareness*; *Highlighting municipal road safety initiatives*; and *Engaging citizens*. Due to the impacts of COVID-19, the 'engaging citizens' component, which would have included Crosswalk Awareness Day and a continuation of the Bright Ideas Challenge, had been postponed.

The planned promotional efforts associated with the other two components had been paused from March to June 2020 due to shifted resources in response to COVID-19. These efforts resumed in July and have been ongoing ever since. Ongoing messaging has typically followed the provincial road safety themes, where they align with the emphasis areas of the SRSP; and has included evolving content updates made to the road safety website (Halifax.ca/roadsafety) and the road safety dashboard; as well as both organic and paid social media messages highlighting specific safety issues related to those themes. There have also been investments made to print ads, billboards, bus boards, bus shelters, and radio ads, highlighting the municipality's commitment to road safety.

The Heads Up Halifax content released to the public through social media included 20 posts on Instagram with a reach of 60,621 views; 30 posts on Facebook with a reach of 188,200 views; and 32 posts on Twitter with a reach of 344,900 views. There was a total of 12 print ads published in both regional and community

newspapers as well as 184 radio ads which played on 4 local radio stations. The 14 billboards placed throughout the municipality had generated an estimated 4.7 million views in addition to the high visibility bus boards (200 interior and 35 exterior) and bus shelter ads. Engagement with social media posts, as well with the various print media, had resulted in an additional 9,269 people visiting the road safety family of web pages compared to the previous year.

### **3.5 Enforcement**

Enforcement plays a critical role in achieving our road safety goals in the Region. Members of both HRP and the RCMP are active members on the Road Safety Steering Committee and have committed to moving the priority of road safety forward. Enforcement is important to address the behavioural emphasis areas such as aggressive driving, impaired driving, and distracted driving. Traffic enforcement was impacted during the early stages of COVID-19; but had begun to resume at previous levels during the latter part of 2020.

Aggressive driving offences, including speeding, stunting, failing to stop/obey traffic control, and failing to yield right-of-way, totaled 2,368 from HRP. Similar efforts from RCMP resulted in 1,637 offences in 2020. Stunting offences, in particular, had seen an increase in 2020. HRP issued 81% more summary offence tickets (SOT) in 2020 compared to 2019; while the increase in offences handed by RCMP were 143% more than in 2019.

Pro-active strategies are used to identify and monitor potentially impaired drivers, intercepting them as quickly as possible. Both HRP and RCMP also rely on calls from the public regarding suspected impaired driving. HRP and RCMP had laid 378 and 331 impaired driving charges, respectively in 2020.

Both HRP and RCMP target distracted driving through consistent application of checkpoints in order to change behaviours around cell phone use while driving. These efforts had led to 436 offences issued by HRP and 267 by RCMP.

## **4. Strategic Road Safety Plan 2021/2022**

The Strategic Road Safety Plan 2021 (SRSP 2021) will continue to build on the success of the SRSP 2020 by expanding the data-driven engineering countermeasures to more priority strategic locations; and improving the collaboration and focus of the education and targeted enforcement countermeasures.

### **4.1 Engineering Countermeasures**

Strategic changes to the mobility network based on continuous analysis of the collision database, in-service safety reviews and intersection assessments have a high potential of preventing fatal and injury collisions. Safety improvements are recommended where there are safety or design deficiencies identified through these reviews. This process will continue within the holistic approach to intersection safety whereby strategic pro-active countermeasures at priority locations are combined with modifications in response to resident concerns at intersections. As noted previously, many engineering countermeasures are expected to enhance safety within more than one emphasis area.

Like the SRSP 2020, the plan moving forward will involve an increased number of engineering countermeasures being implemented during the 2021/2022 and 2022/2023 fiscal years, targeting all emphasis areas. The road safety improvement capital budget of \$3.147 million within Transportation and Public Works has been approved for the 2021/2022 fiscal year; and includes the additional \$1 million requested by Regional Council to increase the number of traffic calming projects.

The projects identified for the 2021/2022 road safety budget include:

- 101 traffic calmed streets (61 residential neighbourhood streets and 40 school zone streets);
- Intersection modifications

- Sackville Dr/Orchard Dr/Bambrick Rd;
- Beaverbank Rd/Stokil Dr/Millwood Dr;
- Modifications to the RA-5 crosswalk at Dunbrack St/Clayton Park Dr;
- Construction of a new RA-5 crosswalk on Barrington Street between Young St and Hanover St;
- 19 crosswalk upgrades to include Rectangular Rapid Flashing Beacons (RRFB); and,
- A feasibility analysis study to deliver a photo enforcement program.

The road safety capital budget approved in principle by Regional Council for 2022/2023 is \$2.520 million. Detailed work plans for intersection and roadway modifications will evolve as road safety assessments are completed. Table 4 compares the general categories of road safety initiatives in the approved 2021/2022 and the 2022/2023 road safety budget:

**Table 4: 2021/2022 and 2022/2023 Road Safety Budget Comparison**

Road Safety Initiatives	Approved 21/22 Capital Budget	Approved in Principle 22/23 Capital Budget
Traffic Calming	1,815,000	1,000,000
Traffic Calming – School Zones	400,000	150,000
Rectangular Rapid Flashing Beacons	167,000	140,000
Pedestrian Access Improvements	50,000	50,000
Intersection Improvements (includes potential new RA-5 crosswalk locations and traffic signals)	615,000	1,180,000
Red Light Camera Study	100,000	0
<b>Total</b>	<b>3,147,000</b>	<b>2,520,000</b>

The projected 2022/2023 road safety capital budget strikes a balance between new initiatives and upgrading existing infrastructure; however, staff has identified the following (minimum) budget pressures based up staff’s understanding of Council priorities:

1. Traffic Calming – During the 2021/2022 budget process, Regional Council approved an increase of \$1,000,000 to the traffic calming budget. The proposed 2022/2023 road safety capital budget would need to increase by approximately \$1,000,000 to maintain the approved 2021/2022 funding level. Such an expenditure increase will likely need to be accommodated by an incremental staff increase as well to maintain program spending at this level.
2. Photo Enforcement – As noted earlier in this report, a feasibility analysis study will be conducted in 2021/2022 to deliver a photo enforcement program. Recommendations arising from the report will likely require funding to execute in 2022/2023 should Regional Council wish to proceed as soon as possible.
3. Accessible Pedestrian Signals (APS) – One of the deliverables of the 2021/2022 business plan is to develop an implementation plan to upgrade all signalized intersections with APS by 2030. Current funding levels typically provides for the installation of APS at five signalized intersections on an annual basis. The budget for this initiative currently resides in the “Controller Cabinet and

4. Detection” budget. Given that 99 of 277 signalized intersections have APS, the rate of installation and related funding would need to significantly increase to meet the 2030 target.

Based on the pressures above, staff will work toward increasing the 22/23 Road Safety capital envelope to approximately \$4 million as part of the annual business planning process unless otherwise advised by Transportation Standing Committee or Regional Council. It is important to understand that specific Road Safety capital budgets are significantly augmented by complete streets expenditures as part of HRM’s annual road rehabilitation and active transportation programs. These expenditures to support the development/implementation of improved accessible infrastructure for vulnerable road users is currently estimated to be \$10 million annually.

Additional evidence driven engineering countermeasures planned for 2021/2022 included as part of other operating and capital budgets outside the specific Road Safety Improvements account are identified in Table 5.

**Table 5: Planned Engineering Countermeasures 2021/2022**

Action Item	2021/2022 Target	Emphasis Areas
Leading Pedestrian Intervals	20	Intersection-related Pedestrian Collisions Aggressive Driving
Accessible Pedestrian Signals	5	Intersection-related Pedestrian Collisions
Integrated Traffic Calming*	16	Aggressive Driving Young Demographic
40 km/h Neighbourhoods	6	Aggressive Driving Young Demographic
Advance Yield Lines (Expanded Pilot)	5	Intersection-related Pedestrian Collisions

\*These are traffic calming installations integrated with other road recapitalization projects

The SRSP 2021 will also include implementation of short-term measures recommended in both the MicroTraffic report and the assessment of 10 signalized intersections being completed internally. These will involve operational modifications to the signalized intersections including changes to signal timing and signage. Longer-term recommendations resulting from these reviews which require design and construction will be programmed into the future capital budgets for 2022/2023 and beyond.

Halifax is being considered for another national safety project in collaboration with MicroTraffic. The study will specifically focus on the safety of bicycles in dedicated bicycle facilities where these intersect with right turning vehicles. The intent of the study is to provide quantitative clarification and optimization of design guidance for these conflict locations.

Other cost-effective engineering measures that are operational in nature, but have no specified target are included for review in the SRSP 2021. These include:

- Speed limit review of priority corridors – this includes review of minor/major collectors and arterials where speed has been identified as contributing to safety concerns (i.e. staff have recently completed the work involved to reduce the speed limit on Main Street from 70 km/h to 60 km/h between Salmon River and Broom Road).
- Rotate locations of existing Speed Display Signs (SDS) to other priority locations – existing locations of SDS will be evaluated for effectiveness. Locations where driver behaviour is no longer being

influenced will have the sign relocated to other priority locations. This item also includes placement of four additional SDS which are currently in the inventory.

- Identify corridors where additional marked pedestrian crossings are warranted to provide improved connectivity – this will mainly look at corridors where there is increased spacing between existing marked crosswalks. Locations identified for installation will be programmed into future budgets.

The Municipality also 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 and bicyclist realms in advance of street recapitalization projects. The engineering countermeasures included through these initiatives have a significant role in improving road safety in the region for all road users. Some examples of these types of countermeasures are included below.

**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. 31 concrete curb extensions have been incorporated into capital projects being tendered, including where they have been designed for traffic calming. The plan also involves nine temporary curb extensions currently planned through the tactical urbanism and Slow Streets programs.

**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 1.4 km of protected bike lane being constructed in 2021/2022, as well as 4.4 km of tactical bike lanes. The measures included in these projects often have safety benefits related to lower speeds and volumes which impact other road users as well.

**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 0.7 km of multi-use pathway is budgeted for construction in 2021/2022.

**Sidewalks** – Improvements to the municipal sidewalk network increases the physical separation between pedestrians and vehicles. The Plan involves budgeting for 4.2 km of sidewalk renewals; and 2.7 km of new sidewalk construction to be completed in 2021/2022.

**Tactile Walking Surface indicators** – The use of tactile walking surface indicator plates follows universal standards to provide consistent safety information to all persons with low or no vision. The Plan includes budget for 1222 additional plates to be installed in 2021/2022.

The Slow Streets program, developed as part of the Mobility Response Plan, will continue through 2021, with the goal of creating interim active transportation corridors on several of the proposed local street bikeways, as approved in the Integrated Mobility Plan and the Active Transportation Priorities Plan. Slow Streets will use materials such as concrete curbs, bollards, paint, planters, and signs to create temporary installations designed to slow down vehicle traffic and discourage non-local travel on these streets. Staff are currently working to determine which corridors will be included in this year's program.

#### **4.2 Road Safety Dashboard**

The Road Safety Dashboard will continue to evolve to enhance its value and functionality. The next iteration of the dashboard will continue to provide regular updates on the progress the municipality is making on our road safety targets. The goal is to also include a map interface which will be linked to various spatial datasets included in Open Data. These datasets include the Traffic Management collision database as well as several of the engineering countermeasures being implemented through the SRSP including LPI, RRFB,

and SDS. Users will be able to filter results by emphasis areas to view trends and alignment with road safety initiatives.

#### **4.3 Education**

Educational messages are targeted towards specific behaviours determined to be contributing to fatal and injury collisions through analysis of the collision database. The Heads-Up Halifax campaign, our primary source for disseminating road safety information, involves continuous assessment of the impact the messaging is having; and evolving the messaging to improve its effectiveness.

Feedback gathered from the 2020/2021 campaign has led to the adjustment of the campaign tagline to “Everyone’s Responsibility”; moving away from “Shared Responsibility.”

Planning for further evolution of the campaign is underway for 2021/2022. The new plan will be developed by Corporate Communications in collaboration with Transportation and Public Works and endorsed by the Road Safety Steering Committee. One notable difference for this year’s campaign is the inclusion of a video series for social media highlighting tips for road safety behaviour for all road users (whether driving, cycling, walking or rolling). The campaign will continue to follow the provincial road safety calendar for the timing of message themes where there is alignment between the monthly themes and the emphasis areas.

The 2021/2022 campaign will continue with placement of billboards, bus boards, and bus shelters to offer high visibility of road safety messaging; as well as continue with print ads in community newspapers. Strategically timed radio ads will be introduced to address those times of the year when pedestrian safety concerns are heightened (i.e. back to school, Halloween, and Daylight Savings Time). Corporate Communications is also looking to test other broadcast opportunities such as YouTube, Podcasts, and Television.

#### **4.4 Enforcement**

Enforcement efforts will continue to target high-risk behaviours determined to be contributing to injury collisions. HRP analysts now have access to the internal Traffic Management collision database. Together, HRP, RCMP, and the rest of the Road Safety Steering Committee will work towards identifying data-driven enforcement efforts to target higher risk behaviours and locations. Assuming the situation with COVID-19 remains relatively stable in the region, it is expected enforcement efforts will be closer to the pre-COVID levels.

Aggressive driving actions continue to be a priority for enforcement efforts for both HRP and RCMP. Data from Traffic Management will be analyzed to help focus speed enforcement in areas that contribute to fatal and injury collisions, taking into consideration neighbourhood and councillor concerns. This effort will evolve into a collaboration between HRM and both HRP and RCMP with the Speed Display Sign program, effectively installing these signs based on evidential speed and collision data.

Both HRP and RCMP also consider impaired and distracted driving to be priorities for enforcement. The pro-active approach to identifying and intercepting for enforcement of impaired driving will continue. This includes cooperation from the public calling in concerns of impaired driving. The consistent application of checkpoints for enforcement of distracted driving will also continue through 2021/2022.

### **FINANCIAL IMPLICATIONS**

There are no financial implications associated with this report. All activities planned for this fiscal year 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**

Attachment 1: Strategic Road Safety Plan 2021

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A copy of this report can be obtained online at [halifax.ca](http://halifax.ca) or by contacting the Office of the Municipal Clerk at 902.490.4210.

Report Prepared by: Jill Morrison, P.Eng., Traffic Services Supervisor 902.490.5018

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# STRATEGIC ROAD SAFETY PLAN

ANNUAL REPORT 2021

**Submitted by:**

Brad Anguish, Executive Director, Transportation and Public Works  
Jacques Dubé, Chief Administrative Officer

**Report Prepared by:**

Jill Morrison, P.Eng., Traffic Services Supervisor



**HALIFAX**



## 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 had set an initial 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:

### Seven emphasis areas:

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



The emphasis areas are expected to have the greatest impact to reducing the frequency and severity of collisions.

Defining the Road Safety Steering Committee and development of an internal collision database were critical first steps to ensuring that data-driven decisions are made to reach the 20% reduction goal by 2023. With those pieces in place, the baseline collision statistics were established, from which to measure our overall progress.

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. 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 March 31, 2021. These numbers are subject to change in future collision reporting as case files are closed.

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# DISCUSSION

## 1. ROAD SAFETY UPDATE

This annual report presents the first year of evaluating the progress towards the goal (i.e. 2020 is the first year following the years comprising the benchmark statistics). In 2020 there were 5 fatal collisions and 607 injury collisions which had occurred on roadways within the Halifax region including roadways under provincial jurisdiction. Table 1 presents the annual fatal and injury collision statistics from 2018 to 2020. This indicates for 2020, despite a steady increase in the estimated population, we have seen a drop in the total number of fatal and injury collisions occurring in the region.

✓ TABLE 1: FATAL AND INJURY COLLISIONS (2018 - 2020)

YEAR	POPULATION ESTIMATE	FATAL COLLISIONS	INJURY COLLISIONS	FATAL + INJURY COLLISIONS PER 100,000 POPULATION
2018	429895	18	749	178.4
2019	439529	17	816	189.5
2020	448544	5	607	136.4

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 and 2019, normalized by 100,000 population. The same data for 2020 was not yet publicly available. This shows the Halifax Region is performing relatively well with respect to all casualty collisions.

✓ TABLE 2: SUMMARY OF FATAL AND INJURY COLLISIONS FOR VARIOUS CANADIAN CITIES (2018 - 2019)

REGION	POPULATION		FATAL COLLISIONS		INJURY COLLISIONS		FATAL+ INJURY COLLISIONS PER 100,000 POPULATION	
	2018	2019	2018	2019	2018	2019	2018	2019
Halifax Region	429,895	439,529	18	17	749	816	178.4	189.5
City of Ottawa	1,004,802	1,025,425	27	27	3486	3577	349.6	351.5
City of Hamilton*	566,144	574,265	11	14	1560	1463	277.5	257.2
City of Saskatoon	268,188	272,200	1	4	709	888	264.7	327.7
City of Edmonton	973,100	993,100	19	14	2610	2066	270.2	209.4
City of Calgary	1,267,344	1,285,711	16	19	2496	2353	198.2	184.5

\*Collision data excludes provincial highways

Figure 1 compares the 2020 collision data to the baseline and target values. The total number of fatal and injury collisions for 2020 is shown to be 23% less than the baseline average, compared to the 20% target reduction value for 2023.

✓ FIGURE 1: 2020 ROAD SAFETY PROGRESS



Coincidentally, this reduction also corresponds with the COVID-19 pandemic so it was assumed results are at least partially impacted by the modifications to travel behaviour and reduced traffic volumes. The road safety team completed an analysis to compare the reduction in number of fatal and injury collisions against the reduction in regional traffic volumes to get a better sense of the impact the public health restrictions associated with the pandemic have had on collision results. Using traffic volumes from the Halifax Harbour Bridges as a proxy for regional traffic volumes, a 25% reduction in the average daily traffic (ADT) was found for the eight-month period of April through December from 2019 to 2020. In comparison, the fatal and injury collisions reported by HRP and RCMP for that same period were reduced by 35% from 2019.

## 2. BREAKDOWN OF COLLISIONS BY EMPHASIS AREA

Figure 2 provides the annual fatal and injury collisions compared to the baseline average for each of the emphasis areas which had been 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 number of fatal and injury collisions presented above. Similarly, countermeasures targeting one emphasis area may have an impact on others as well. As seen in Figure 2 collisions have decreased from the baseline average of the previous two years across all emphasis areas.

Intersection-related collisions accounted for over 51% of the total fatal and injury collisions that occurred in 2020. These collisions include both signalized and unsignalized intersection locations; as well as those occurring at roundabouts. Intersections include those with a private roadway or access that have occurred within the road right-of-way.

The young demographic represents 29% of the total fatal and injury collisions that occurred in 2020. This emphasis area includes both victims and drivers alike.

Pedestrian collisions account for 15% of the fatal and injury collisions that occurred in 2020. Nearly 75% of the collisions involving pedestrians occurred at intersections. Most fatal and injury collisions involving pedestrians occur within the Regional Centre where there are increased volumes of both pedestrians and motorists.

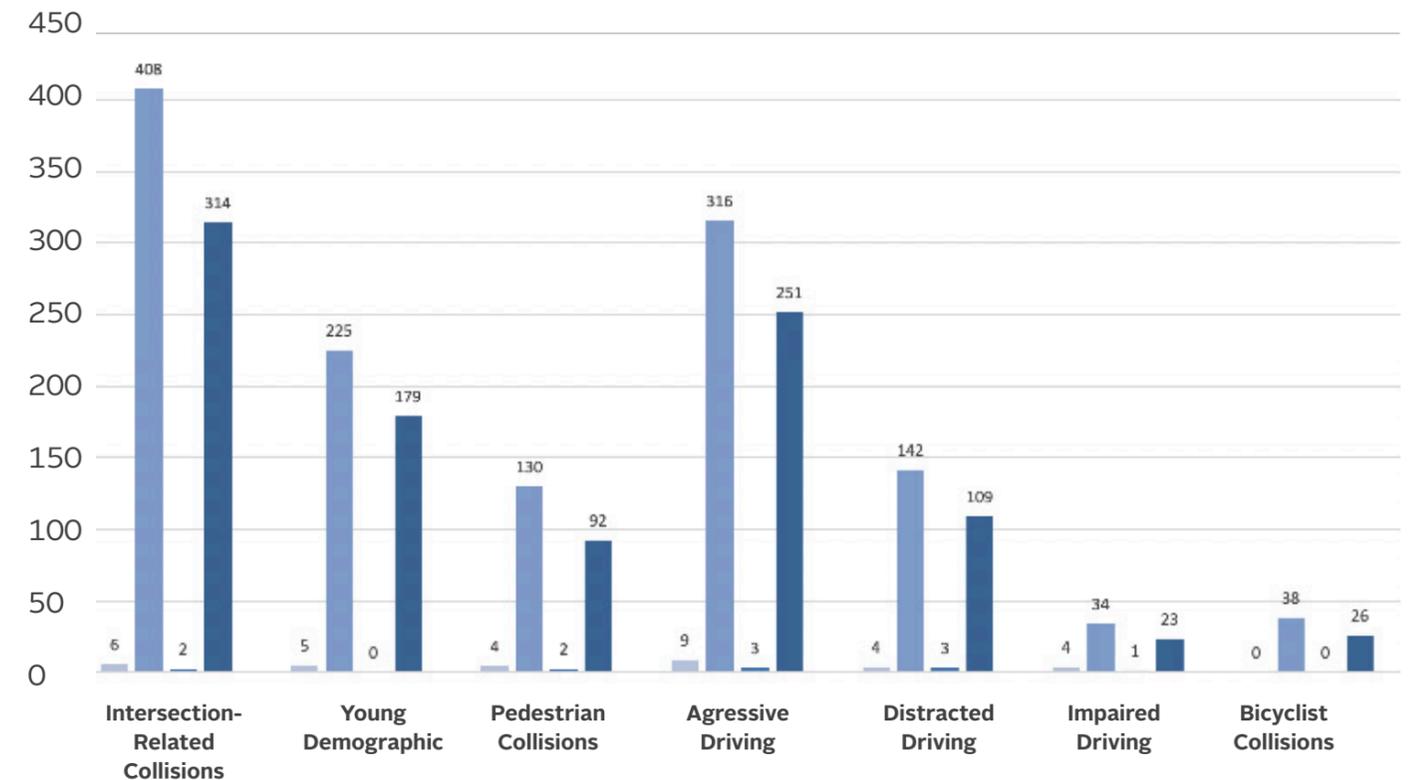
Aggressive driving was identified as contributing to 41% of the fatal and injury collisions in 2020. Aggressive driving includes actions such as failing to yield right-of-way, exceeding speed limit, driving too fast for conditions, and following too closely.

Distracted driving, including general inattentiveness, as well as distractions by passengers, cell phones, etc., is shown to have contributed to 18% of total fatal and injury collisions in 2020.

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. Impaired driving was identified in nearly 4% of the total fatal and injury collisions in 2020, none of which were fatalities with impaired driving identified as a contributing factor.

Bicyclist collisions account for nearly 4% of the total fatal and injury collisions that occurred in 2020. Fifty-eight percent (58%) of the injury-causing collisions involving bicycles occurred at intersections in 2020. This is down from an average of 64% percent in 2018-2019. Most bicyclist collisions occur within the Regional Centre where there are increased volumes of both motor vehicles and bicycles.

✓ FIGURE 2: FATAL AND INJURY COLLISIONS - ALL EMPHASIS AREAS (2018-2020)



### 3. COUNTERMEASURES UPDATE

The evidence-driven actions outlined for 2020/2021 in the SRSP 2020 included engineering, education and enforcement countermeasures aimed to reduce fatal and injury collisions within each of the emphasis areas.

#### 3.1 Engineering Countermeasures

Progress on many of the engineering countermeasures included in the SRSP 2020 had been tracked throughout the year on the new [Road Safety Dashboard](#), which will be discussed in the next section. A final update on the full list of engineering countermeasures included in the SRSP 2020 that were completed in 2020/2021 is provided in Table 3.

✓ TABLE 3: 2020/2021 ENGINEERING COUNTERMEASURES

ACTION ITEM	2020/2021 TARGET	2020/2021 COMPLETED
LEADING PEDESTRIAN INTERVALS (LPI)	10	15
RECTANGULAR RAPID FLASHING BEACON (RRFB)	12	12
ACCESSIBLE PEDESTRIAN SIGNALS (APS)	5	5
SPEED DISPLAY SIGNS (SDS)	10	13
TRAFFIC CALMING INSTALLATIONS	24	30
40 KM/H NEIGHBOURHOODS	4	6
IN-GROUND SCHOOL CROSSWALK SIGNS (RA-8)	5	5
CONCRETE CURB EXTENSIONS	12	16
TACTICAL (TEMPORARY) CURB EXTENSIONS	17	20
PROTECTED BIKE LANES (KM)	1.5	1.4
TACTICAL BIKE LANES (KM)	-	1.2
MULTI-USE PATHWAYS (KM)	3.1	2.4
SIDEWALKS - NEW (KM)	2.0	2.4
SIDEWALKS - RENEWAL (KM)	2.9	2.2
TACTILE WALKING SURFACE INDICATOR PLATES	1200	1602

\*Includes full block renewal only; there are additional spot repairs completed with capital paving projects.

This list does not include countermeasures implemented based on consultant recommendations from the In-Service Road Safety Reviews of the top 10 signalized intersections with high frequency of injury collisions, completed in 2019. Based on those recommendations more than 50 improvements were completed ranging from signage improvements (replacing worn/non-reflective signs, removing sign clutter); new signs and pavement markings installed; lighting improvements, and new signal equipment.

There had also been three sections of arterial roadway identified for a reduction in speed limit. Larry Uteck Blvd from Hammonds Plains Road to Bluewater Road was reduced from 80 km/h to 70 km/h. Cole Harbour Road/Portland Street from Ritcey Cres to Portland Hills Drive was reduced from 60 km/h to 50 km/h. Forest Hills Parkway from Cole Harbour Place to Cole Harbour Road was reduced from 70 km/h to 60 km/h. Bissett Road, a major collector, was also reduced from 70 km/h to 60 km/h from the Salt Marsh Trail to the end at Cow Bay Road.

An additional 10 signalized locations were put forward for a national grant project through Aviva Canada. This project uses emerging video analytics technology from the company MicroTraffic to analyze near misses at intersections as a means of identifying potential safety issues. Recommendation reports have been submitted to HRM. Staff are currently reviewing the reports and will draft mitigation plans based on the recommendations. Upgrades will be implemented within short- and long-term budget availability.

#### 3.2 Road Safety Dashboard

Traffic Management staff had worked closely with staff from Information, Communication and Technology (ICT) and Corporate Communications on the development of the first iteration of the online Road Safety Dashboard (the dashboard). The dashboard provides a public, centralized location for accessing regular updates on the progress of the Road Safety Plan, including updated collision data for each of the emphasis areas, as well as progress on the engineering countermeasures implemented. These efforts also resulted in the traffic collision data being released to Open Data, providing the public with an increased level of access to collision information.

#### 3.3 Mobility Response Plan

The COVID-19 pandemic in 2020 had resulted in a shift in resources to respond to the changing needs of the road right-of-way in the region. The initial temporary adjustments to the transportation network to help reduce the spread of COVID-19 had evolved to support the mobility of residents, create more space for local businesses, and take into consideration changing traffic patterns. The highlights of projects from the 2020 Mobility Response Plan, which also contributed to road safety in the region, include:

- » Addition of temporary expanded sidewalks on Spring Garden Road and Quinpool Road
- » Implementation of 16 km of Slow Streets in the Regional Centre
- » Addition of temporary loading spaces in front of businesses to support curbside pick-ups and deliveries
- » Accelerated implementation of tactical protected bicycle lane on Lower Water Street



### 3.4 Education

The education efforts included in the SRSP 2020 involved the expansion of the Heads-Up Halifax campaign in both scope and scale. The expanded campaign had been designed to not only increase efforts to promote crosswalk safety but also encompass the broader scope of road safety for all road users and the importance of shared responsibility for road safety, whether someone is walking, driving, rolling or cycling.

Communication efforts to increase road safety awareness have been ongoing since July 2020. Ongoing messaging has typically followed the provincial road safety themes, where they align with the emphasis areas of the SRSP; and has included evolving content updates made to the road safety website (Halifax.ca/roadsafety) and the road safety dashboard; as well as both organic and paid social media messages highlighting specific safety issues related to those themes. There have also been investments made to print ads, billboards, bus boards, bus shelters, and radio ads, highlighting the municipality's commitment to road safety.

The Heads Up Halifax content released to the public through social media included 20 posts on Instagram with a reach of 60,621 views; 30 posts on Facebook with a reach of 188,200 views; and 32 posts on Twitter with a reach of 344,900 views. There were a total of 12 print ads published in both regional and community newspapers as well as 184 radio ads which played on 4 local radio stations. The 14 billboards placed throughout the municipality had generated an estimated 4.7 million views in addition to the high visibility bus boards (200 interior and 35 exterior) and bus shelter ads. Engagement with social media posts, as well with the various print media, had resulted in an additional 9,269 people visiting the road safety family of web pages compared to the previous year.

### 3.5 Enforcement

Enforcement plays a critical role in achieving our road safety goals in the Region. Members of both HRP and the RCMP are active members on the Road Safety Steering Committee and have committed to moving the priority of road safety forward. Enforcement is important to address the behavioural emphasis areas such as aggressive driving, impaired driving, and distracted driving. Traffic enforcement was impacted during the early stages of COVID-19; but had begun to resume at previous levels during the latter part of 2020.

Aggressive driving offences, including speeding, stunting, failing to stop/obey traffic control, and failing to yield right-of-way, totaled 2,368 from HRP. Similar efforts from RCMP resulted in 1,637 offences in 2020. Stunting offences, in particular, had seen an increase in 2020. HRP issued 81% more summary offence tickets (SOT) in 2020 compared to 2019; while the increase in offences handed by RCMP were 143% more than in 2019.

Pro-active strategies are used to identify and monitor potentially impaired drivers, intercepting them as quickly as possible. Both HRP and RCMP also rely on calls from the public regarding suspected impaired driving. HRP and RCMP had laid 378 and 331 impaired driving charges, respectively in 2020.

Both HRP and RCMP target distracted driving through consistent application of checkpoints in order to change behaviours around cell phone use while driving. These efforts had led to 436 offences issued by HRP and 267 by RCMP.



## 4. STRATEGIC ROAD SAFETY PLAN 2021/2022

The Strategic Road Safety Plan 2021 (SRSP 2021) will continue to build on the success of the SRSP 2020 by expanding the data-driven engineering countermeasures to more priority strategic locations; and improving the collaboration and focus of the education and targeted enforcement countermeasures.

### 4.1 Engineering Countermeasures

Strategic changes to the mobility network based on continuous analysis of the collision database, in-service safety reviews and intersection assessments have a high potential of preventing fatal and injury collisions. Safety improvements are recommended where there are safety or design deficiencies identified through these reviews. This process will continue within the holistic approach to intersection safety whereby strategic pro-active countermeasures at priority locations are combined with modifications in response to resident concerns at intersections. As noted previously, many engineering countermeasures are expected to enhance safety within more than one emphasis area.

Like the SRSP 2020, the plan moving forward will involve an increased number of engineering countermeasures being implemented during the 2021/2022 and 2022/2023 fiscal years, targeting all emphasis areas. The road safety improvement capital budget of \$3.147 million within Transportation and Public Works has been approved for the 2021/2022 fiscal year; and includes the additional \$1 million requested by Regional Council to increase the number of traffic calming projects.

The projects identified for the 2021/2022 road safety budget are identified below. A full list of evidence-driven action items for 2021/2022, including those in other capital and operating budgets outside of the road safety budget is included at the end of this report:

- » 101 traffic calmed streets (61 residential neighbourhood streets and 40 school zone streets);
- » Intersection modifications
  - » Sackville Dr/Orchard Dr/Bambrick Rd
  - » Beaverbank Rd/Stokil Dr/Millwood Dr;
- » Modifications to the RA-5 crosswalk at Dunbrack St/Clayton Park Dr;
- » Construction of a new RA-5 crosswalk on Barrington Street between Young St and Hanover St;
- » 19 crosswalk upgrades to include Rectangular Rapid Flashing Beacons (RRFB); and,
- » A feasibility analysis study to deliver a photo enforcement program.

The SRSP 2021 will also include implementation of short-term measures recommended in both the MicroTraffic report and the assessment of 10 signalized intersections being completed internally. These will involve operational modifications to the signalized intersections including changes to signal timing and signage. Longer-term recommendations resulting from these reviews which require design and construction will be programmed into the future capital budgets for 2022/2023 and beyond.

Halifax is being considered for another national safety project in collaboration with MicroTraffic. The study will specifically focus on the safety of bicycles in dedicated bicycle facilities where these intersect with right turning vehicles. The intent of the study is to provide quantitative clarification and optimization of design guidance for these conflict locations.

Other cost-effective engineering measures that are operational in nature, but have no specified target are included for review in the SRSP 2021. These include:

- » Speed limit review of priority corridors – this includes review of minor/major collectors and arterials where speed has been identified as contributing to safety concerns (i.e. staff have recently completed the work involved to reduce the speed limit on Main Street from 70 km/h to 60 km/h between Salmon River and Broom Road).
- » Rotate locations of existing Speed Display Signs (SDS) to other priority locations – existing locations of SDS will be evaluated for effectiveness. Locations where driver behaviour is no longer being influenced will have the sign relocated to other priority locations. This item also includes placement of four additional SDS which are currently in the inventory.
- » Identify corridors where additional marked pedestrian crossings are warranted to provide improved connectivity – this will mainly look at corridors where there is increased spacing between existing marked crosswalks. Locations identified for installation will be programmed into future budgets.

#### 4.2 Road Safety Dashboard

The Road Safety Dashboard will continue to evolve to enhance its value and functionality. The next iteration of the dashboard will continue to provide regular updates on the progress the municipality is making on our road safety targets. The goal is to also include a map interface which will be linked to various spatial datasets included in Open Data. These datasets include the Traffic Management collision database as well as several of the engineering countermeasures being implemented through the SRSP including LPI, RRFB, and SDS. Users will be able to filter results by emphasis areas to view trends and alignment with road safety initiatives. The Road Safety Dashboard is accessible through [www.halifax.ca/roadsafety](http://www.halifax.ca/roadsafety)

#### 4.3 Education

Educational messages are targeted towards specific behaviours determined to be contributing to fatal and injury collisions through analysis of the collision database. The Heads-Up Halifax campaign, our primary source for disseminating road safety information, involves continuous assessment of the impact the messaging is having; and evolving the messaging to improve its effectiveness.

Feedback gathered from the 2020/2021 campaign has led to the adjustment of the campaign tagline to “Everyone’s Responsibility”; moving away from “Shared Responsibility.”

Planning for further evolution of the campaign is underway for 2021/2022. The new plan will be developed by Corporate Communications in collaboration with Transportation and Public Works and endorsed by the Road Safety Steering Committee. One notable difference for this year’s campaign is the inclusion of a video series for social media highlighting tips for road safety behaviour for all road users (whether driving, cycling, walking or rolling). The campaign will continue to follow the provincial road safety calendar for the timing of message themes where there is alignment between the monthly themes and the emphasis areas.

The 2021/2022 campaign will continue with placement of billboards, bus boards, and bus shelters to offer high visibility of road safety messaging; as well as continue with print ads in community newspapers. Strategically timed radio ads will be introduced to address those times of the year when pedestrian safety concerns are heightened (i.e. back to school, Halloween, and Daylight Savings Time). Corporate Communications is also looking to test other broadcast opportunities such as YouTube, Podcasts, and Television.

#### 4.4 Enforcement

Enforcement efforts will continue to target high-risk behaviours determined to be contributing to injury collisions. HRP analysts now have access to the internal Traffic Management collision database. Together, HRP, RCMP, and the rest of the Road Safety Steering Committee will work towards identifying data-driven enforcement efforts to target higher risk behaviours and locations. Assuming the situation with COVID-19 remains relatively stable in the region, it is expected enforcement efforts will be closer to the pre-COVID levels.

Aggressive driving actions continue to be a priority for enforcement efforts for both HRP and RCMP. Data from Traffic Management will be analyzed to help focus speed enforcement in areas that contribute to fatal and injury collisions, taking into consideration neighbourhood and councillor concerns. This effort will evolve into a collaboration between HRM and both HRP and RCMP with the Speed Display Sign program, effectively installing these signs based on evidential speed and collision data.

Both HRP and RCMP also consider impaired and distracted driving to be priorities for enforcement. The pro-active approach to identifying and intercepting for enforcement of impaired driving will continue. This includes cooperation from the public calling in concerns of impaired driving. The consistent application of checkpoints for enforcement of distracted driving will also continue through 2021/2022.



2021/2022 ACTION ITEMS	INTERSECTION-RELATED	YOUNG DEMOGRAPHIC	PEDESTRIANS	AGGRESSIVE DRIVING	DISTRACTED DRIVING	IMPAIRED DRIVING	BICYCLIST COLLISIONS
<b>ENGINEERING</b>							
<b>LEADING PEDESTRIAN INTERVALS</b> 20 new locations	✓		✓				
<b>RECTANGULAR RAPID FLASHING BEACON</b> 19 new installations	✓		✓				
<b>ACCESSIBLE PEDESTRIAN SIGNALS</b> 5 upgraded signal locations	✓		✓				
<b>40 KM/H RESIDENTIAL SPEED LIMIT</b> 6 neighbourhood reviews	✓	✓	✓	✓			✓
<b>TRAFFIC CALMING</b> 77 Residential Streets 40 School Zone Streets	✓	✓	✓	✓			✓
<b>ADVANCED YIELD LINES</b> 5 Multi-lane RA-5 crosswalk locations			✓	✓	✓		
<b>CURB EXTENSIONS</b> 31 locations budgeted for construction 9 temporary installations (Tactical Urbanism)	✓	✓	✓	✓			

2021/2022 ACTION ITEMS	INTERSECTION-RELATED	YOUNG DEMOGRAPHIC	PEDESTRIANS	AGGRESSIVE DRIVING	DISTRACTED DRIVING	IMPAIRED DRIVING	BICYCLIST COLLISIONS
<b>ENGINEERING</b>							
<b>PROTECTED BIKE LANES</b> 1.4 km being constructed  4.4 km tactical installations		✓					
<b>MULTI-USE PATHWAYS</b> 0.7 km budgeted for construction		✓	✓				✓
<b>SIDEWALKS</b> 4.2 km budgeted for sidewalk renewal 2.7 km budgeted for new sidewalk construction		✓	✓				
<b>TACTILE WALKING SURFACE INDICATOR PLATES</b> 1222 budgeted for construction	✓		✓				
<b>EDUCATION</b>							
<b>EXPANDED HEADS UP HALIFAX CAMPAIGN</b>	✓	✓	✓	✓	✓	✓	✓

**2021/2022  
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**