2017-2020 Manitoba Road Safety Plan: Road to Zero

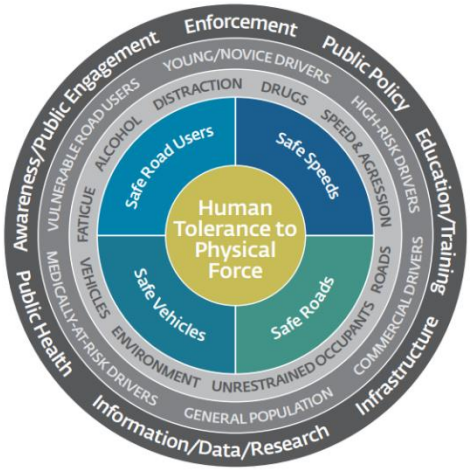
Final Progress Report

March 2021

TABLE OF CONTENTS

Background

The 2017-2020 Manitoba Road Safety Plan: Road to Zero adopts a 'Towards Zero' strategy to road safety. A 'Towards Zero' strategy supports the vision of a future which is free of traffic fatalities or severe injuries. 'Towards Zero' is an ethics-based approach for traffic safety, and is a variation of Vision Zero which was introduced in Sweden in the late 1990s. The core principle of both is that it can never be acceptable that people are killed or seriously injured when moving within the road transport system. 'Towards Zero' suggests that responsibility for the safety of road users is shared by road users, transportation system administrators (including politicians, designers, construction and maintenance workers, facility owners and operators), and vehicle manufacturers.



'Towards Zero' maintains that while not all types of crashes may be prevented, traffic deaths and severe injuries are preventable. 'Towards Zero' aligns with a Safe Systems Approach that people will make mistakes and that the human body is not designed to absorb the high-impact forces that occur in motor vehicle collisions. Therefore, the focus is not on avoiding all collisions, but rather on lowering the likelihood of crashes resulting in severe injury or death. A safe system with an emphasis on data-driven solutions is needed to protect all roads users (in particular, vulnerable road users) from their own or others' mistakes.

Road Safety Targets

Manitoba's Road Safety Plan aligns with Canada's Road Safety Strategy 2025 model, and seeks to accelerate previous downward trends in the rate-based number of fatalities and serious injuries on provincial and municipal roadways. Overall performance will be measured by an annual downward trending over the next ten years in fatalities and serious injuries per 100,000 population, as well as downward trending over the next ten years in the societal cost of collisions in Manitoba on a per capita basis.

Priorities for Manitoba

Priorities were established for each quadrant of the Safe Systems Approach to focus efforts in pursuit of our targets. These priorities for Safe Vehicles, Safe Roads, Safe Road Users and Safe Speeds guide strategic actions, public policy and legislative countermeasures, safety interventions, and resource allocation and investment of Manitoba's road safety stakeholders. Research priorities impact each quadrant of the Safe Systems Approach and are identified separately.

Reporting Period

This report highlights the initiatives undertaken by Manitoba's road safety stakeholders as part of the Road to Zero plan. During this time, the COVID-19 pandemic impacted some planned road safety programming and created a driving environment unlike previous years. A further examination of the impact the pandemic has had on road safety in Manitoba is presented later in the document.

Progress ‘Towards Zero’

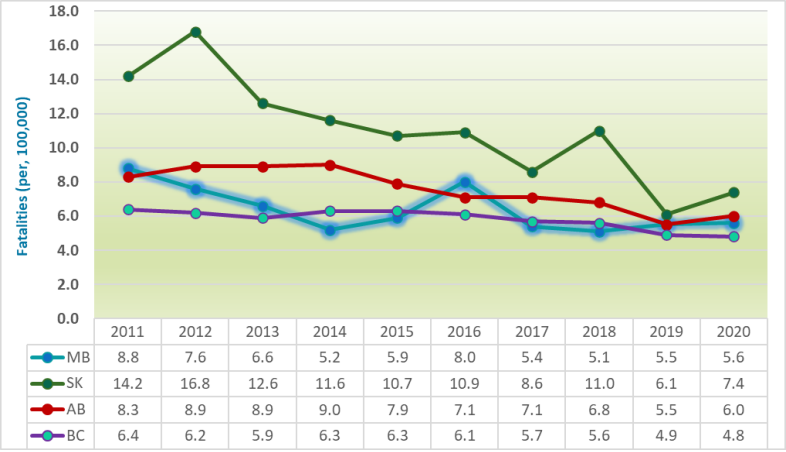
Summary

In keeping with Canada’s Road Safety Strategy (RSS) 2025 model of examining rate-based trends in fatalities and serious injuries over the previous ten years, the following charts show that although progress has been made on reducing fatalities on Manitoba’s roads, there are still many lives being lost and Manitobans suffering serious injury on our roadways.

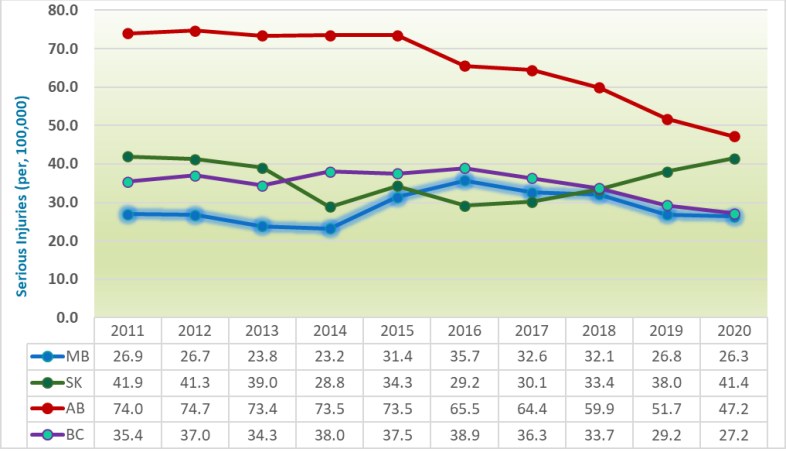
Annual fatalities and serious injuries per 100,000 population - 2011 to 2020

After an upward trend in 2015 and 2016, Manitoba’s annual fatalities per 100,000 population has returned to near 2014 levels. The same can be said for serious injuires, which have been declining since 2016.

When comparing Manitoba’s rate of fatalities to other Western Canadian provinces, Manitoba has consistently trended below Alberta and Saskatchewan, and aligned closely to British Columbia. When Manitoba’s serious injury rate is compared to these same jurisdictions, Manitoba’s rates (apart from 2016) are lower than its Western Canadian neighbours. Like its other Western neighbours (apart from Saskatchewan) Manitoba’s serious injury rates are trending downwards.



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MB	8.8	7.6	6.6	5.2	5.9	8.0	5.4	5.1	5.5	5.6
SK	14.2	16.8	12.6	11.6	10.7	10.9	8.6	11.0	6.1	7.4
AB	8.3	8.9	8.9	9.0	7.9	7.1	7.1	6.8	5.5	6.0
BC	6.4	6.2	5.9	6.3	6.3	6.1	5.7	5.6	4.9	4.8

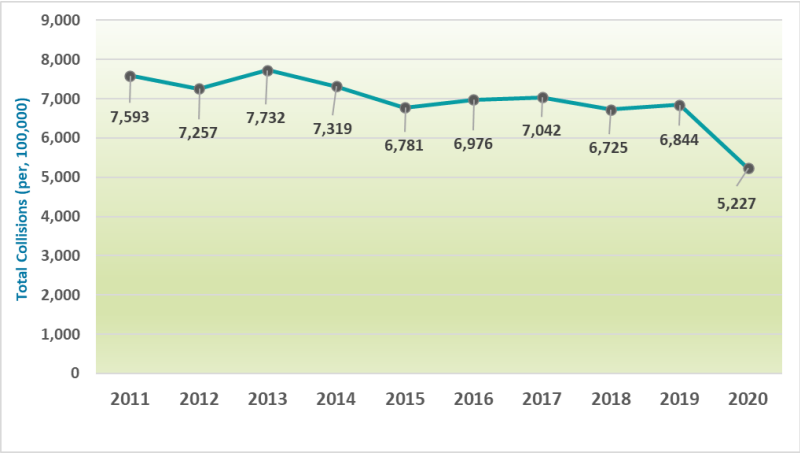


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MB	26.9	26.7	23.8	23.2	31.4	35.7	32.6	32.1	26.8	26.3
SK	41.9	41.3	39.0	28.8	34.3	29.2	30.1	33.4	38.0	41.4
AB	74.0	74.7	73.4	73.5	73.5	65.5	64.4	59.9	51.7	47.2
BC	35.4	37.0	34.3	38.0	37.5	38.9	36.3	33.7	29.2	27.2

Total collisions per 100,000 population - 2011 to 2020

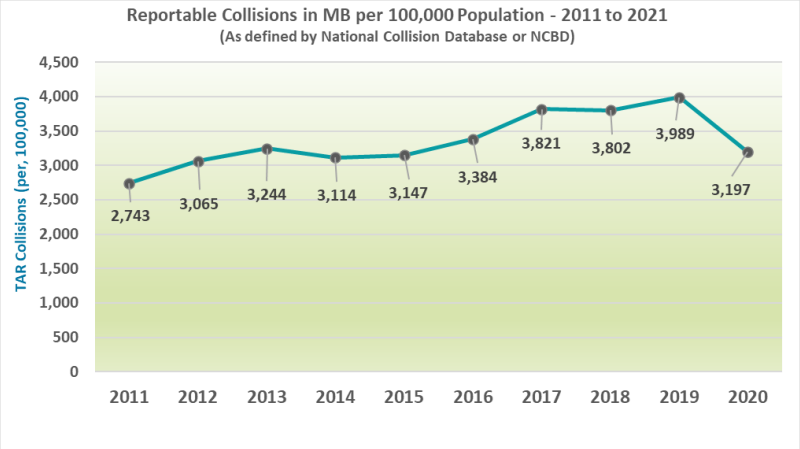
In Manitoba, collision incidents are reported through the claim registration process with Manitoba Public Insurance and form the basis for the overall population of collisions.

Total collisions per 100,000 population have been trending slightly downwards for the past ten years. In 2020, the rate decreased 24% compared to 2019 due to reduced vehicle volume resulting from the COVID-19 pandemic.



Collisions based on the national reporting standards per 100,000 population - 2010 to 2020

To be consistent with jurisdictions across Canada and in compliance with reporting standards for the National Collision Database (NCDB) maintained by Transport Canada, a "reportable collision" definition is applied. This definition includes only collisions that occur on a public roadway and either involved some injury or have property damage in excess of $2,000.

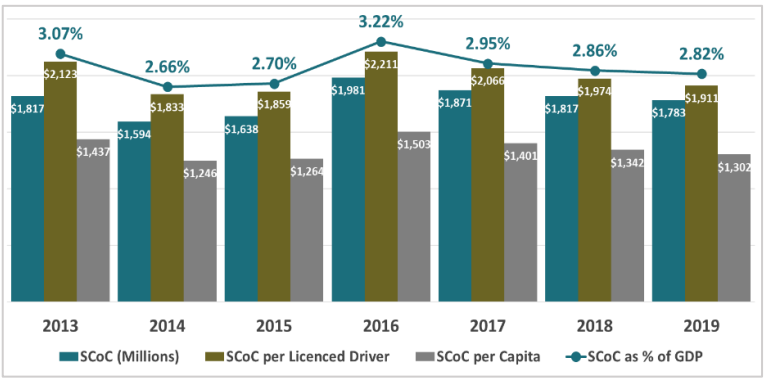


Using this definition, the total crashes in Manitoba per 100,000 population have been trending upwards for the past ten years. Note that amendments to the Highway Traffic Act (HTA) in October 2011 changed how collisions were reported. A portion of the increase in collision numbers reported from 2011 onwards can be attributed to this reporting change. Reductions in traffic volumes and changes driving patterns resulting from the COVID-19 pandemic likely resulted in the decrease observed in 2020 (20% lower than 2019). Increases in vehicle repair costs over time have also resulted in more collisions meeting the $2,000 threshold for including in the NCDB definition.

Social costs of collisions in Manitoba

The personal and social costs of collisions, injuries and fatalities continue to be significant in Manitoba. According to Transport Canada, the Social Costs of Collisions (SCoC) in Manitoba are estimated to be $1.8 billion in 2018 or approximately 3.2% of Manitoba's estimated gross domestic product.

In 2018 and 2019, the SCoC per licensed driver decreased slightly, due primarily from declines in the number of fatalities and serious injuries.



Road Safety Initiatives

Following are the notable road safety strategies, programs, legislation and other initiatives delivered during the reporting period, in each of the priority categories.

Strategic Planning

In 2020, the City of Winnipeg began development of a Road Safety Strategic Action Plan, which incorporates all Safe Systems components. It will serve as a roadmap for setting the direction and pace of road safety investments in the City in a coordinated and focused manner. The Action Plan will be built based on consultation with road safety stakeholders and the public, as well as an in-depth statistical and analytical review.

The first phase of this program has been completed. It included a thorough assessment of the current state of road safety in Winnipeg, along with review of related practices, policies and partnerships. Public engagement was vital. Surveys, discussion kits, pop-up events and virtual engagement sessions helped define public perception on road safety in Winnipeg.

With support and input from a Stakeholder Advisory Team and Technical Working Group, among others, the long-term vision and focus areas will be confirmed, and an implementable action plan to achieve the stated vision will be developed.

Research and Data Collection

Rationale for Inclusion in the Plan	Priorities Identified in the Plan
Fostering research capacity, data collection and consistency are overarching goals that span all road safety priority areas. Comprehensive data collection and analysis is essential for designing effective road safety strategies, determining intervention priorities, and monitoring program effectiveness.	• Create a central repository of road safety related data, accessible to provincial and municipal stakeholders and researchers. • Collaborate on research projects (multi-partner funding agreements). • Expand research and intelligence as primary drivers for road safety decision making. • Evaluate road safety policies, legislation, programming and interventions to ensure their effectiveness is measured, resources are allocated appropriately and desired outcomes are achieved.

Research and Data Collection Initiatives:

Open Data Portal

The City of Winnipeg's Open Data Portal empowers the City to "share with citizens, businesses and other jurisdictions the greatest amount of data possible while respecting privacy and security concerns". In 2020, the City began adding traffic volume to the Open Data Portal in an effort to promote transparency and open the door for collaborative efforts with private and public entities. This dataset is one of many that can be used by developers, analysts, and data enthusiasts to promote road safety in Winnipeg.

Non-motorized Traffic Monitoring Program

In 2020, the City of Winnipeg revised its Non-motorized Traffic Monitoring Program to take advantage of new data collection methods. The new program leverages a hybrid system of permanent and short duration cyclist counts to measure temporal and geospatial cycling trends on a three-year cycle. This program will help the City better understand cycling behaviour and guide investments in the cycling network to better serve users of the system, thus promoting safety.

Video Conflict Analysis Pilot Project

In 2020, the City of Winnipeg engaged a consultant to conduct a video conflict analysis pilot project and execute in-service road safety reviews at select intersections. Video conflict analysis studies near-miss interactions between motor vehicles, pedestrians and cyclists. This type of analysis can be used to diagnosis safety issues before collisions and resultant injuries occur, and can also be used for relatively rapid before/after evaluations. The pilot project is in progress and includes intersection conflict studies at 15 locations, pedestrian conflict studies at six signalized intersections structured as a before/after study of leading pedestrian intervals, and bicycle conflict studies at 12 locations.

Manitoba Transportation and Infrastructure (MTI) has also used near-miss video analytics in a number of safety reviews. In 2020, MTI engaged two engineering service providers to conduct a video conflict analyses of 24 priority signalized and unsignalized intersections throughout Manitoba.

Side-mounted beacons at pedestrian corridors research project

The City of Winnipeg completed a study analyzing the Effectiveness of Additional Lower Flashers at Pedestrian Corridors. The observations and conclusions of this study led to a positive change in the new pedestrian corridor design and a focused effort to standardize existing pedestrian corridor signage, illumination and design.

Network screening analyses

Network screening analyses has been in use by MTI since 2015, and it continues to be used annually by MI. This is a high-level analysis that helps to identify intersections or segments across the entire network that are deficient in terms of safety. From the results, MTI is able to identify road segments and intersections which have demonstrated a statistically significant number of incidents involving severe or fatal injuries. The safety issues identified on individual segments and/or intersections are then reviewed and prioritized for inclusion in the Department's Capital Program. A rework of the province-wide network screening process is expected in the near future using updated collision data. The updates are tentatively planned for 2021/22.

Safe Vehicles

Rationale for Inclusion in the Plan	Priorities Identified in the Plan
Advanced safety features are becoming standard equipment in new vehicles. These systems take control of the vehicle to avoid a collision when a human driver fails to do so. This can have a significant impact on road safety as more vehicles on Manitoba roadways are equipped with such technology. According to data from the National Highway Traffic Safety Association's National Motor Vehicle Crash Causation Survey (2005 to 2007) the driver was identified as the critical reason for 94 percent of all recorded crashes. Therefore, the impact of technologies in removing the human action (or decision), which was most often the critical reason for a collision, could be dramatic.	• Promote early adoption of automated vehicle technologies that promote road safety. • Expand safety research of emerging technology, autonomous technology in particular. • Address challenges with technology transition; ensure infrastructure can accommodate and interact with automated vehicle technologies and autonomous vehicles can interact with non-autonomous vehicles. • Determine how vehicle telematics may be used to monitor and influence positive driving behaviour.

Safe Vehicles Initiatives:

Ensuring Safer Vehicles

Vehicle Repairs

Manitoba Public Insurance objective for vehicle repair is ultimately to return vehicles to pre-collision condition. As vehicle technology evolves, MPI is committed to exploring new repair techniques, equipment, and related training necessary to properly and safely repair increasingly complex vehicles to the original manufacturer specifications. MPI also provides support for repair facilities when they encounter complex repair scenarios to ensure repaired vehicles maintain as much of the original integrity of the vehicle as possible, including preserving impact protection as designed by the Original Equipment Manufacturer (OEM). In support of this objective, MPI partnered with calibration system suppliers in 2019 to provide repair shops with greater access to calibration technology for advanced driver assistance systems (ADAS).

Vehicle Inspections

In 2019 MPI's Vehicle Safety department implemented a focused inspection program of Winnipeg's Vehicle for Hire (VFH) cohort in order to understand how much of this fleet meets current safety standards, and in the case where standards are not met, identify commonalities that can be addressed not only at the individual vehicle level, but through overall education and awareness initiatives. Semi-annual inspections in spring and fall of each year is scheduled to be conducted by MPI.

Manitoba Transportation and Infrastructure continually reviews vehicle safety standards to ensure safety inspections of vehicles are performed in accordance with national standards. The Motor Carrier Division ensures carrier profile safety ratings are current and non-compliance deficiencies are addressed.

In December 2019, the provincial Office of the Auditor General submitted a report to MTI containing recommendations regarding MI's Oversight of Commercial Vehicle Safety. MTI is currently pursuing the implementation of the recommendations.

Temporary Registration Permits

To further decrease the chance of unsafe vehicles operating on Manitoba roadways, MPI is reducing the limits for temporary registration permits. Vehicle owners have often used temporary registration permits as a way to operate their vehicles while avoiding safety inspection requirements. Limiting the number of time vehicles can be registered using temporary registration permits will limit the number of vehicles without Certificates of Inspection operating on Manitoba roadways. Moving vehicles from temporary registration permits to regular insurance will remove unsafe vehicles from the roadway, and allow the Corporation to better assess the risk that they pose.

Furthermore, analysis showed that collision claims were significantly higher on vehicles registered on temporary registration permits than on vehicles with regular registrations. Overall collisions were 56% higher, and total loss claims were 239% higher for vehicles operating on temporary registration permits.

Finally, adding temporary licence plates will remove the element of anonymity that drivers using temporary registration permits currently have, which allows them to avoid detection by photo enforcement devices. Temporary plates will allow law enforcement to identify vehicle registration and ownership using automated licence plate readers, traffic enforcement cameras, and the naked eye, and better allow other motorists to identify vehicles if they witness traffic violations or collisions. It also improves officer safety, as they will be able to look up who a vehicle is registered to prior to approaching it at a traffic stop.

Commercial Vehicle Fleet Safety

To help operators with vehicle safety of their fleet, MPI's Fleet Safety department has developed a Commercial Fleet Orientation Package for new businesses. The orientation package contains detailed explanations of the regulatory requirement required for fleet operators.

Preparing for transition to autonomous vehicle technology

In the 2018 Throne Speech, the Manitoba Government indicated its intent to create a legislative framework to enable the testing of autonomous vehicles on public roads in the province. Bill 20, The Vehicle Technology Testing Act (Various Acts Amended)[1] was introduced on October 14, 2020, to enable the testing of vehicle technology, including automated vehicles, on Manitoba roads.

The legal framework for testing vehicle technology includes amendments to legislation (Bill 20), new regulations and policies outlining requirements and conditions, and a permitting system.

Accordingly, MTI is currently developing permit processes that will enable on-road testing of autonomous vehicle technologies within Manitoba and staying up-to-date on latest industry trends and innovations in vehicle technologies and related road safety impacts.

[1] http://web2.gov.mb.ca/bills/42-3/b020e.php

Safe Roads

Rationale for Inclusion in the Plan	Priorities Identified in the Plan
Currently in Manitoba, at both the provincial and municipal levels, traffic engineers and road designers have established practices whereby safety improvements to existing infrastructure are incorporated into rehabilitation and re-construction projects on an as needed project-by-project basis. Further safety benefits would be achieved through adoption of a more formalized and systemic approach to incorporate road safety within new and existing infrastructure, while ensuring compatibility with the Safe Systems Approach.	• Improve safety for all vulnerable road users through smart road design. • Align active transportation strategies at the municipal and provincial levels and meet the ever-changing needs of Manitobans. • Build capacity for research and data collection on site specific location solutions—in both urban and rural municipalities (to better understand where the problems are, what the issue is, and what the possible solutions might be). • Implement a formalized and systemic approach in incorporating infrastructure improvements that enhance safety.

Safe Roads Initiatives:

Traffic Studies and Road Safety Engineering Improvements

The City of Winnipeg regularly conducts traffic studies in response to requests from the public, dispositions from Standing Policy Committee, and as part of capital projects, and as part of other transportation studies. Road safety improvements are often made as a result of these studies. Between 2017 and 2020, several road safety engineering improvements were made, including:

- Approximately 40 new pedestrian crosswalks, including ground-mounted crosswalks, pedestrian corridors, and rectangular rapid flashing beacon pedestrian crosswalks
- Several instances of upgrading intersection traffic control to either all-way stop control, traffic control signals, or roundabout
- Several new roundabout installations in new developments
- Several improvements to signalized intersections, including the addition of lower flashing amber beacons, left turn phases, leading pedestrian intervals, and leading bicycle intervals
- Lower flashing amber beacons installed on new pedestrian corridors in 2020 and at select existing pedestrian corridors
- Various traffic calming measures installed, including speed humps, speed tables, and curb extensions
- Removal of overnight amber/red flash pattern at 185 locations city wide
- Pedestrian countdown signals to be installed at all signalized intersections by 2021
- Accessible pedestrian signals installed at all signalized intersections
- Standardization of the pedestrian and vehicle clearance period at all signalized intersections
- Incorporating various geometric improvements and aligning with Accessibility Design Standards during road renewal projects

Aligning Road Safety Principles and Practices

Manitoba Transportation and Infrastructure increased the working-level knowledge and awareness of road safety principles and practices among municipal jurisdictions within the Association of Manitoba Municipalities (AMM) and among First Nations and other indigenous communities (e.g. in the development of active transportation (AT) paths, school zone traffic safety measures, pedestrian crossings, speed zones,

etc.). From 2017 to 2020, MI's key efforts in this regard have included new school zones/pedestrian crossings in Carberry, Niverville, Mitchell, Morden, Rosenort, Ashern, Onanole and Ste Agathe.

In addition to the school zone/pedestrian crossings, MTI has a Speed Reader Board program, where MTI works with various communities to set up a speed reader board on a temporary basis in locations where the community has concerns with motorists speeding. The temporary speed reader boards are typically set up in locations where there are schools in close proximity to help reduce the actual travel speed of the road user. Between 2017 and 2020, MTI worked with 16 communities for the temporary speed reader boards. These communities are: Rosser, Onanole, Oak Lake, Seven Sisters, The Pas, Niverville, Baldur, Roblin, St. Adolphe, Wawanesa, Strathclair, Virden, Miniota, Riding Mountain, St-Pierre-Jolys and Ninette.

MI has also worked with 6 communities who expressed interest in purchasing their own speed reader boards to help reduce the speed of motorists driving in their communities. These communities are: Birds Hill, Blumenort, Miniota, Birtle, Ninette, and Brandon.

Through its membership in the Manitoba Good Roads Association (MGRA) and its seat on the MGRA Board of Directors, each year MTI participates in the MGRA Annual Conference and conducts a half-day training course for MGRA members – mainly employees of the various municipalities under AMM. Recent training courses (including 2017-2020) put on by MTI have included topics such as: Equipment Securement during Transport; On-road Flagger Training; and Traffic Safety & Roadside Safety Protection.

During the 2017-2020 period, MTI also continued to implement its own internal Traffic Safety Strategic Plan, with various key core initiatives geared toward: identifying and prioritizing road safety infrastructure projects on the provincial highway network, stakeholder consultations and outreach, and multi-modal safety considerations - taking into account pedestrian/cyclists, rail crossings, truck traffic, buses, and ferry landings. The plan also includes continued focus on safe work zones, school area safety, and network wide safety reviews.

Through the province's circulation process for reviews of upcoming/planned land development projects (by landowners, developers, municipalities/First Nations, etc.), MTI continued to help co-ordinate transportation infrastructure and land use development to ensure safety related to new/added traffic flows and active transportation demands. Major reviews for the 2017-2020 period continued to focus on developments in and around urban centers across Manitoba, as well as those involving Centre Port Canada lands at the northwest corner of Winnipeg/in the RM of Rosser.

Traffic Enforcement

Traditional Traffic Enforcement

Law enforcement agencies in Manitoba continue to focus on speeding, distracted driving and impaired driving, the primary reasons for serious and fatal collisions. Non-seatbelt use has also been a focus for law enforcement, as it contributes to higher levels of injury and death. Gains have been made on being more intelligence-led, to focus enforcement efforts on areas with identified road safety problems. These locations are selected by historical collision data, volume of enforcement actions and citizen complaints. Law enforcement also supports ensuring the safety of vehicles on the roadway through light vehicle inspections, as well as commercial vehicle inspections.

Enhanced Traffic Enforcement

Manitoba Public Insurance's enhanced enforcement program provides funding to provincial policing agencies for supplementary enhanced enforcement operations targeting alcohol-impaired driving, distracted driving, and speed through various campaigns during the calendar year. These campaigns are coordinated to run in conjunction with targeted public awareness campaigns by Manitoba Public Insurance and law enforcement. Significant, visible enforcement is an acknowledged best practice to increase a motorist's perceived risk of apprehension for breaking the rules of the road; and combining enforcement with education and awareness efforts is a recognized international proven practice to increase compliance and improve road safety.

Automated License Plate Recognition (ALPR) Program

In addition to enhanced enforcement, in 2020, MPI also provided funding to police agencies in Manitoba for the purchase of Automated License Plate Recognition (ALPR) scanners. As of March 2016, MPI no longer required vehicle owners apply licence plate validation stickers on their vehicles. Moving to a multi-year registration and no requirement for validation stickers, more vehicles may be operating without being properly registered and insured. Equipping more police vehicles with ALPR scanners will help law enforcement quickly identify unregistered vehicles, suspended or unlicensed drivers, or stolen vehicles.

Pedestrian and Cycling Strategies

The City of Winnipeg's Pedestrian and Cycling Strategies (PCS) outlines an expansive, citywide active transportation network that covers all areas of the city designed to get cyclists and pedestrians to their destination safely. The City builds on the pedestrian and cycling network through priorities of the PCS in conjunction with road renewal, Walk Bike projects and other major projects. The following Walk Bike projects were completed between 2017 and 2020:

- Empress Street and Overpass Reconstruction and Rehabilitation
- Pembina Highway buffered and Protected bicycle lane
- Memorial Boulevard Protected Bike Lanes
- Fermor Avenue Bridge over Seine River Rehabilitation and Roadworks
- North East Pioneers Greenway Connection to Archibald Street
- Chief Peguis Greenway Extension
- from Henderson Highway to Main Street
- Chevrier Boulevard Walk Bike Improvements
- Princess Street Protected Bike Lane Study
- Downtown Bike Lane System and Street Improvements (Garry Street protected bike lane)
- Osborne Street to Downtown Walk Bike Bridge and Connections Study
- Wolseley to Downtown Walk Bike Project Study and Phase 1 Construction
- St. Boniface to Downtown Walk Bike Project Study
- Maryland Street to Broadway to Bridge (raised bike lane)
- Speers Road - Elizabeth Road to Bournais Drive (Multi-use path)

- Waverley Street – Scurfield Boulevard to Chevrier Boulevard (Multi-use path)
- Day Street – McMeans Avenue to Kildare Avenue (two-way off-street bike lane)
- Sidewalks – Wellington Crescent, Cliffwood Drive
- Southwest Rapid Transit Corridor multi-use path wayfinding improvements

Active Transportation Advanced Clearing Program

In the winter of 2019/2020, the City of Winnipeg undertook an enhanced winter maintenance program of active transportation pathways throughout the season. The Council-approved Snow Clearing and Ice Control Policy was amended to include the winter re-prioritization of roadways, sidewalks, and active transportation pathways for improved snow clearing to help make walking and cycling convenient and accessible for people of all ages and abilities year-round.

Open Streets

As a response to the pandemic, in April 2020 the City of Winnipeg in opened its four Sunday/Holiday Active Transportation Routes for daily use between 8:00 am and 8:00 pm. to accommodate increased outdoor activity while enabling social distancing. Subsequently, six other routes were added. These routes, known as open streets, provide a traffic-calmed environment by restricting vehicle traffic to one block at a time and promoting use by pedestrians and cyclists.

Update to the Manual of Temporary Traffic Control

The City of Winnipeg's Manual of Temporary Traffic Control provides instruction and guidance to ensure construction agencies safely accommodate vulnerable road users through and around work zones. Recent manual updates have introduced new sidewalk closure signage, as well as the use of temporary curb ramps and pedestrian channelization devices. When passengers cannot alight from the curb, construction agencies must provide temporary transit platforms to ensure all passengers can board the bus. The Manual contains a series of traffic control illustrations that depict accommodations for typical scenarios involving pedestrians, transit users, and bike facilities of varying levels.

Updated Technical Guideline for Pedestrian Crossing Control

The Technical Guideline for Pedestrian Crossing Control was updated to enhance pedestrian safety, reflect the latest best practice, and promote consistency with other jurisdictions across Canada. Significant updates include: (1) revised preliminary assessment methodology, which establishes the need to provide pedestrian crossing control at a specific site, to include latent crossing demand and an updated discussion of pedestrian desire lines and system connectivity, and (2) rectangular rapid flashing beacons (RRFB) are included as a new treatment system option.

Road Safety Reviews and Audits

Manitoba Transportation & Infrastructure's In-Service Road Safety Reviews
Manitoba Transportation and Infrastructure has engaged engineering safety providers to study safety through the use of In-Service Road Safety Reviews (ISRSR's) since 2014. ISRSR's examine all aspects of an intersection or road segment to evaluate the safety of road geometry, signage, guardrail, and traffic control. ISRSR's also provide mitigation options for any safety deficiencies found. MTI has undertaken five ISRSR's between 2017 and 2020:

- Perimeter Highway Median Openings
- PTH 1 at PTH 13 Intersection
- PTH 8 at PR 231 Intersection
- PTH 1 at Road 40W Intersection
- PTH 10 from PTH 16S to PTH 16N

In addition, MTI has four other ISRSR studies underway, which are nearing completion as of October 2022.

City of Winnipeg's Road Safety Audits

The City of Winnipeg has incorporated road safety audits into major capital projects for several years. A Road Safety Audit is a formal and independent safety review of a road transportation project by an experienced team of safety specialists, addressing the safety of all road users. The audit team is external to the City of Winnipeg and is independent of the overall project team. This reduces bias and allows for an exclusive focus on road safety with the key objective of the audit being to reduce the risk of severe collisions. Road Safety Audits are often conducted during the planning and design stages of a project. As such, they are a proactive, preventative, and cost-effective approach to improving road safety. Design changes occur early in response to safety issues before a project is constructed and before the road is open to traffic.

Road safety audits include those completed for the following projects:

- Waverley Underpass Project
- Fermor Avenue Bridge over the Seine River Rehabilitation and Roadworks
- Downtown Bike Lane System and Street Improvements
- Chief Peguis Trail Extension West
- Empress Street and Overpass Reconstruction and Rehabilitation
- A Better Bridge for Arlington
- Route 90 Improvements Study

Rail Upgrades

The City of Winnipeg has completed safety assessments of all 205 grade railway crossings in the City. Remediation of safety concerns concluded so far have included advanced warning signs, cautionary signs, signal timing, pavement marking, as well as interconnection of several railway warning systems and traffic signals.

Improving Safety at Intersections

Manitoba Transportation and Infrastructure has undertaken several intersection improvement projects between 2017-2020, aimed at enhancing safety for all road users:

- PTH 100 (South Perimeter Highway) - as part of a focused Short-Term Safety Plan, MTI closed median openings and rationalized other access points to enhance safety for both through movements and cross-traffic flows (this included the closure of the Brady Road intersection, and construction of the new Ethan Boyer Way service road). Additionally, MTI engaged the services of an engineering consulting firm to complete a major Functional Design Study of the entire South Perimeter Highway from Portage Avenue to Fermor Avenue, which included identifying further long-term/future safety improvements. Beginning in 2020, MTI initiated a major Design-Build contract to fast-track construction starting in 2021 of new grade-separated interchange at the junction of PTH 100/St. Mary's Road to improve safety at this site, in response to rapid traffic growth in the area.
- MI constructed a new roundabout intersection (first ever on the provincial highway network) at the junction of PTH 2/PTH 3 near Oak Bluff to eliminate previous safety issues related to the poor skew angle of the intersection which had existed prior to the upgrade. Another roundabout intersection has been designed for the junction of PR 206/PR 213 (Garven Road) and is slated for construction in 2021. Designs for future roundabouts are also underway at various other locations on the provincial highway network, to help address site-specific safety issues.
- An engineering study commenced in 2020 looking at intersection upgrade options at the junction of PTH 1 (TransCanada Highway & PTH 16 (Yellowhead Highway)/PR 305 just west of Portage la

Prairie to address growing safety concerns at this location. Construction is expected to begin in 2021.

- Over the past 2 years, MTI continues to actively work with local stakeholders in Mitchell to address safety related concerns along PTH 52 regarding intersections, driveway accesses, and pedestrian/school crossings.

Active Transportation Safety Improvements

Manitoba Transportation and Infrastructure installed audible pedestrian signals at multiple locations across the provincial highway network to improve safety for vision-impaired pedestrians. MTI also installed curb extensions (bulb-outs) in urban communities to lower speeds and improve safety by allowing pedestrians to be more visible to motorists and shortening the crossing distance required at the crosswalk.

From 2017 to 2020, MTI has overseen the installation of four rectangular rapid flashing beacons (RRFB) crosswalks and approved many others that have been installed by municipalities on the highway network.

School Area Traffic Safety Guidelines

Manitoba Transportation and Infrastructure reinforced the School Area Traffic Safety Guidelines, which is a guide intended as a resource for schools throughout the province of Manitoba. These guidelines are primarily intended to be used by teams of volunteers consisting of parents, school staff, and community representatives who are working together to resolve traffic safety issues at an existing school.

The purpose of this document is to provide a comprehensive, step-by-step process to help school teams see improvements through to implementation, and understand the challenges that may occur along the way. Much of the information pertaining to mitigation methods regarding school area safety concerns can be considered as part of the planning and design process for new schools, and the document also contains a separate chapter regarding new schools.

The School Area Traffic Safety Guidelines were originally distributed to Manitoba School Divisions in 2015, and it was also recirculated in 2018 following updates to the guide. The re-release was intended to capture the updates and serve as a means of introducing the guide to potentially new school division members.

Safe Routes to School

The City of Winnipeg has partnered with Green Action Centre and local consultants to review "Safe Routes to School" initiatives at a number of schools throughout Winnipeg. When these grassroots-led studies (sometimes involving area Councillors) suggest improvements to encourage/facilitate walking and cycling to/from school, as well as addressing issues related to interaction between travel modes, the City both reviews the proposed recommendations and provides input into the plans/programs. School Travel Plans have also been incorporated into Walk Bike projects. The City also works with school administrators on a regular basis to review safety related to school travel and pick up and drop off protocols.

Safe Road Users

Rationale for Inclusion in the Plan	Priorities Identified in the Plan
Culture consists of the "beliefs, values, norms, and things people use, which guide their social interactions in everyday life". Traffic safety culture, therefore, refers to the influences that drive attitudes and behaviours regarding road safety. To actively address traffic safety culture in Manitoba, the province will be proactive in changing the mindset of Manitobans about road safety by encouraging heightened awareness of the consequences of unsafe behaviour (such as distraction, unsafe speed or impairment) so road users are willing to change their behaviour in the interest of safety. In adopting a traffic safety culture, Manitobans will recognize their everyday actions can contribute to an improved road safety environment for all. Placing their safety and safety of others ahead of anything else would make it socially unacceptable to take part in unsafe behaviour.	• Evolve and improve the traffic safety culture in Manitoba. • Reduce driver distraction on Manitoba roadways. • Reduce impaired driving, both alcohol and drug impairment, on Manitoba roadways. • Persuade Manitobans to use occupant restraints properly and consistently— including seatbelts, child restraint systems, and mobility aid securement. • Improve safety of youth on our roads.

Safe Road Users Initiatives:

Traffic Safety Culture

Changing the traffic safety culture in Manitoba is a foundational element of the Manitoba Road Safety Plan. In a progressive traffic safety culture, Manitobans are committed to traffic safety, not just by way of their concern for safety on our roads, but as reflected in their own improved and consistent safe road behaviours. Safety is never a trade-off for competing priorities (for example shorter trip time, more social interaction, or the speedier transport of goods).

In support of Manitoba's provincial road safety plan, Manitoba Public Insurance launched a new and innovative road safety awareness campaign titled ***'Save the 100***' in September 2018. '***Save the 100'*** represents the average number of people killed annually on Manitoba roadways over the last decade. The primary objective of the campaign is to reduce the tolerance and acceptance for traffic fatalities by asking Manitobans to look beyond the statistics and focus on the real people and real lives lost behind every fatality number reported. An equally important message is that every Manitoban has the power to reduce the annual fatality count to zero by changing how we think about road safety, the way we drive, and the decisions we make behind the wheel. Each subsequent/supporting campaign encourages all road users to take action and accept personal responsibility for the decisions they make, how they drive, and how they interact with other vehicles, motorcyclists, cyclists and pedestrians on our roadways.

Driver Training

In 2019, MPI launched Driver Z, its new High School Driver Education (HSDE) program. This new program replaces conventional instruction with a blended, higher-order learning approach involving interactive online learning, richer classroom engagement, increased parental/guardian involvement, and a substantial increase in dedicated practice time for students. Young drivers are consistently overrepresented in collision involvement, particularly fatal and serious injury collisions; evidence suggests novice driver education reduces traffic collisions, especially significant injuries and fatalities. The HSDE program delivers approximately 470 driver training courses to 10,500 high school students annually. In order to ensure continuity of the HSDE program in 2020, and in response to pandemic restrictions, the program was modified to enable online/virtual delivery of the classroom component of the program.

Mandatory Entry-Level Training (MELT) for Class 1 drivers was introduced by the Province of Manitoba in September 2019. It established a mandatory minimum training requirement that aligns with other jurisdictions in Canada. MELT ensures that applicants possess the basic knowledge and driving skills to safely operate a commercial vehicle, and is now a prerequisite to obtaining a Class 1 driver's licence.

Manitoba Public Insurance worked with stakeholders to develop the training curriculum, along with policies and requirements to support this fundamental training. Since its introduction, MPI has continued to work with key stakeholders to evaluate and evolve the programming and has recently taken steps to enable some components to be delivered in a virtual format.

Cyclist Education

The Public Education, Awareness and Promotion grant is part of the Pedestrian and Cycling Program in the City of Winnipeg's Capital Budget. It provides grant funding to various organizations that promote walking and cycling in Winnipeg.

Through its role on the Road Safety Committee (of the Transportation Association of Canada), MTI chaired a Project Steering Committee which completed a national study entitled "Safety Performance of Bicycle Infrastructure in Canada". The study was published in November 2020 and includes a new Bicycle Facility Selection flowchart, which MTI is now using and also promoting among its stakeholders, municipalities/First Nations, trail developers, etc.

In 2016, MTI (in collaboration with other provincial departments) assisted in the creation of a new document entitled "Active Transportation Planning Guide for Manitoba Municipalities". This document is posted on-line and has been widely used during the 2017-2020 period as a reference document and education/awareness tool across Manitoba.

Safe Trail Use

MI worked with several local trail developers/Trails Manitoba and the TransCanada Trails (TCT) organization to safely locate, legally permit, and properly sign trail infrastructure for public use throughout southern Manitoba from Ontario through to Saskatchewan, as part of the national TCT initiative to create Canada's "Great Trail". Many of the local trail developers were comprised of volunteers with limited initial knowledge of road safety considerations, and this was addressed through a co-operative and consultative approach involving MTI staff and staff from other provincial departments.

This initiative included finding innovative on-ground and water-crossing solutions in areas with rugged terrain, while preserving safety for all affected users (trail cyclists/pedestrians, and motorists/pedestrians using local provincial highways) – both along the trails and at intersection/cross-over points with the provincial highway network (e.g. Borders to Beaches Trail from West Hawk Lake to Grand Beach). Over the course of the "Great Trail", there were several hundred road crossings involved, each with its own unique characteristics to consider from a safety perspective.

Federal and Provincial Road Safety Law Amendments

Manitoba Justice led the development and implementation of amendments to The Highway Traffic Act and The Drivers and Vehicles Act to improve impaired driving legislation in the areas of drug impaired driving sanctions and the new Immediate Roadside Prohibition program.

Manitoba participated in Federal/Provincial/Territorial working group discussions to improve Criminal Code impaired driving and road safety investigation, evidence, offence, and penalty laws.

Safe Speeds

Rationale for Inclusion in the Plan	Priorities Identified in the Plan
Reducing the tolerance for exceeding the speed limit and aggressive driving in urban areas can contribute to the reduction of serious injury and fatal collisions. The Safe Systems Approach incorporates the basic premise that the severity of a traffic injury is directly related to the force of the collision and the resulting impact on the body. Speeds need to be controlled by a combination of policy, technology, road safety culture and infrastructure design to a level corresponding with the inbuilt safety of the road system itself.	• Examine new speed management strategies to lower risk. • Change the culture on speed in Manitoba.

Initiatives:

Speed display boards

Each year in Manitoba, unsafe speed contributes to approximately twenty percent of fatalities. In 2020, Manitoba Public Insurance provided 25 highly visible speed display boards in 13 communities. The speed display boards use radar to detect the speed of an approaching vehicle and display the speed on an LED message display. The intent is to encourage compliance with the posted speed limit when transitioning to lower posted speeds, such as school zones or entering communities located along highways.

Manitoba Transportation and Infrastructure also offers temporary speed reader boards to municipalities upon request. This program distributes MI-owned speed reader boards to communities for a duration of a few months at a time. The signs are targeted for school areas, particularly in the vicinity of crosswalks, and speed transition areas when entering a community.

Residential Traffic Calming Program

The City of Winnipeg's residential traffic calming program was updated to in 2020. The new process includes additional engagement opportunities for residents, enables a robust prioritization system so that resources can be targeted to the highest needs locations, and allows a wider range of traffic calming measures to be considered.

A community traffic study is in progress in the Lord Roberts neighbourhood. This study is assessing a variety of traffic and road safety concerns across the entire neighbourhood, the City is working with the public and technical experts to develop solutions. Lessons learned from the study will inform the City's' residential traffic calming program with the intention to conduct similar studies in other neighbourhoods in the future.

Updated Technical Guideline for Speed Limit Reviews

The Technical Guideline for Speed Limit Reviews was updated to reflect recent practices for establishing speed limits, which have begun to rely more on additional environmental factors to recommend speed limits that consider the safety of all road users. The previous Technical Guideline recommended a speed limit primarily based on the 85th percentile speed of traffic. The update uses the Manitoba Transportation and Infrastructure *Guide for Setting Posted Speed Limits on Manitoba Roadways* (2019) engineering speed limit study as the framework, with minor modifications, to evaluate and recommend posted speed limits. Significant updates include identifying the "target speed" of the roadway which explicitly evaluates the roadway function, physical characteristics, and mix of road users.

Reduced Speed School Zones

In 2013, the Highway Traffic Act (HTA) authorized local government (RM's, FN's, etc) to make bylaws establishing a reduced speed school zone (RSSZ), where speeds may be lower during school hours, or at all times, according to the posted signs.

In order to establish an RSSZ, some regulatory requirements must be met, such as;

- the school property line must abut the roadway
- school zone can be a maximum length on 150m beyond school property line in either direction
- k-12 schools are eligible
- speed can only be reduced to 50 km/h if the existing regulatory speed is 80 km/h or greater
- speed can be reduced to 30 km/h if the existing regulatory speed is 70 km/h or less
- the community can choose hours/days/months of the RSSZ

MI works with local communities, RM's, Towns, etc. who are planning to implement a RSSZ bylaw to confirm all signage can be installed as drafted considering the site specific constraints, underlying speed zones, intersections, existing signs, etc.

Since the HTA was amended, a total of 51 RSSZs have been implemented on provincial roads since 2013, with 15 reduced speed school zones being implemented between 2017 and 2020, and another request is currently in the works.

Community Engagement

External Stakeholder Committee on Road Safety (ESCRS)

Through the External Stakeholder Committee on Road Safety, MPI engages and informs external road safety stakeholders on its road safety efforts. This committee provides a forum for road safety interest and advocacy groups to identify concerns and opportunities to mitigate provincial road safety issues.

Public Engagement

Safe Roads

The City of Winnipeg engages with the public through a variety of channels. When Winnipeggers have concerns regarding road safety, the City encourages residents to contact them through 311 or through their Councilors. Many studies are initiated as a result of requests from the public. For other City projects, such as Walk Bike projects, public engagement is an important component. Engagement can take the form of surveys, open houses, pop-up events, and other tactics and this public feedback on active transportation projects often relates to safety, and is used to inform design solutions. As part of the Open Streets initiative in 2020, the City conducted public engagement to understand road users' experiences, suggestions and concerns, including those related to safety.

Safe Road Users

Safe routes to school initiatives involve high levels of engagement with students, school staff and administration, as well as parents and guardians.

Between 2017 and 2020, Manitoba Justice engaged with law enforcement, other government departments, and community representatives, such as MADD Canada, on a variety of road safety priorities including drug impaired driving sanctions and Immediate Roadside Prohibitions. Manitoba Justice continues to engage with law enforcement, other government departments, and community representatives on impaired driving issues.

Safe Speeds

The new traffic calming process makes it easier for residents to initiate studies by reducing the petition requirement from 70% to 25%. The new process also builds in an engagement step where designs will be taken to the public for feedback prior to installation.

The Lord Roberts community traffic study assembled a Public Advisory Committee comprised of residents, business owners, and other community representatives that are consulted and provide advice throughout the project. Several opportunities for the broader public to provide input have also been included, such as workshops, surveys, and other events.

COVID Impacts

Collision and Traffic Counts

From March to mid-June 2020, initial public health measures and travel restrictions resulted in a significant reduction in traffic counts and collisions. By July, when daily reported COVID-19 cases were very low in Manitoba, public health measures and travel restrictions reduced significantly. This resulted in both traffic counts and collision numbers returning to historical norms. Though collision counts returned to normal levels, serious collisions resulting in fatalities or serious injuries increased significantly over this period. COVID-19 cases increased early in fall, prompting a return to greater health order restrictions in October 2020 and a Code Red status across Manitoba as of November 12 2020. As a result, traffic counts and collision claims have again declined significantly and are trending below previous years' levels.

Traffic Enforcement

Traditional Traffic Enforcement

The impacts of Covid-19 on enforcement activities has been significant. Law enforcement has attempted to reduce contact with members of the public for non-essential stops, which has had a significant impact on impaired enforcement, particularly on high visibility lineup enforcement. There has also been some reduction in the use of roadside screening devices because of the amount of respiratory droplets that are generated during the test, increasing the risk to members. Traffic patterns have also had a significant impact, as the volume of traffic on the roadways has dropped significantly. This led to a reduction in the number of offences being detected and tickets issued. The drop in traffic volumes led to another problem, however, in that some drivers saw the opportunity to travel at extremely high speeds due to less traffic on the road, resulting in a higher volume of serious offence notices being issued.

Enhanced Traffic Enforcement

Enhanced enforcement campaigns planned from March to June 2020 were postponed due to COVID-19. During the early months of the pandemic, lower traffic volumes coupled with limiting the interaction between officers and the public resulted in the elimination of incremental enforcement funded by MPI. In June/July 2020, once public health order restrictions were reduced, enhanced enforcement programs were reestablished as planned and concluded in November 2020.

MPI Road Safety Programming

The pandemic affected not only traffic patterns and enforcement levels, but also the delivery of road safety programming including driver education, road safety research and communications. Programs were suspended and/or modified to accommodate public health restrictions.

In order to ensure continuity of mandatory and elective Driver Education, MPI's high school driver education program ('Driver Z'), Mandatory Entry Level Training (MELT) and mandatory driver improvement classroom session were all enabled virtually to ensure continuity during the pandemic. Public awareness communications and public events were also adjusted or cancelled. Where possible, community road safety program presentations were delivered virtually.

Planned road safety research was also deferred in 2020. The 2020 'Alcohol and Drug Roadside Survey', to study the prevalence of drugs and/or alcohol in Manitoba drivers was postponed due to reductions in traffic volume and the inability to obtain a breath and oral fluids sample during the pandemic.

Moving Forward "Towards Zero"

The Manitoba Road Safety Plan 2017-2020 identified priorities for road safety stakeholders and set the framework for collaborative development of strategic actions to address these priorities.

Through continued collaboration and commitment to supporting a safe systems approach, Manitoba's road safety stakeholders and partners aimed to make meaningful change in the province's traffic safety culture and to continue the downward trend in the number of fatalities and serious injuries related to motor vehicle collisions.

From 2017-2020, participating stakeholders have collectively pursued numerous strategic actions and activities to achieve improved road safety outcomes. These new approaches will continue to improve the driving environment for all road users in Manitoba. Moving forward, stakeholders plan to further the priorities of the plan, specifically:

- Organizations, including the City of Winnipeg, and Manitoba Public Insurance, are developing and implementing multi-year action plans to engage stakeholders and focus efforts in support of the safe systems approach and improved traffic safety culture.
- Road safety partners will continue to collaborate on the development and sharing of new or improved data to support decision-making on opportunities for improving road safety.
- Engagement and analysis will guide the continuous improvement and evolution of driver training to ensure drivers have the knowledge and skills to operate safely on our roads.
- Road safety, for all road users, will be a principal consideration in the design of new or improved infrastructure. In addition to on-going monitoring of road infrastructure, this also includes appropriate structural and safety inspections of bridges and other transportation-related structures across the provincial highway network and in municipalities/First Nations.
- Stakeholders will continue to raise awareness and communicate the risks and related consequences of unsafe driving behaviours. These campaigns, whether intended for the general public or focused on specific at-risk segments, also promote the need to advocate safe driving practices in others.

This progress report will also be shared with the Canadian Council of Motor Transport Administrators to demonstrate Manitoba's contribution and progress toward Canada's Road Safety Strategy 2025.