

# Transportation Safety Plan

A community on the move towards zero  
transportation-related deaths and serious injuries



# Acknowledgements

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This Transportation Safety Plan was developed by the City of Lethbridge, in conjunction with key partners in transportation safety, and with regular input from the general public. The Steering Committee consisted of members from the following City Departments and organizations:

- City of Lethbridge Transportation
- City of Lethbridge Planning and Development Services
- City of Lethbridge Communications
- City of Lethbridge Regulatory Services
- City of Lethbridge Police Services
- City of Lethbridge Emergency Medical Services
- City of Lethbridge Fire Services
- Alberta Health Services – South Zone
- Alberta Motor Association

Several other stakeholders and partners were engaged at various stages of the Transportation Safety Plan development.

Consulting assistance was provided by TranSafe Consulting Ltd., with support from WATT Consulting Group and B & A Planning Group.



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## Message from the Police Chief

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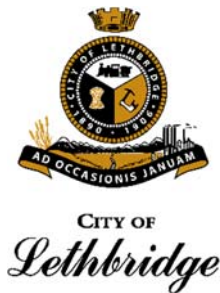


Each year, 435 collisions occur in Lethbridge in which people are injured. Twenty- There were 2,574 collisions reported in the City of Lethbridge in 2019, with almost 18 per cent of those resulting in injuries. While it's fortunate that none of those collisions resulted in the loss of life in 2019, the impact on those directly involved, as well as their families, friends and co-workers, can be significant and long-lasting.

In listening to Lethbridge residents in the development of this Plan, we heard that the biggest transportation-related safety issues include distracted driving, speeding and aggressive driving. The Lethbridge Police Service will continue to focus on traffic enforcement in those and other areas, but we also ask the community to make a renewed commitment to share the road safely and create an environment in which we take care of ourselves and each other.

## Messages from Senior Staff and Partners

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We recognize the role that infrastructure plays in preventing serious injuries and deaths in our transportation system. To that end, we will aim to ensure best practices are implemented throughout the city aimed at making our streets safer, including an increased focus on transit facilities, roundabouts, crosswalks, traffic signal modifications, and the continued implementation of complete streets and accessibility improvements. These changes are expected to result in safer speeds, safer use of the road network, and the accommodation of the most vulnerable users of the system. Through safety-conscious planning, design, operation and maintenance, we can move towards our goal of zero transportation-related deaths and serious injuries in Lethbridge.

– *Director of Infrastructure Services, City of Lethbridge*



At Alberta Health Services – South Zone, transportation-related injuries continue to be one of the leading causes of injury in the health care system. From broken bones to incapacitating injury, these take a toll on families, workplaces and communities. Our data shows that several of these injuries could have been prevented if the force of impact, often due to speed, was less severe. We applaud this initiative and will continue our existing programs and expand on them in support this shared target.

The Alberta Motor Association operates several programs in Southern Alberta in support of transportation safety, including the well-known School Patrol Program, driver training and certification courses, bike rodeos, school and winter safety campaigns, School Travel Planning, the Prevent Alcohol & Risk-Related Trauma in Youth (P.A.R.T.Y.) program and seniors falls. We will continue to support the City by providing resources and expertise to deliver on this exciting new goal.



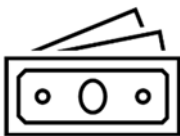
# The Problem

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In Lethbridge, transportation-related collisions and injuries are far too common:



The personal costs of these tragedies to families cannot be measured. Based on the loss of productivity, health care costs, and pay-outs from the insurance and court systems resulting from pain and suffering and other costs, collisions in Lethbridge cost society:



**\$130 Million Every Year**



A comparison with other similar-sized Alberta municipalities shows that the injury rate is higher in Lethbridge than most cities:

Alberta Municipality	Population (2016 Census)	Annual Collision Rate (per 1,000 population)	Annual Injury Rate (per 1,000 population)	Annual Fatality Rate (per 1M population)
<b>Lethbridge</b>	92,729	23.2	<b>4.69</b>	23.7
<b>St. Albert</b>	65,589	13.0	2.63	18.3
<b>Red Deer</b>	100,418	24.3	2.64	27.4
<b>Strathcona County</b>	98,044	23.0	5.07	55.1
<b>Medicine Hat</b>	63,260	29.5	3.90	31.6



# Our Shared Vision

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The City of Lethbridge has developed a vision for transportation safety, developed together with its partners and stakeholders.

## VISION

**A community on the move towards ZERO transportation-related deaths and serious injuries**

Zero deaths and serious injuries is the only acceptable goal when it comes to our families and community. The zero target encourages mobility, but in a way that is safe throughout the road transportation system (which includes roadways, sidewalks, bicycle facilities, public transit, the roadside environment, and land use planning). This plan focuses specifically on preventing the most serious and life-changing outcomes.

Further to this, the City has attached a timeline to reach this zero goal: the year 2040. Aiming for this ambitious goal requires a paradigm shift, along with significant changes in the way the transportation system is developed and managed. These changes are embodied in Vision Zero and Safe System principles, which have been endorsed by the City and its partners and captured in the Mission Statement and Guiding Principles.





# Guiding Principles

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**S** **Sustainability:** Prioritizing safety, regardless of political and economic cycles

**A** **Adaptability:** Managing the risks and harnessing the opportunities that come with technological advancements and other changes

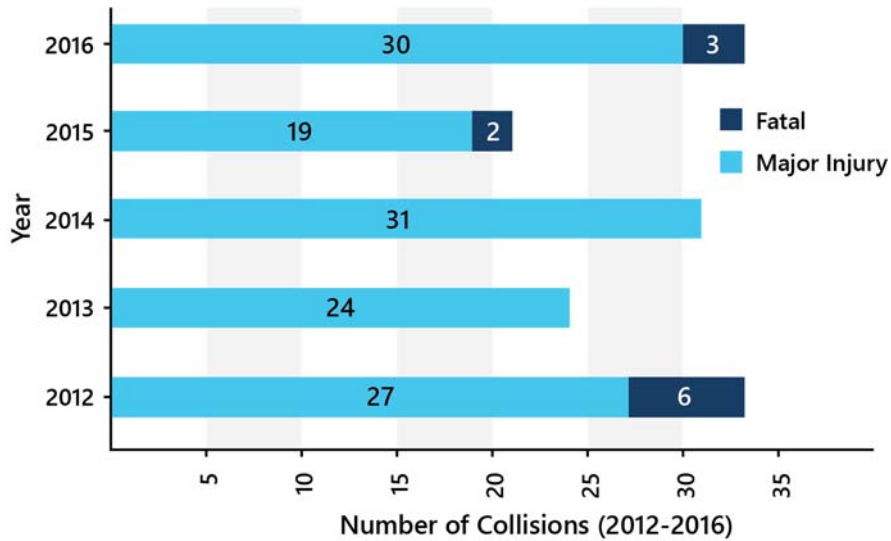
**F** **Fostering a Positive Culture:** Starting to change social norms by rejecting risky behaviours and effectively engaging the public

**E** **Equitability:** Equity and fairness across all travel modes, abilities, and ages; a multidisciplinary evidence-based approach

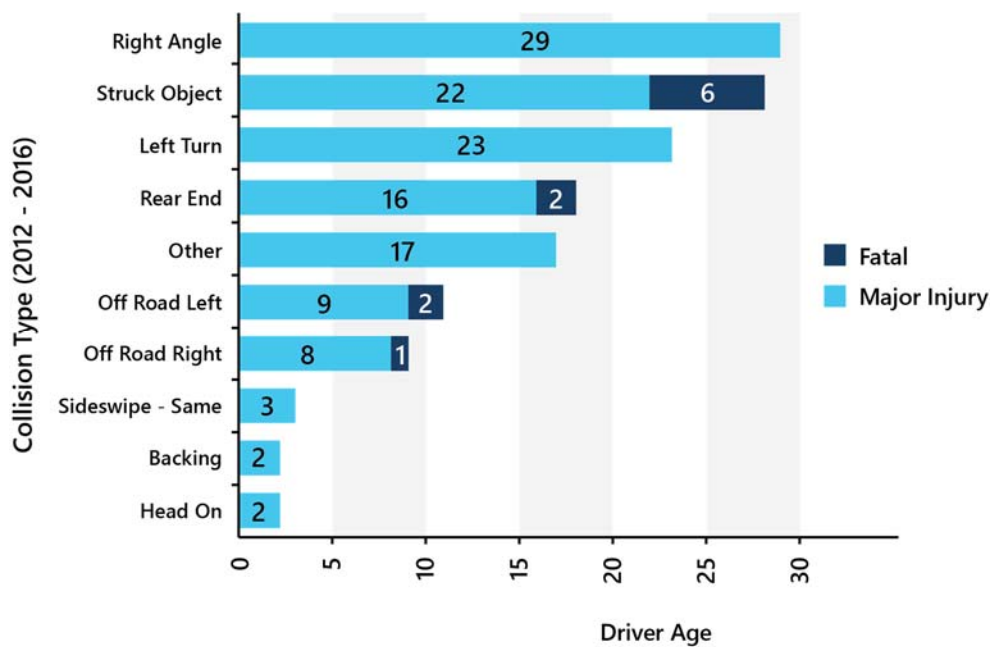


# Transportation Safety Trends in Lethbridge: Severe Collisions

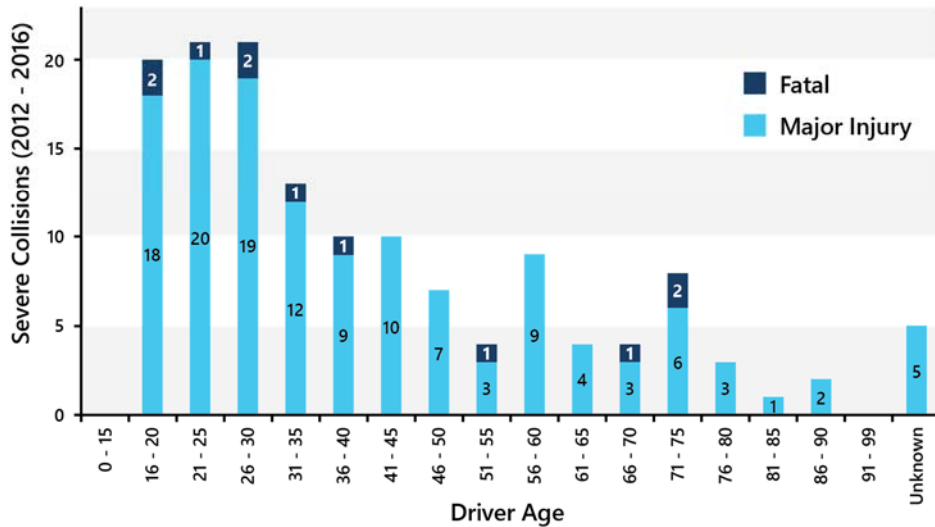
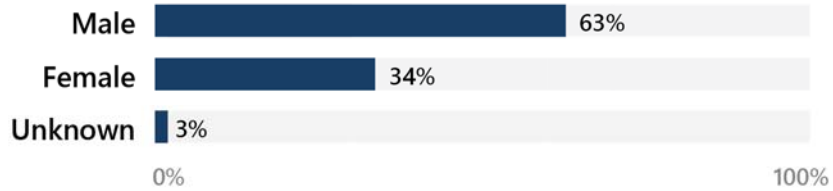
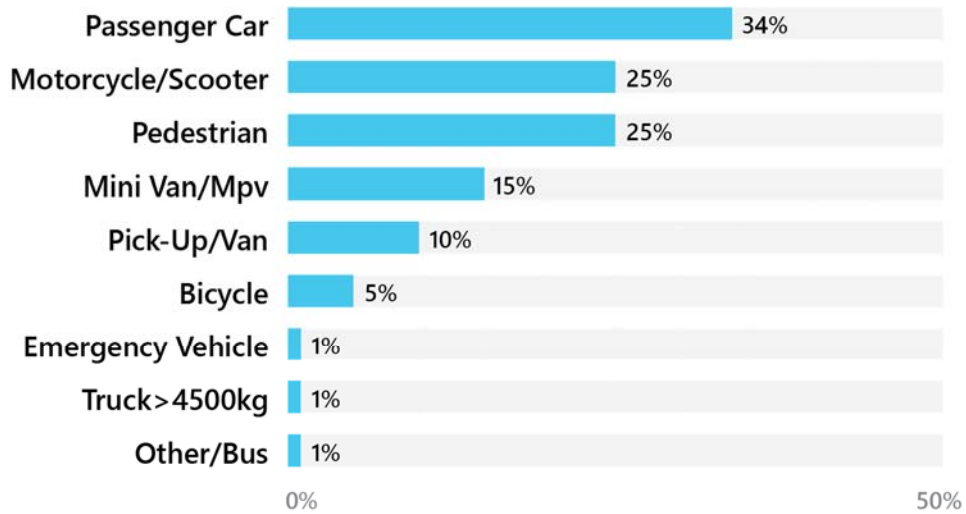
## Trend in Severe Collisions Over Time



## Types of Severe Collisions



## Who is getting involved in Severe Collisions?



These groups are at a higher risk of being involved in severe collisions:

- Males
- Pedestrians
- Drivers aged 16 to 30

# Successful Safety Initiatives

***The City has piloted several devices and programs that are proven to reduce motor vehicle injuries and fatalities, including:***

- *Roundabouts (35 to-date)*
- *Variable Speed Limits (7 VSL installations on Whoop Drive)*
- *Rectangular Rapid Flashing Beacons*
- *Red-Light Cameras*
- *Road Safety Audits*
- *Road Weather Information System (RWIS) to determine safe speeds on bridge decks and slopes*



## **ROUNDBABOUTS**

### **Safety Benefits**

- *Eliminates crossing conflicts*
- *Reduces vehicle speeds through intersections*
- *Reduces fatal and incapacitating injury crashes by 89-100%*



## **VARIABLE SPEED LIMITS**

### **Safety Benefits**

- *Provides safer speeds during adverse weather conditions and in work zones*
- *Smoother traffic flow*
- *Reduces all collisions by 20-30%*



# Community Engagement

Community engagement was a critical part of the process of developing the Transportation Safety Plan. A Community Conversation was held in person and online in October 2019, and again online between March and June 2020.



# Stakeholder Engagement

In addition to various City departments and the Project Steering Committee partner agencies, a wide range of stakeholders were invited to provide input towards the development of the Transportation Safety Plan. Workshops were held in October 2019 and February 2020 to discuss the vision, focus areas and strategies. Stakeholders who were invited (*and attended*) are as follows:

*Alberta Transportation Operations*  
 Alberta Transportation Office of Traffic Safety  
 Commercial Vehicle Enforcement Branch  
 Alberta Sheriffs  
*Lethbridge RCMP*  
*University of Lethbridge*  
 Lethbridge College  
 Mothers Against Drunk Driving  
 London Road Community Association  
 Victoria Park Community Association  
 Westminster Community Association  
 Senator Buchanan Community Association  
 Downtown Business Revitalization Zone  
*Chamber of Commerce*  
*Lethbridge Driving Academy Ltd.*  
 Gateway Safety Services Ltd.  
 Alberta Motor Transport Association  
 Black Diamond Taxi Ltd.  
 A Plus Taxi  
 Safety City (Exhibition Park)  
 Headwinds Cycling Group  
*Bike Bridge*  
 Piikani Nation  
*Siksika Nation*  
 Metis Local  
 Blood Tribe  
 Blackfoot Family Lodge Society (Native Women's  
 Transition Home Society)  
*Lethbridge School Division #51*  
 Holy Spirit Catholic Schools Division #4  
*Inclusion Lethbridge*  
*Lethbridge Senior Citizens Organization*  
 CNIB Lethbridge  
 Vista Radio  
 Lethbridge Herald  
 Global News



Organizations in *italics* attended the organized workshops. Other stakeholders participated in the online survey.



# Focus Areas

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Focus areas for the Transportation Safety Plan were identified from:

- Data – including trends in serious injuries and fatalities
- Community Engagement (Both Stakeholders and the Public)
- Best Practices (within Lethbridge and from other cities)
- Alignment with Vision, Mission and Guiding Principles



## DISTRACTION

Whether in the act of driving or using other modes of transportation, distraction has played a role in an increasing number of transportation-related deaths and serious injuries.

## SPEED & AGGRESSIVE DRIVING

Travelling at higher speeds increase the probability of death or serious injury. Aggressive driving can also result in a wide range of severe collisions, and breeds an unfavourable public safety culture.



## INTERSECTIONS

Serious injuries frequently occur at intersections, often as the result of side-impact or head-on collisions, and are the site where all modes of transportation come into conflict.

## SAFE VEHICLES

Public transit is the safest mode of transportation, and its underutilization represents a missed opportunity for increasing safety in the system. Connected and autonomous vehicles have tremendous potential to minimize the risk of severe collisions.



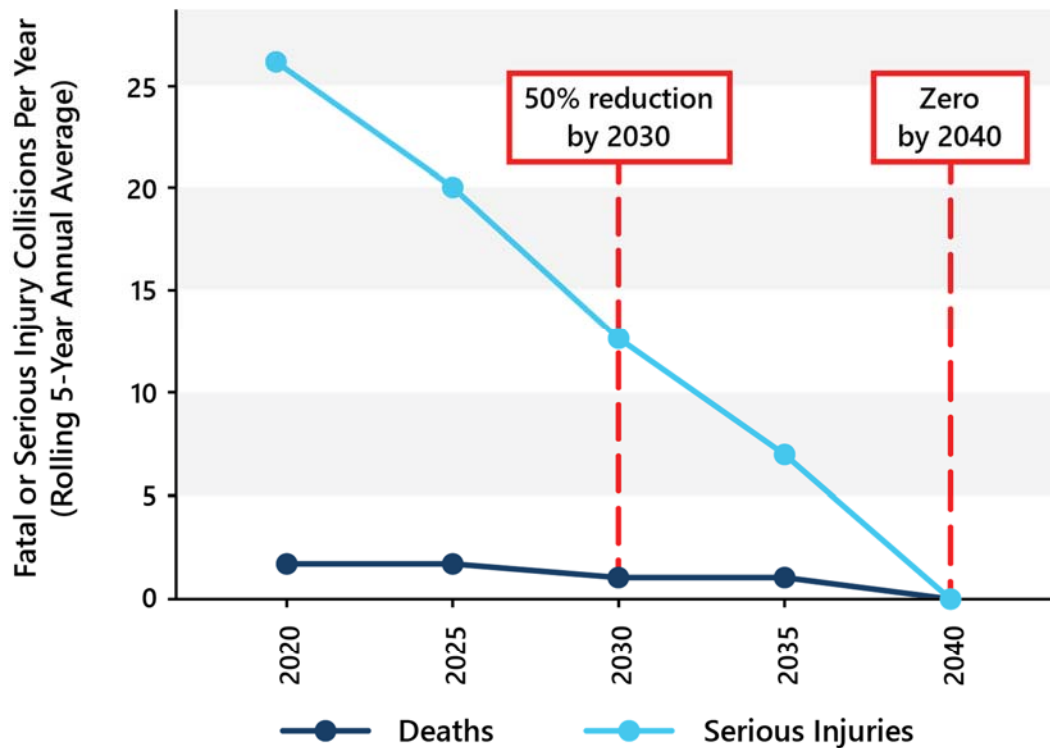
## VULNERABLE ROAD USERS (VRU)

Road users such as children, the elderly, those who use mobility devices, and the disabled are more vulnerable to injury and death.



## Interim Targets

As we move towards ZERO transportation-related deaths and serious injuries in Lethbridge, we will regularly be measuring our progress along the way. Interim targets are shown below. This includes a 50% reduction by 2030, which is consistent with the United Nations General Assembly's newly adopted target for the global community.



	2020	2025	2030	2035	2040
Deaths	2.2	1.65	1.1	0.55	0
Serious Injuries	26.2	19.65	13.1	6.55	0
Total	28.4	21.3	14.2	7.1	0

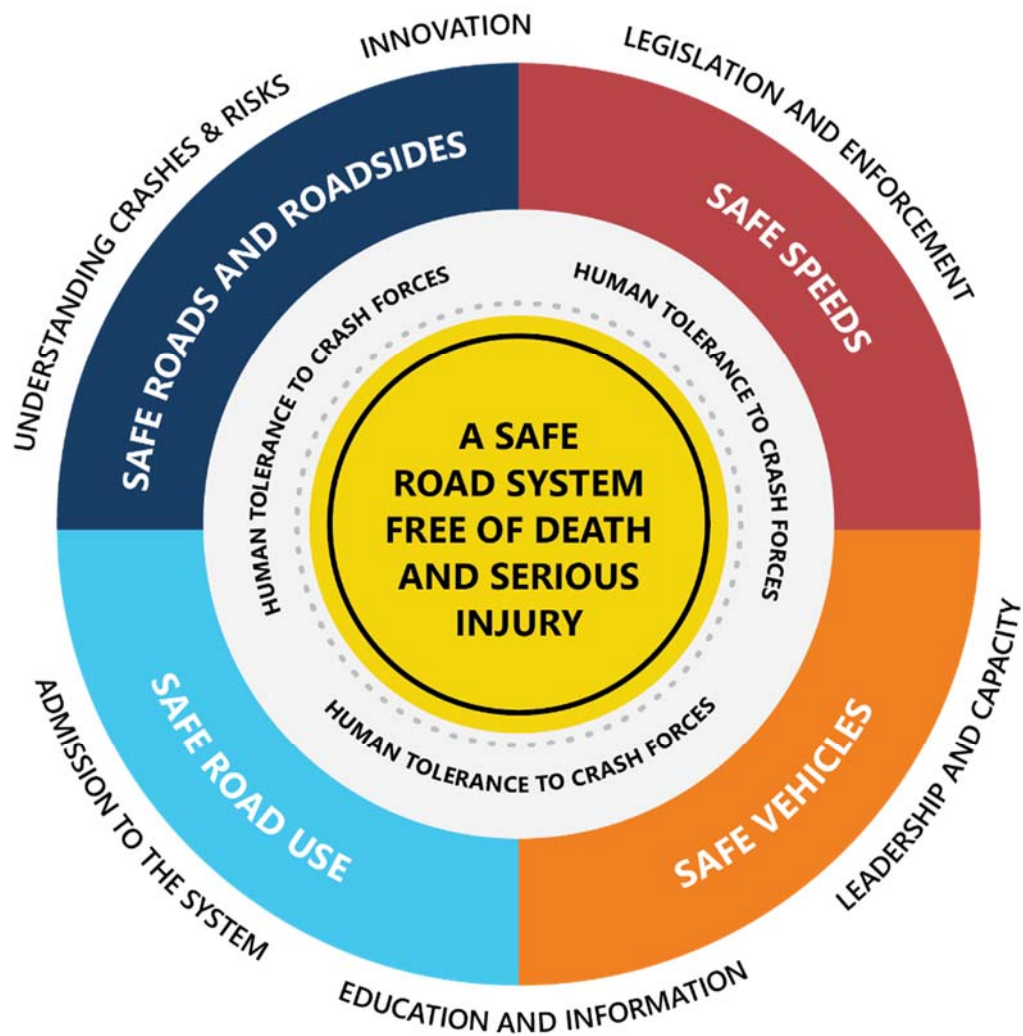
*Note: 2020 baseline values are based on 2012-2016 collision data*





# Strategies and Actions

The Transportation Safety Plan contains 30 strategies and 64 supporting actions covering the 5 Focus Areas, as well as several Transportation Safety Management Strategies to create the systems and processes that can have an overall impact on transportation safety in Lethbridge.



# Focus Area 1: Distraction

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Distraction is an increasing contributor to crashes. Distraction happens when drivers look away from, or take their mind away from, the road. This often happens when they engage in other tasks such as eating, grooming, turning to/speaking with passengers, looking at or playing with car features, listening to loud music, or expressing road rage. The fastest growing source of distraction is electronic mobile devices: talking, listening, browsing and texting. Current legislation bans distracted driving. Strategies and projects to curb distraction are intended to:

- Educate road users of the risks of distraction
- Disable mobile devices while in motion
- Give enforcement officers the tools they need to identify distraction
- Purchase vehicles that contain collision avoidance systems

STRATEGY	SUPPORTING ACTIONS
<b>1.1 Institutional Policies</b>	(1) Establish and implement progressive institutional policies (2) Encourage progressive policies among other large employers
<b>1.2 Youth Engagement</b>	(1) Develop speakers program (2) Investigate virtual reality programs
<b>1.3 Personal Commitment</b>	(1) Promote family driving contracts (2) Encourage individual and community pledges





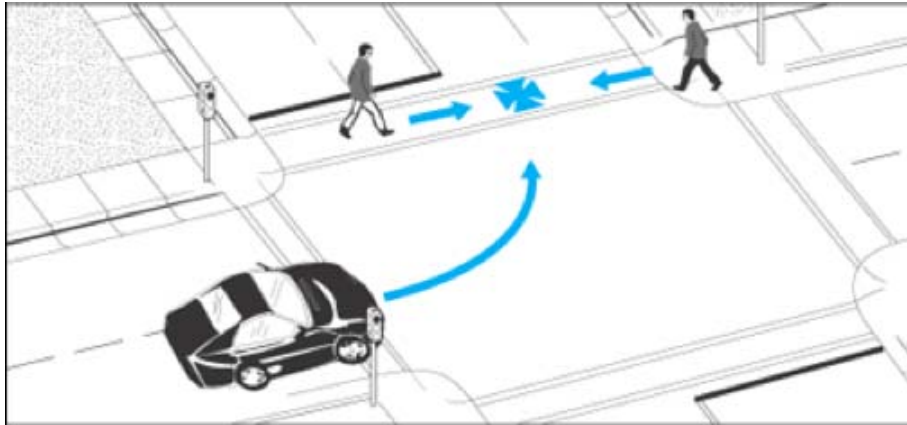
## Focus Area 2: Speed & Aggressive Driving

Speed is both a primary and secondary cause of collisions. When combined with high speeds, collisions (such as rear-ends or red light running) can result in a much higher severity. Drivers typically select speeds based on the road design, land use and roadway features, more so than posted speed limits. Strategies and projects for reducing speeds aim to:

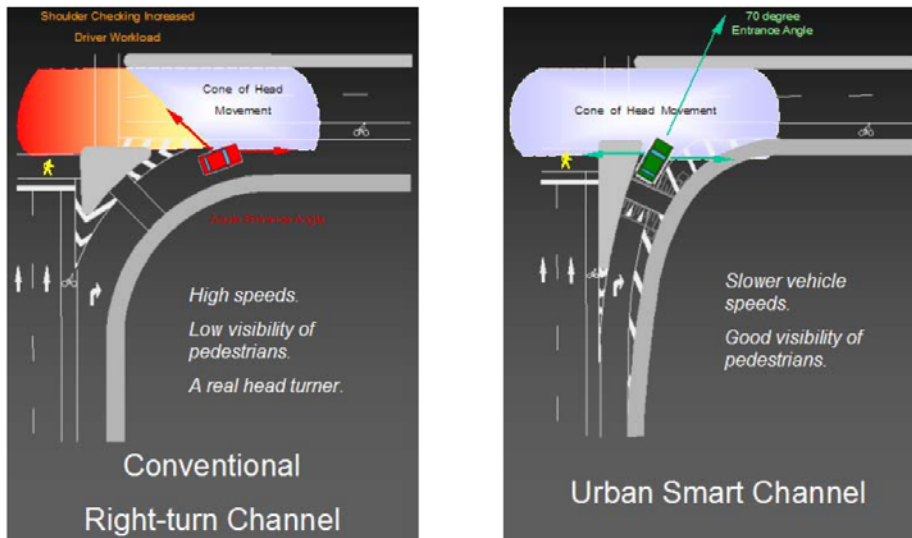
- Educate the public about the risks of speeding.
- Provide speed limits consistent with the road design.
- Provide road designs to achieve a target speed.
- Encourage lower speeds in urbanized areas, where access locations are more frequent and the vulnerable road users (VRU) are more prominent.
- Ensure there is a perceived risk of being caught if speeds are non-compliant.

STRATEGY	SUPPORTING ACTIONS
<b>2.1 Road Design and Speed Limits</b>	<ul style="list-style-type: none"> <li>(1) Implement narrowed vehicle lanes</li> <li>(2) Pilot safe system speed limits</li> <li>(3) Expand the use of median barriers</li> </ul>
<b>2.2 Variable Speed Limits</b>	<ul style="list-style-type: none"> <li>(1) Optimize Whoop-up Drive variable speed limit (VSL)</li> <li>(2) Review other locations and configurations</li> </ul>
<b>2.3 Aggressive Driving Education</b>	<ul style="list-style-type: none"> <li>(1) Promote courses on aggressive driving</li> </ul>
<b>2.4 Average Speed Cameras</b>	<ul style="list-style-type: none"> <li>(1) Pilot average (“point-to-point”) speed cameras</li> </ul>
<b>2.5 Speed Display Devices</b>	<ul style="list-style-type: none"> <li>(1) Enhance and expand speed display device program</li> </ul>
<b>2.6 Reduced Speed Zones</b>	<ul style="list-style-type: none"> <li>(1) Pilot residential speed limits</li> <li>(2) Implement downtown speed zone</li> <li>(3) Harmonize school and playground zones</li> </ul>





*Leading Pedestrian Interval (Source: www.pedbikesafe.org)*



*Smart Right Turn Channel (Source: City of Surrey, BC)*



## Focus Area 3: Intersections

Intersections are the locations in a road network where two roads meet, where vehicles are turning, and where many of the pedestrian and cyclist crossings are located. This connectivity is vital to the road network but requires that road users approach the same points in time and space, creating situations where they come into conflict with one another. Signalized, partially signalized, stop controlled, yield controlled, and uncontrolled intersections all share this characteristic. Safety strategies and projects at intersections seek to:

- Provide all road users enough space
- Provide safe and protected movements
- Increase compliance with the traffic control
- Reduce vehicle speeds

STRATEGY	SUPPORTING ACTIONS
<b>3.1 Safety-oriented Traffic Control</b>	(1) Develop guidelines for protected-only left turns at traffic signals (2) Update guidelines for all-way stops (3) Update guidelines for pedestrian crosswalks
<b>3.2 Traffic Signal Visibility</b>	(1) Upgrade primary (overhead) signal displays (2) Upgrade secondary (side-mounted) signal displays
<b>3.3 Roundabouts</b>	(1) Develop implementation policy and guidelines (2) Optimize designs (3) Build more roundabouts
<b>3.4 Leading Pedestrian Intervals (LPI)<sup>1</sup></b>	(1) Implement at additional locations
<b>3.5 Smart Right-Turn Channels<sup>2</sup></b>	(1) Develop application guidelines (2) Replace existing high-speed right-turns

<sup>1</sup>Pedestrians cross prior to vehicles turning (see illustration on facing page)

<sup>2</sup>Reduces right turn speeds and improves visibility (see illustration on facing page)





## Focus Area 4: Vulnerable Road Users

Vulnerable road users (VRUs) are defined as pedestrians, cyclists, motorcyclists, the visually or hearing impaired, the cognitively challenged and users of mobility aids. Collisions involving VRUs typically result in injury; and when impacted by higher speeds, vulnerable road users have a relatively low chance of survival.

Strategies and projects to aid vulnerable road users aim to:

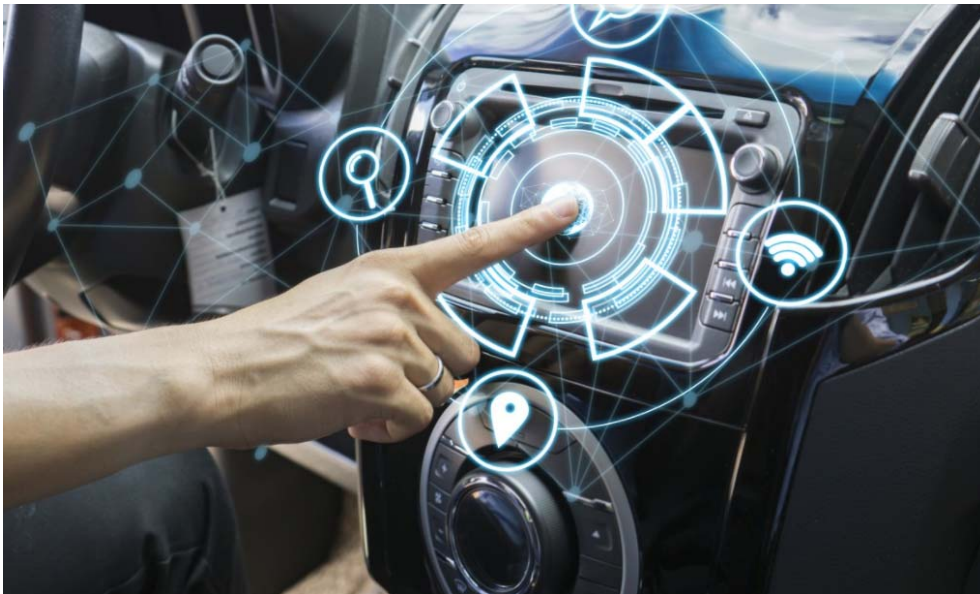
- Provide safer spaces and street crossings
- Provide greater warning in advance of conflict points
- Provide full accessibility features
- Educate all users to share common road space

STRATEGY	SUPPORTING ACTIONS
<b>4.1 Younger Users</b>	(1) Implement safe routes to school (2) Revive safety city program
<b>4.2 Pedestrians</b>	(1) Install more rectangular rapid flashing beacons (2) Distribute reflective wearables
<b>4.3 Bicycles</b>	(1) Explore additional bike boulevard projects (2) Protected bike lanes on high-collision corridors
<b>4.4 Motorcycles</b>	(1) Encourage more widespread and proper use of approved helmets
<b>4.5 E-bikes and E-Scooters</b>	(1) Adopt legislation and regulation (2) Upgrade infrastructure
<b>4.6 Elderly Users</b>	(1) Assist with route planning (2) Review pedestrian facilities near seniors' homes (3) Install larger street name signs
<b>4.7 Users with Disabilities</b>	(1) Adopt accessibility/mobility guidelines
<b>4.8 Adaptive Roadways<sup>3</sup></b>	(1) Re-purpose select roadways (2) Review design guidelines and standards

<sup>3</sup>Roads that can be adapted to provide more space for active modes







## Focus Area 5: Safe Vehicles

Safe Vehicles is recognized as one of the key components of the Safe System. However, its influence is sometimes underestimated, and several factors related to safe vehicles are beyond the control of local authorities.

Although most vehicles manufactured and distributed in Canada are crashworthy and come standard with a range of safety features, there are still elements that can be addressed. Transportation delivery models continue to diversify, due to the emergence of car-sharing and ride-hailing programs, electric vehicles, and the transition towards the adoption of fully autonomous vehicles.

Safer vehicles can provide safety in the system independently of the human element and the road infrastructure. Strategies and actions for safer vehicles aim to:

- Provide public information on the relative safety of travel options
- Review the vehicle fleet
- Shift our planning to include preparation for autonomous and connected vehicles.

Numerous studies of the relative safety of travel modes (usually expressed as the number of injuries or deaths per unit of trips) consistently place public transit as the safest mode of transportation and motorcycles and scooters as the least safe.

STRATEGY	SUPPORTING ACTIONS
<b>5.1 Increase Public Transit Mode Share</b>	(1) Improve Transit Service (2) Consider Municipal Incentives / Disincentives (3) Add Safety to Transit Marketing
<b>5.2 Vehicle Safety Features</b>	(1) Educate the public about vehicle safety features (2) Review City and company vehicle fleets
<b>5.3 Connected and Autonomous Vehicles</b>	(1) Consult with Working Groups (2) Assess Preparedness (3) Participate in Pilot Projects



# Transportation Safety Management

Transportation Safety Management encompasses the foundational items of an effective transportation safety program. This includes programs, tools and processes that are critical for managing the safety performance of a municipal transportation system. Enhancing these items are expected to ease the implementation and evaluation of all strategies and actions, and to reduce serious injuries and fatalities across the five focus areas.

STRATEGY	SUPPORTING ACTIONS
<b>A. Data Collection and Management</b>	<ul style="list-style-type: none"> <li>(1) Link Police and health data</li> <li>(2) Work with Province to address other collision data issues</li> <li>(3) Observational study of road user behaviours</li> </ul>
<b>B. Safety Management System</b>	<ul style="list-style-type: none"> <li>(1) Enhance network screening program</li> <li>(2) Formalize road safety audit program</li> <li>(3) Conduct corridor in-service safety reviews</li> </ul>
<b>C. City Planning and Development</b>	<ul style="list-style-type: none"> <li>(1) Consider safety in land use and transportation planning</li> <li>(2) Consider safety in development applications</li> <li>(3) Adopt and implement Complete Streets</li> </ul>
<b>D. Communication and Public Awareness</b>	<ul style="list-style-type: none"> <li>(1) Expand public education on website and social media platforms</li> <li>(2) Conduct bumper sticker campaign</li> <li>(3) Conduct campaign to reward compliant behaviour</li> </ul>
<b>E. Transportation Safety Culture</b>	<ul style="list-style-type: none"> <li>(1) Undertake culture surveys</li> </ul>



# Implementation

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The City will work across departments and with its partners to implement the strategies and actions identified in the Transportation Safety Plan. This includes providing more staff time and seeking additional funding opportunities, as well as regularly monitoring the success of the actions and communicating to the public progress towards the target of zero deaths and serious injuries by 2040.

Some of the focus area actions recommended for early implementation due to their anticipated benefits include:

- Safe system speed limits
- Protected-only left-turn phases
- Roundabouts
- Leading pedestrian intervals
- Smart right-turn channels
- Bike boulevards and bike lanes
- Mode shift to public transit

Some of the transportation management strategies recommended for early implementation due to the anticipated benefits include:

- Coordination with the Province to address collision data issues
- Observational study of road user behaviours
- Corridor in-service road safety reviews
- Road safety audits
- Consideration of safety in transportation planning

Continued support from all partners and the public will enable us to make progress towards the zero target. Individually and collectively shifting our thinking and placing a higher value on safety than on speed will help us to reach this goal sooner than later, so that all Lethbridge residents and workers can reach their destination safely.



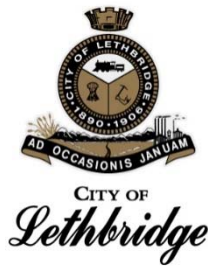
# Resources and Contacts

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To learn more about the Transportation Safety Plan and the City's implementation progress and monitoring, please visit <https://www.lethbridge.ca/living-here/Projects-Initiatives/Current-Projects/Pages/Transportation-Safety-Plan.aspx>

If you have an input at any time, please contact 311.

## Transportation Safety Plan



*A community on the move towards zero transportation-related deaths and serious injuries*