



...Mobility free of major injuries and fatalities

Calgary Safer Mobility Plan – Annual Briefing 2022

Introduction

The Decade of Action for Road Safety 2021-2030 has recently been proclaimed by UN General Assembly with a target to reduce road traffic deaths and injuries by 50% by 2030, recognizing the gravity of this global issue. The cornerstone of the Decade of Action for Road Safety is the Global Plan, which aims to inspire and guide national and local government, as well other stakeholders who can influence road safety. It advocates for the Safe System Approach and changes based on best practices and research.

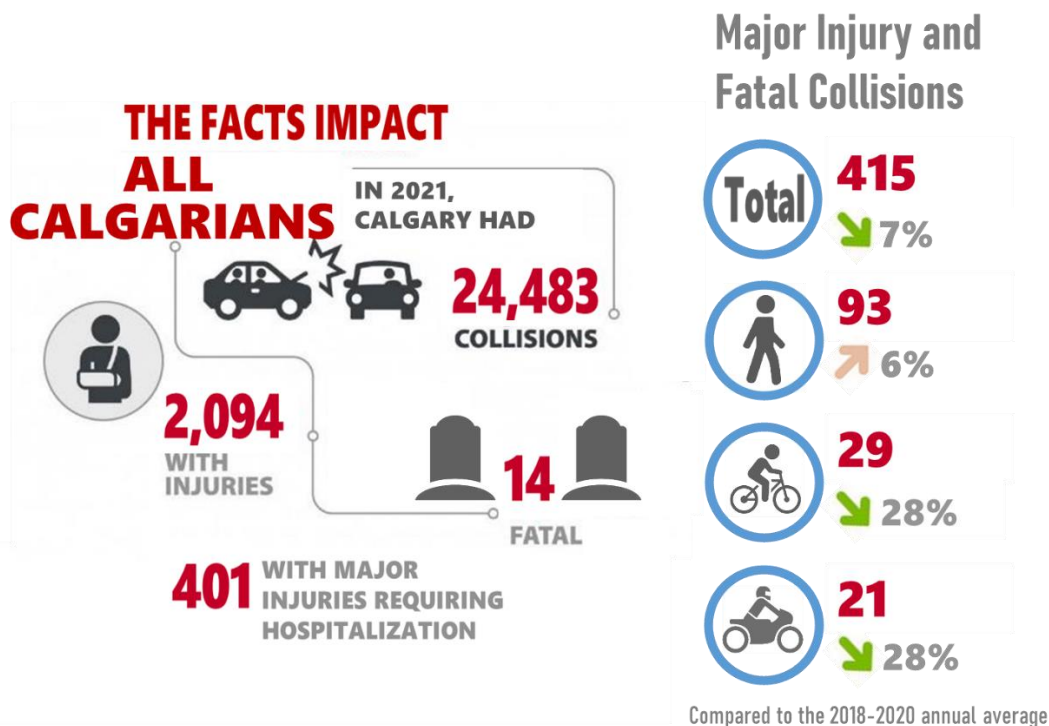
In Calgary we are working towards the same goal. Our 2019-2023 Safer Mobility Plan (SMP) outlines the long-term **vision of mobility free of major injuries and fatalities** with the short-term target of **25% reduction by 2023**. Reaching this target is dependent on many factors that influence the outcome and we are continuing to work towards reducing harm on our roadways through data driven and evidence-based approaches, and increasing collaboration across disciplines and community-based programs. We are seeing improved safety outcomes for Calgarians with 138 fewer incidents per year resulting in life changing or ending injuries now, compared to five years ago. Nevertheless, the decreased travel and exposure during the pandemic likely contributed to this decrease, and more deliberate action is needed to maintain these levels.

Collision Statistics

Calgary Safer Mobility Plan Indicator Statistics 2021

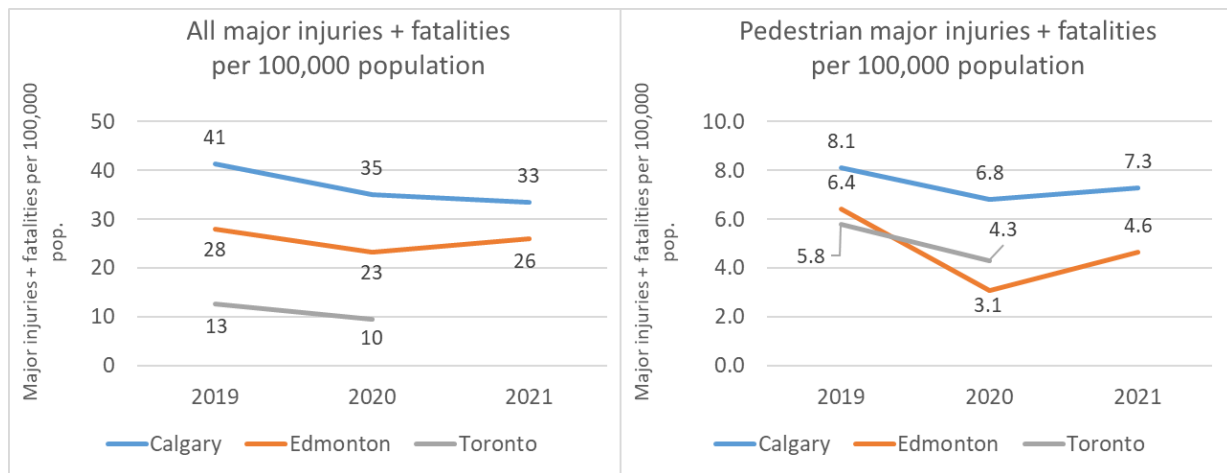
	2020	2021	% Change (Year over Year)	2018-2020 Average	2021	% Change (3-year Average)
Fatal Collisions	24	14	-42	20	14	-30
Major Injury Collisions	424	401	-5	471	401	-15
Pedestrian Involved Fatality+Major Injury Collisions	88	93	6	105	93	-11
Bicyclist Involved Fatality+Major Injury Collisions	40	29	-28	34	29	-15
Motorcyclist Involved Fatality+Major Injury Collisions	29	21	-28	27	21	-22

In 2021, there were 14 fatal collisions (24 in 2020), 2,094 injury collisions (1,697 in 2020) and 24,483 property damage only collisions (19,822 in 2020) on Calgary roads. The 2021 societal cost of these collisions was estimated to be \$956 million. Pedestrians were involved in 8 fatal collisions (4 in 2020), and 85 major injury collisions (84 in 2020), while cyclists were involved in 29 major injury collisions (38 in 2020), with no fatal cyclist collisions (2 in 2020).



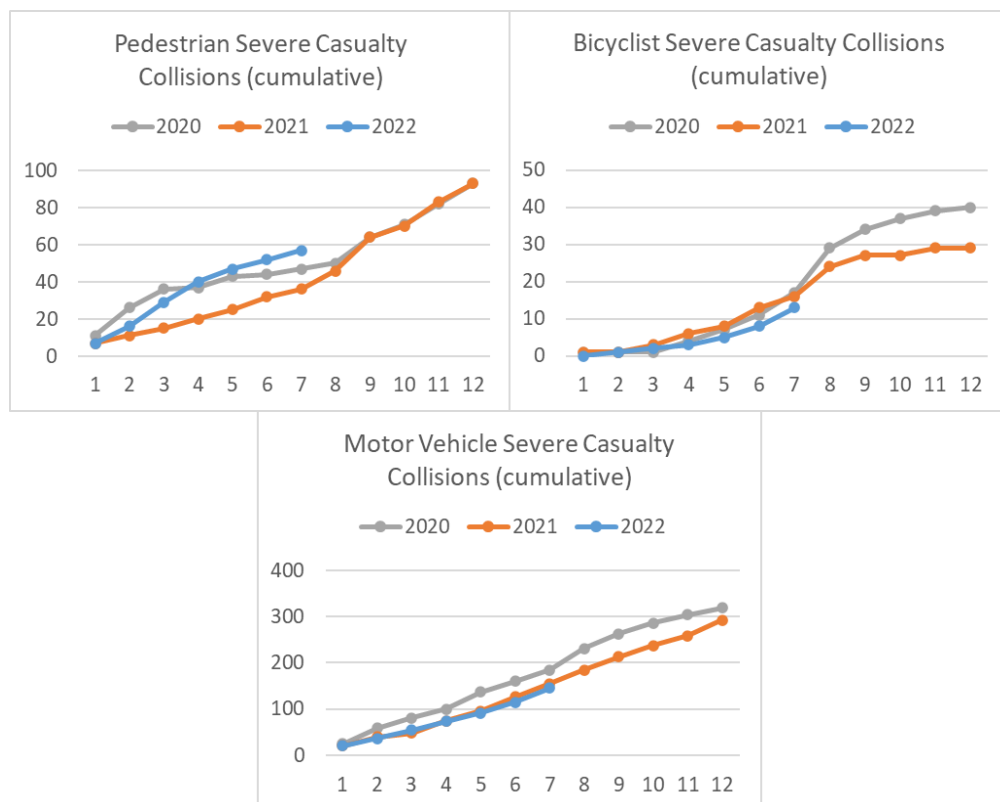
For comparison purposes, selected cities are shown in the table below, using the most recently available comparable data. While Calgary is continuing to improve its performance year over year, further action is needed to close the gap to other major Canadian cities.

Summary of Traffic Injuries and Fatalities for Various Canadian Cities



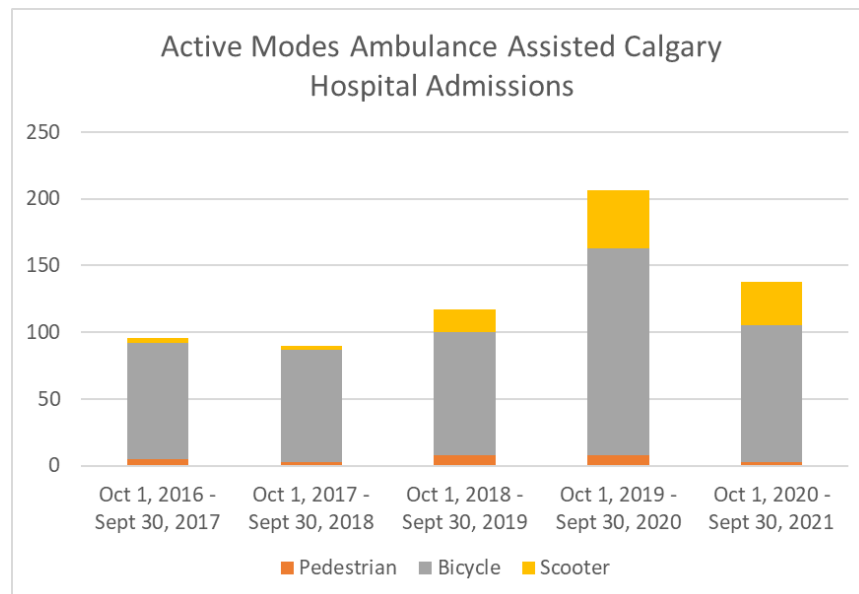
Based on preliminary data for the current year (2022), casualty collisions are generally trending similarly to 2021 for motor vehicle and bicyclist categories, however, the pedestrian category is trending above previous years. This may be related to decreased travel demand during the pandemic that is now increasing.

Cumulative Casualty Collisions (Fatal and Major Injury), Jan 2020 to Jul 2022



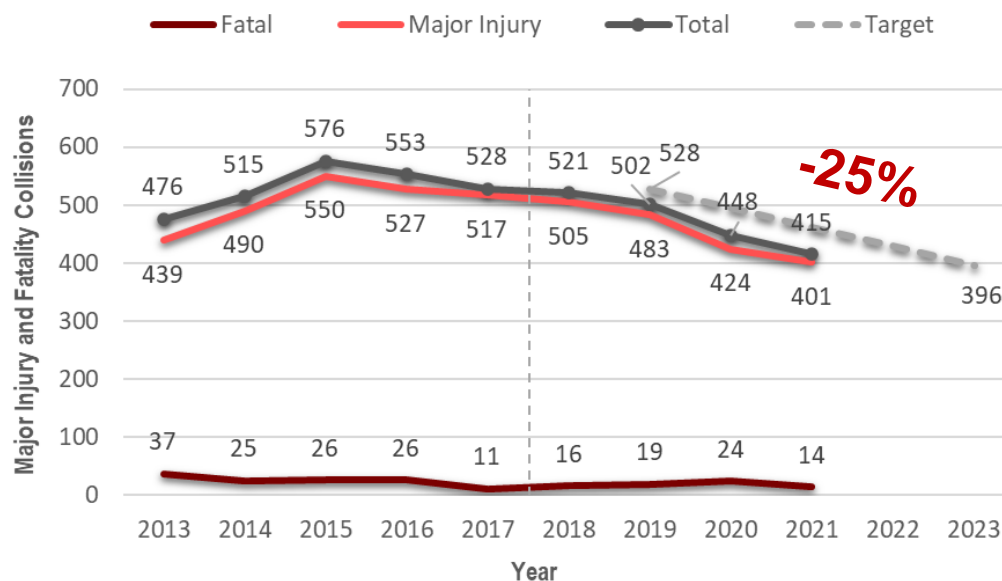
As police reported collisions only include incidents involving motor vehicles, it provides little insight into collisions between two active modes or single bicycle/scooter incidents. Another indicator of safety is Alberta Health Services (AHS) data for pedestrians, bicycle and scooter incidents that resulted in ambulance assisted hospital admissions shown below. The hospital admission data shows that until the start of the pandemic the annual admissions were approximately 100 per year, made up of mostly bicycle incidents. In 2020 the incidents doubled before decreasing in 2021. With the increased use of scooters, related injuries have also increased in the last two years.

Summary of Alberta Health Services Hospital Admissions (Oct 2016-Sept 2021)



Focus Area Targets

Target #1: Major Injury and Fatality Collision Target



Target: 25% reduction in major injury and fatality collisions

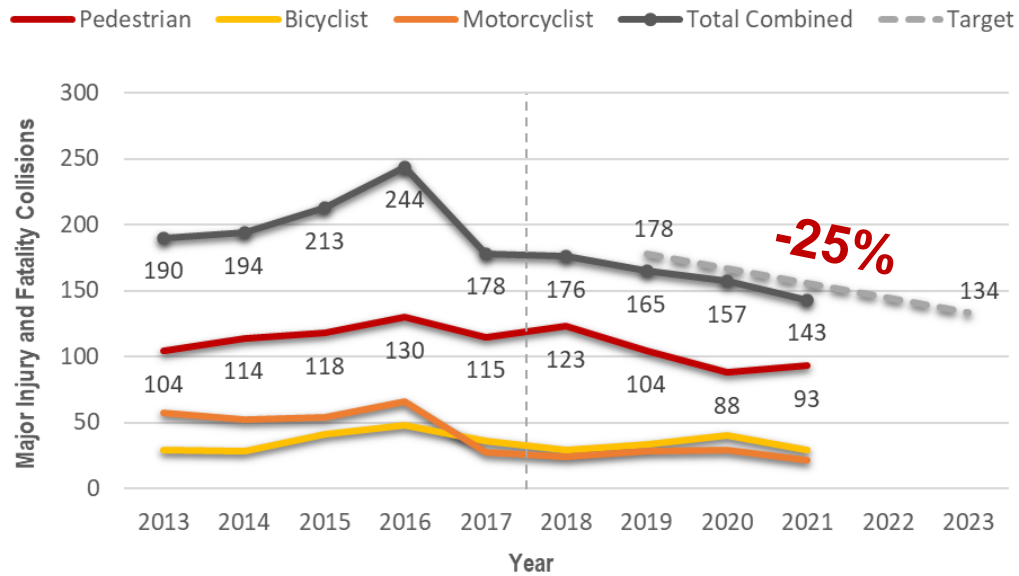
Baseline: 528 major injury and fatality collisions (2017)

Progress summary: In 2021, we had 10 fewer fatal collisions compared to the previous year. Major injury collisions continued the downward trend initiated in 2015. Overall, major injury and fatal collisions combined decreased by 7.4% compared to the previous year and by 28% since the peak in 2015. This briefing presents 2021 collision statistics and progress towards the targets for actions taken prior to 2021.

Key Actions:

- Undertake a fatal collision review (10 years of data) to investigate causal factors from a safe system perspective (in progress)
- Implementation of network improvements focused on reducing most severe collisions
- Speed-related engagement, education, and speed reductions, where appropriate
- Calgary Police Service (CPS) targeted enforcement activities

Target #2: Vulnerable Road User Collision Target



Target: 25% reduction in major injury and fatality collisions

Baseline: 178 major injury and fatality collisions (2017)

Progress summary: Major injury and fatality collisions involving vulnerable road users decreased by 8.9% in 2021 compared to 2020. This is mainly driven by a decrease in bicyclist and motorcyclist collisions, with slight increases among pedestrian collisions.

Key Actions:

- Implement collision reduction measures based on network screening, video-based conflict analysis
- Downtown bicyclist collision review (in progress)
- Continued application of Traffic Calming Curbs to address collision issues
- Engagement and awareness activities related to speed
- CPS targeted enforcement activities



2022 Accomplishments and Planned Actions for 2023

2022 was a busy year with significant achievements by many groups throughout the organization. Highlighted below is a selection of actions that have been undertaken in 2022. Some of these have been completed while others are ongoing.

- **Downtown Pedestrian Zone Speed Reductions.** Speeds have been reduced 40 km/h along several downtown pedestrian zones to aid with seasonal patio implementation, but data has shown that the new posted speed is more closely aligned with the speeds most drivers are already traveling, making it safer for everyone especially the large numbers of people walking and cycling.
- **Joint Mobility Safety Forum.** Initiated new partnership between CPS and City of Calgary focused on working together towards the Vision Zero goal by expanding collaboration opportunities and working relationship between CPS and City of Calgary Transportation, and other partners, aimed at creating a safer city for all Calgarians.



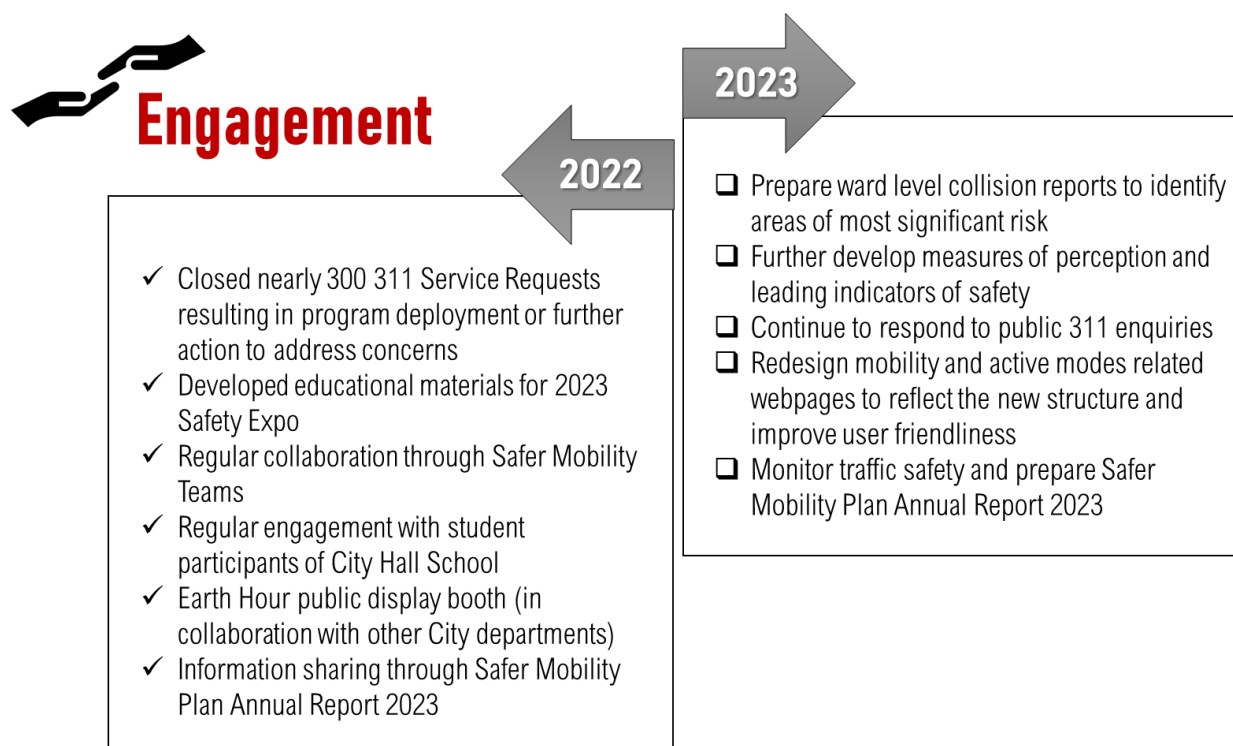
- **Traffic Tuesday.** Every Tuesday humorous or topical traffic safety messages are posted on Electronic Message Boards or Dynamic Message Signs throughout the city. These humorous and light-hearted messages aim to inspire a positive mindset while moving around the city and engage meaningful discussions on social media platforms.

- **Safer mobility and equity.** We are having important conversations to ensure that our journey towards Vision Zero is rooted in equity. The implementation of many accessibility improvements such as missing sidewalk segments and wheelchair ramps, accessible pedestrian signals, and navigational tools will improve the experience for everyone including people with mobility challenges and vision loss.
- **Ward Mobility Safety Summary.** The development of a summary for each Ward outlining the most severe collision trends and hot spots to facilitate discussion on priorities towards Vision Zero and collaborate on implementation of targeted improvements.
- **Safe Collector Framework.** Collector roadways often see frequent interaction between vehicle and pedestrian traffic accessing schools, transit, and other community amenities. A staged city-wide retrofit of collector roads will be systematic, data-driven approach to address longstanding issues and community concerns.
- **Alignment of Service Metrics with SMP Targets.** We have taken steps to update the Streets and Sidewalks and Pathways service outcomes/service metrics with the SMP targets that are focused on the most severe collision reduction, as no Calgarian should be hurt or seriously injured on our network and this is everyone's responsibility.

The 2022 achievements and planned actions for 2023 are identified for each area of focus. With more work to do, our focus in 2023 will be on implementing proven safety countermeasures, collaborating with our partners, and identifying new programs to create systemic change and gain momentum towards Vision Zero. Some new initiatives and upcoming actions include:

Engagement

The management of the SMP is primarily done through the collaborative teams of the SMP. One of the main actions is to report on the progress of the plan annually and to re-assess the SMP at the end of the 2019-2023 period, once data is available.



Engineering

In 2021 we were able to make progress on a number of important projects that alter the road environment to reduce collisions. Projects with highest collision reduction potential particularly among more severe collisions were prioritized, including roadway geometry improvements, high entry angle right turns (smart rights), and pedestrian safety improvements. Below are some highlights.



Engineering

2022

Studies to support evidence-based approach:

- ✓ Macleod Trail South In-Service Road Safety Review
- ✓ Follow-up video-based conflict analysis at top severe injury locations to evaluate changes implemented (in progress)
- ✓ Collision Reviews, Safety Assessments, and checks

Pedestrian crosswalk improvements:

- ✓ 30 new traffic signals
- ✓ 15 Rectangular Rapid Flashing Beacons (RRFBs)
- ✓ 5 overhead flashers
- ✓ 71 marked/signed crosswalks and 14 Advanced Yield Lines
- ✓ 250 temporary curbs
- ✓ Street lighting improvements

Targeted, cost-effective geometric safety improvements (Safety Improvements Capital Program) for example:

- ✓ 16 Avenue & Shaganappi Trail NW
- ✓ 16 Avenue & Bowness Road NW
- ✓ Metis Trail & 80 Avenue NE
- ✓ Memorial Drive & 36 Street NE
- ✓ Barlow Trail & 39 Avenue NE
- ✓ Blackfoot Trail & Heritage Drive SE
- ✓ Heritage Meadows Way & 11 Street SE

Implementation of roadside improvements including median barriers and bridge pier protection:

- ✓ 16 Avenue west of Home Road NW
- ✓ John Laurie Blvd NW

Signal phasing/timing improvements:

- ✓ Protected Only left turns
- ✓ Leading Pedestrian Intervals and Split Phases

- ✓ Ongoing traffic safety support and coordination of programs.

2023

- ❑ City-wide prioritization of locations for countermeasures including Advanced Warning Flashers and high friction surface treatment.
- ❑ Identify high severity injury corridors and improvement options.
- ❑ Continued implementation of geometric improvements with potential projects at:
 - Deerfoot Trail & Memorial Drive NE
 - Macleod Trail and Lake Fraser Gate
 - 14 Street NW pedestrian safety improvements
- ❑ Traffic signal improvements with focus on vulnerable road users.
- ❑ Continued implementation of the Active and Safe Routes to School Program
- ❑ Safer Collector Framework
- ❑ Develop In-Road Pedestrian Signs Program

Education

Public education and communication is needed to raise awareness of road safety issues and promote safe behaviours, with the goal of reducing frequency and severity of collisions.



Education

2022

- ✓ Developed Mobility Education Framework to guide delivery of education initiatives
- ✓ Public education campaigns including Spring Safety and Back to School
- ✓ Created 5A Network Training for city staff (eLearning module)
- ✓ Residential Speed Limit Reduction – incorporated educational components into Calgary.ca/trafficsafety webpage
- ✓ Residential Sandwich Board program
- ✓ 185 SLOWS speed trailer deployments
- ✓ Ongoing support for “Report Impaired Driving” signage.

2023

- Increase safer mobility outreach in schools through resources for parents and teachers and strengthening partnerships with school communities
- Update the Traffic Safety Tips booklet and make it more user friendly
- Developing strategies and tactics for increasing staff awareness of new and relevant content (e.g. eLearning material on new policies or design guidelines, fact sheets for pilot results, etc.)
- Identifying and categorizing strategic, emerging, and ongoing educational needs.

Enforcement

We continue to work closely with Calgary Police Service as a key partner to achieve our traffic safety targets.



Enforcement

2022

- ✓ Calgary Police Service deployment of high-visibility targeted enforcement
- ✓ Participation in CPS Collision Reconstruction review meetings and sharing of collision data analysis
- ✓ Reintroduced Community Speed Watch program to support volunteers in increasing speed awareness in communities
- ✓ Safer Mobility Operations Team meetings to facilitate collaboration and coordination in the delivery of community improvements and initiatives
- ✓ Coordination of speed trailer deployment with speed enforcement

2023

- ❑ Emergency response coordination improvements between CPS and Traffic Management Centre (TMC) and information sharing
- ❑ Continued collaboration through Safer Mobility Operations Team and other forums to facilitate coordinated community response.

Evaluation and Innovation

Evaluation and innovation are key components of traffic safety and enable evidence-based assessment of the effectiveness of strategies and help in finding new solutions to longstanding problems.



Evaluation & Innovation

2022

- ✓ Trial of blank out signs on cycletracks (in progress)
- ✓ Pilot Centreline Hardening at signalized intersections (in progress)
- ✓ Pilot of Accessible Pedestrian Signals (APS) at Overhead Flashers
- ✓ Application of Video Analytics for proactive evaluation of pedestrian related safety countermeasures.
- ✓ Inclusion of Alberta Health Services ambulance/admissions data in SMP update
- ✓ Collision reduction evaluations to understand the impacts of countermeasures

2023

- ❑ Pilot of temporary tactile walking surface indicators (TWSIs) at 'smart right channelized right turns
- ❑ Regular meetings of the Safer Mobility Research Team
- ❑ Continue to evaluate speed impacts and collision reduction of mitigation measures and elements of the roadway environment to better understand their impact on safety (e.g. impact of curb lane Seasonal Patios on speed in high pedestrian activity zones)
- ❑ Exploring opportunities to collaborate with internal groups and external partners to broaden safety data and understanding of incidents and near misses for all modes of travel that are not reported to police, e.g. Calgary Transit near miss data, Fleet near miss data, etc.)