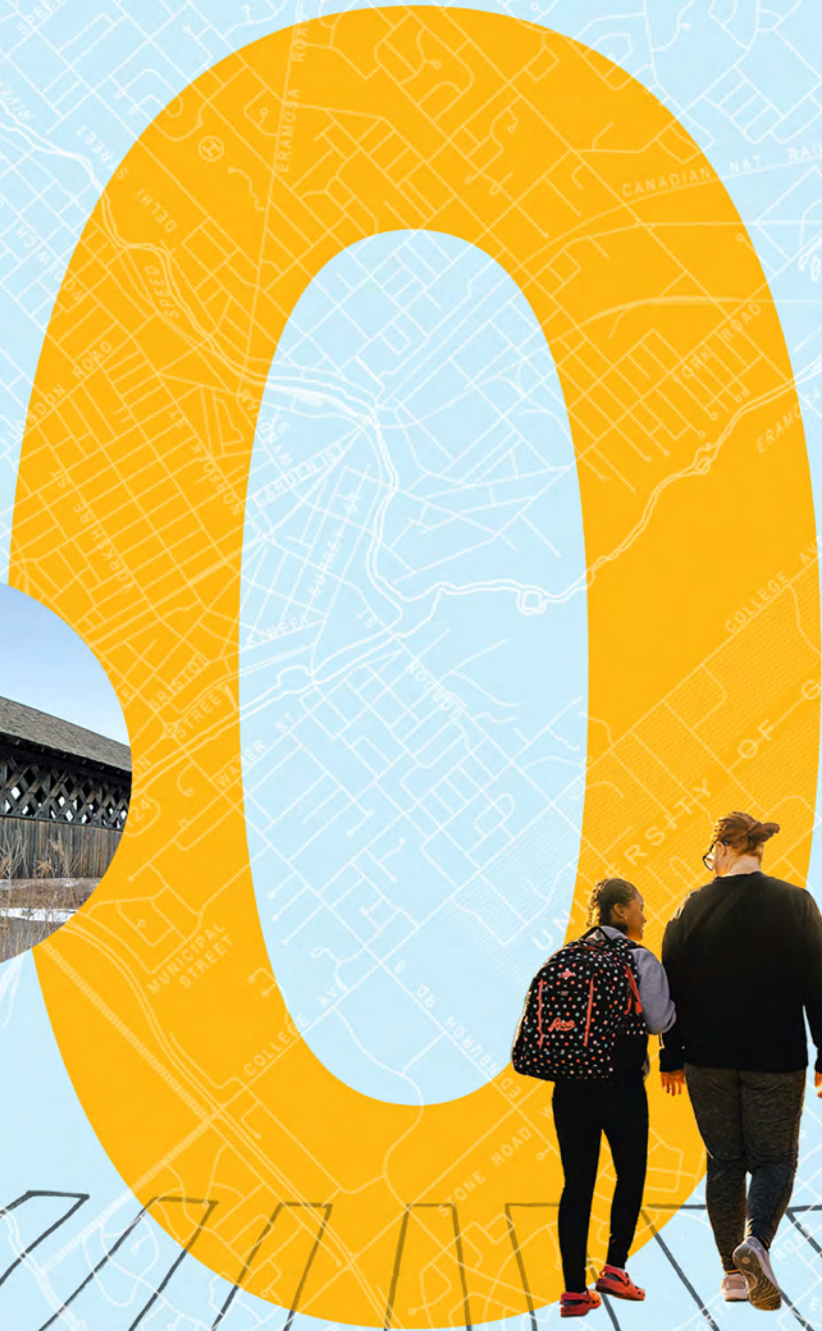


# Vision Zero Guelph

## Action Plan for Safe Streets



# Actions

**Vision Zero is Guelph's strategy to reduce the number of people killed and seriously injured on our roads to zero.**

Here is how we'll get there:

- 1 Plan better ways to grow.** Driving is risky. We will create more ways to get around and make it easier to access everyday needs close to home, reducing the risks that come with driving.
- 2 Identify risk.** We won't wait for a collision to happen before we act. We will proactively investigate, identify and address the risk of collision-related injuries and deaths before they occur.
- 3 Protect vulnerable people.** People who walk, bike, use mobility devices and ride motorcycles need protection. We will pinpoint where vulnerable road users are most at risk and install infrastructure that protects them from collisions with vehicles.
- 4 Design safe streets.** All road users need to be safe on our streets. We will apply new design standards to roads we add or change, especially at intersections, to address known safety issues.
- 5 Reduce speeds.** Speed predicts the survival rate of those impacted by a collision. We will prioritize actions that reduce vehicle speeds so that when collisions happen, fewer people will be seriously injured or killed.
- 6 Be data-driven.** Data guides all our decisions. We have captured new risk-based data sets and will actively pursue research partnerships to help analyze and interpret our data.
- 7 Work together.** Road safety is a shared responsibility. We will collaborate with our partners to amplify road safety measures and communicate needs and solutions at the local, provincial and national levels.
- 8 Learn together.** Changing our streets starts with changing our mindset. We will be transparent about why we are making changes and create opportunities for people to view roads as shared public spaces that belong to all of us.

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This document is **available in alternate formats** upon request to Engineering and Transportation Services:  
phone: 519-822-1260 extension 3414  
TTY: 519-826-9771  
email: [traffic@guelph.ca](mailto:traffic@guelph.ca)

Featuring the [High-Risk Network](#) on page 48

March 2025

Note: **Vision Zero** is *not* the **Race to Zero**, which is Guelph's strategy to become a net zero carbon community by 2050.



Woolwich Street and Macdonell Street

# INTRODUCTION



Guelph Museums - 1994, 15.1



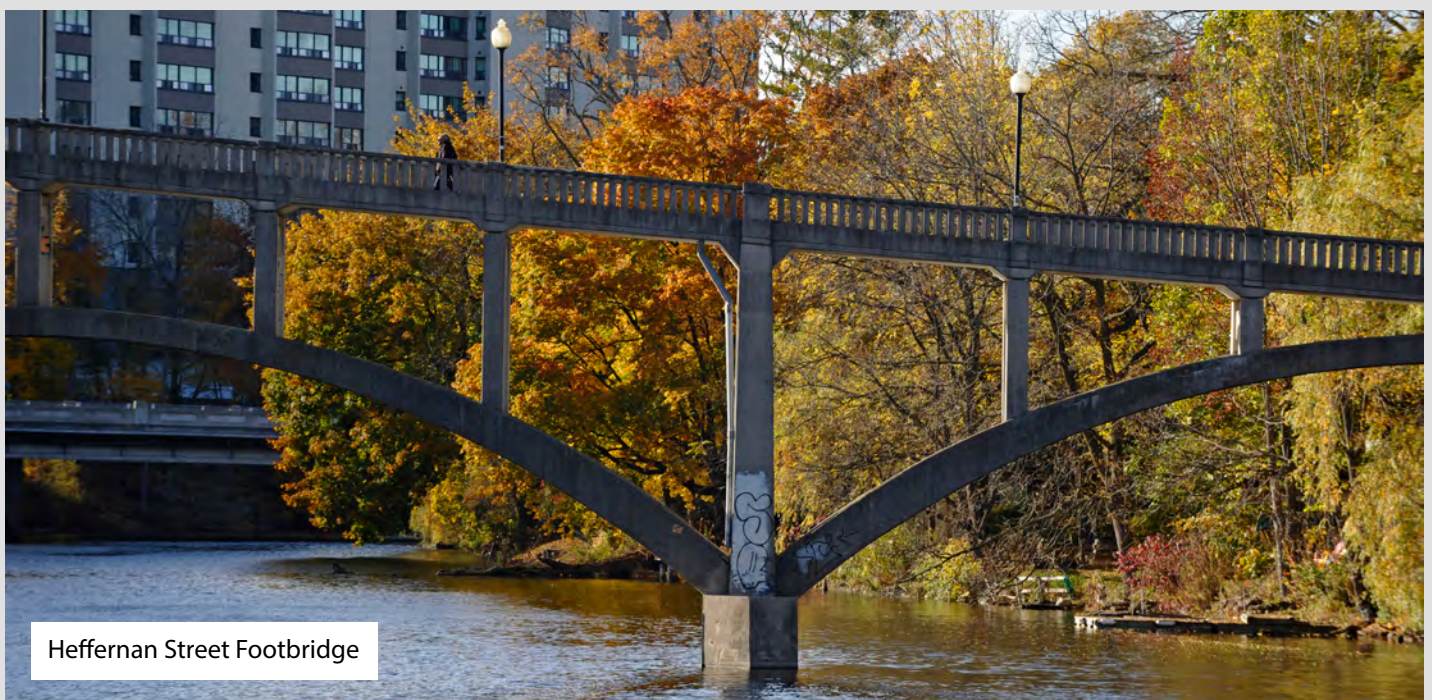
# Territorial acknowledgement

Let us take time to reflect on our privilege to live and work in Guelph; a city built over rich Indigenous histories. We are guests here, and we should reflect upon the responsibility to care for this land, the people who live here today and the generations to come. If our actions today can move us towards reconciliation, we should take pause and make those decisions with intention and gratitude.

This place we call Guelph has served as traditional lands and a place of refuge for many peoples over time, but more specifically the Attiwonderonk and the Haudenosaunee. This land is held as the treaty lands and territory with the Mississaugas of the Credit First Nation. Guelph lies directly adjacent to the Haldimand Tract and is part of a long-established traditional hunting ground for the Six Nations of the Grand River. Many First Nations, Inuit and Métis peoples who have come from across Turtle Island call Guelph home today.

## Our commitment to reconciliation

In the spirit of truth and reconciliation, it's important for territorial acknowledgements to be followed by action. In Canada, Indigenous Peoples are twice as likely to die or be seriously injured due to a vehicle collision than non-Indigenous people.<sup>1</sup> While Guelph's collision data does not account for Indigenous status, we must identify and address the extent to which Indigenous Peoples are disproportionately impacted by our transportation system. Integrating this factor into our Vision Zero actions is a step towards advancing reconciliation.



Heffernan Street Footbridge

# Messages from Guelph partners

## Wellington-Dufferin-Guelph Public Health

The built environment—the spaces where we live, work and play—is an essential component of the health of our region. This includes the transportation network that links these places together. Vision Zero recognizes the need to reduce injuries and fatalities on our roads by shifting our focus away from individual driver behaviour and toward the broader transportation environment. This approach incorporates the best available research to help design transportation networks that prioritize safety for all types of road users in Guelph.

The Vision Zero Action Plan prioritizes population-level interventions and focuses on building communities that are safe for residents of all ages and abilities. As a member of the City of Guelph's Vision Zero Steering Committee, Wellington-Dufferin-Guelph Public Health is pleased to support this plan and to continue our partnership to improve the health and well-being of Guelph residents through its implementation.

**Dr. Nicola Mercer**  
Medical Officer of Health and CEO  
Wellington-Dufferin-Guelph Public Health



## Guelph Police Service

Road safety is a key priority for the Guelph Police Service. We are committed to engaging in proactive safety initiatives to support the goals of Guelph's Vision Zero Action Plan to eliminate deaths and serious injuries on our roads. We believe that road safety is everyone's responsibility and can be achieved via a comprehensive traffic management strategy that involves many community partners. We look forward to working with our partners to support the City's Vision Zero Action Plan, striving together to enhance people's ability to move safely throughout the community.

**Gord Cobey**  
Chief of Police  
Guelph Police Service

## Ministry of Transportation – Public Outreach and Education Office

The Ministry of Transportation's Public Outreach and Education Office (POEO) is a proud partner of Vision Zero Guelph and this Action Plan for Safe Streets. Our work is guided by developing awareness initiatives using proven, evidence-based measures that address the leading causes of death, injury and collision on Ontario's roads. We develop and promote grassroots road safety initiatives through marketing, public education and working closely with our valued road safety partners like the City of Guelph.

**Sean Wraight**  
Regional Strategic Coordinator - West  
Public Outreach & Education Office  
Ministry of Transportation

# The human toll on our streets

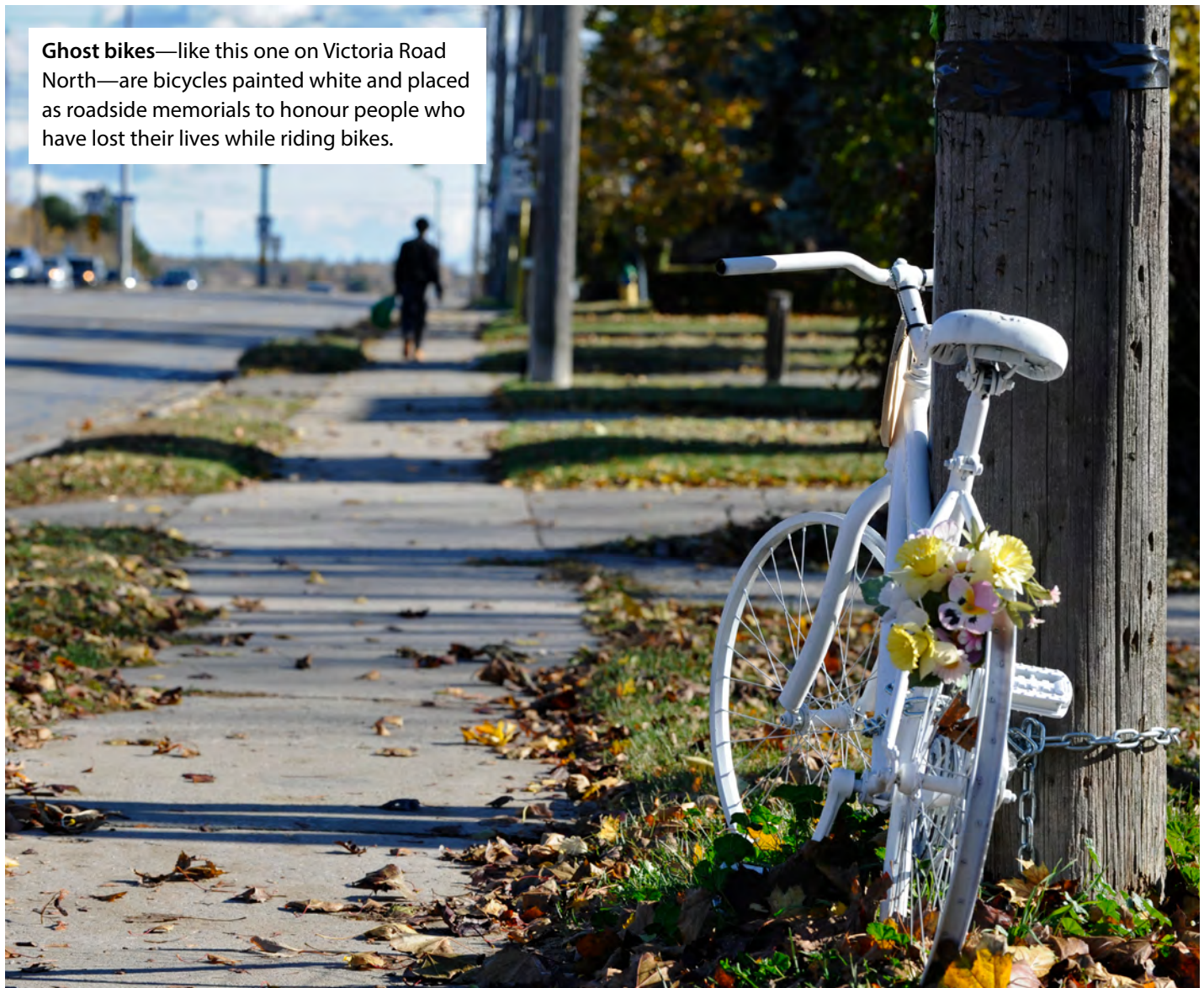
Between 2018 and 2022, 12 lives were tragically lost on Guelph roads due to collisions with vehicles. During this same five-year period, there were 89 reported incidents of serious injuries.

Each death is a profound loss, leaving loved ones and our community deeply affected. For those who survive collisions, serious injuries can have lasting impacts on individuals, their families and the wider community.

This Action Plan is driven by the urgent need to prevent further harm and create safer streets for all.



**Ghost bikes**—like this one on Victoria Road North—are bicycles painted white and placed as roadside memorials to honour people who have lost their lives while riding bikes.





# Why is this plan needed?

We're always moving in Guelph. Wherever we're going along our streets or trails, we all want to feel safe. Safety has always been part of what guides the City's transportation and planning decisions. And yet, every year, people who live and work in Guelph are killed or seriously injured on our roads.



Between 2018 and 2022, there were 1,430 collisions causing injury in Guelph, resulting in \$460 million in costs to society.<sup>4</sup> These collisions impact our lives, our neighbourhoods, our work and our city.

This isn't just a Guelph problem. Across Canada, collisions with vehicles caused an estimated 100,000 injuries and 2,000 deaths in 2022 alone,<sup>5</sup> and remain the leading cause of death for children and youth.<sup>6</sup> The societal cost of all motor vehicle collisions in Canada was estimated at approximately \$47 billion in 2020.<sup>7</sup> These costs include healthcare, missed work, vehicle damage and time and pollution due to traffic delay.

This is a public health crisis that some advocates call **traffic violence**.

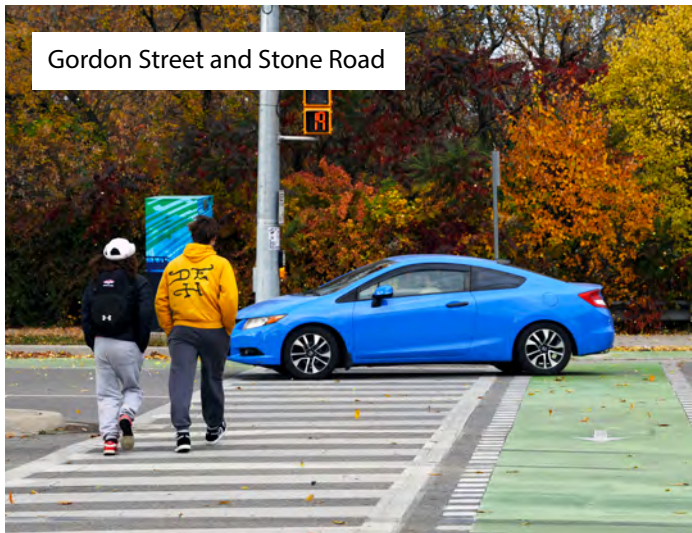
# Every death and serious injury on our roads is unacceptable and can be prevented.

Prioritizing safety represents an opportunity—not only to save lives but to build a more active, vibrant and livable city. Safe streets mean meeting more neighbours en route, kids playing on the sidewalk on the way to school and simply having the freedom to move around the city in the way that works for everyone.

As Guelph grows, safe streets help more of us feel confident choosing to walk or bike instead of driving. This supports our goals for climate action and a healthy environment. A safer Guelph is better for everyone.

## Collisions are not accidents.

They don't happen at random. They result from choices, designs and decisions that can be predicted, mitigated and even prevented entirely.



Now is the time to respond to this crisis as a City, starting with an ambitious goal of zero. **The City of Guelph is committed to achieving zero serious injuries and zero deaths on our roads.** In other words, our goal is Vision Zero.

To get to zero, we need a smarter approach. We need to rethink how we design our roads, our vehicles and our city more broadly, to create a holistic and integrated system. This is called a Safe System.

The Action Plan for Safe Streets is the City of Guelph's framework for reaching our goal, securing our streets as the safest in Ontario and making Guelph the best place to live.



# Safe streets, from many perspectives

We asked Guelph residents what safe streets mean to them. Here's a sample of what they shared.

**Fewer Vehicles**

Children Can Walk to School without fear

bike lanes

Being aware of everyone using the road.

**SAFE STREETS FOR ALL! PEDESTRIANS, CYCLISTS, FAMILIES & KIDS & PETS ALL DESERVE TO USE OUR STREETS SAFELY**

Streets designed for slow speeds, rather than signs that require enforcement.

Getting accustomed to driving at a lower speed (ie 30) and maintaining it.

Better thought out street parking which does not impede visibility

**No Speeding**

Reduced Speed limits, Reduced lane widths, lane reductions @ intersections, and traffic calming = Safer streets, life saving, & happy families

kids can safely walk to school unaccompanied by an adult

having sidewalks for pedestrians to walk on!

**Zero tolerance for distracted driving**

Not having to fear kids safety.

car people need to understand that other forms of transportation are also valid (and reduce traffic!)

People Can Follow Rules for Driving & Respect Others.

looking both ways multiple times before making turns.

building protected bike lanes.

**SIDEWALKS ON ALL ROADWAYS**

\*CALM TRAFFIC USING FLEX BOLLARDS/POSTS OR PLANTERS

We want to be able to go for family bike rides and feel safe crossing intersections. Prioritize cyclists and pedestrians.

KEEP US SAFE

Driving the speed limit and following the rules of the road.

**Safe connections and transportation freedom for all ages and abilities** 😊

Hearing assistance every intersection to help crossing safely

Not blocking bike lanes + sidewalks!

**Prioritize Non-Vehicular Traffic**

connected bike lanes all through Guelph!

easy-to-understand intersections for everyone (in a car, walking, on a bike)

# It is part of our plan

**Vision Zero is part of a strategy to reduce the number of people killed and seriously injured on our roads to zero.**

Guelph City Council endorsed Vision Zero as part of the Transportation Master Plan recommendations in 2022. Vision Zero initiatives are supported by the City's Future Guelph Strategic Plan and are also aligned with Guelph's Community Plan, ensuring that people feel safe walking, jogging, wheeling and riding their bikes through all corners of our city.



Colonial Drive near Summerfield Drive



# Timeline of road safety in Guelph

Safe streets have been important to the City of Guelph for years.



**1998**

» Neighbourhood Traffic Management Policy adopted (now Traffic Calming Policy).



**2002**

» Active and Safe Routes to School Committee established.

**2004**

» Adult School Crossing Guard program launches.

**2022**

» Speed limits in all residential neighbourhoods reduced to 40 km/h.  
» Vision Zero approach adopted by City Council.

**2021**

» First red light cameras installed.



**2020**

» Community Road Safety Strategy adopted.



**2016**

» Guelph Road Safety Coalition established (now the Vision Zero Steering Committee).  
» First protected cycling infrastructure installed (multi-use path on Woodlawn Road).

**2023**

» First Automated Speed Enforcement (ASE) cameras installed.



**2024**

» Launch of **Vision Zero Dashboard** indicating key actions and collision data.  
» First protected intersection installed in Guelph (College Avenue West and Edinburgh Road South).



**2025**

» *Vision Zero Guelph: Action Plan for Safe Streets* launched.



# A mindset shift

## Vision Zero requires a change in how we think about road safety.

Vision Zero is built on these principles:

- 1. No loss of life is acceptable on our roads.** Protecting people must take priority over all other aspects of our transportation system.
- 2. Deaths and serious injuries are preventable.** We have the knowledge, expertise and tools to anticipate and prevent all injury-causing collisions.
- 3. Everyone makes mistakes.** Roads should be designed to account for human error and minimize harm.
- 4. People are vulnerable.** Collisions may happen, but the impact should never exceed what our fragile human bodies can withstand.



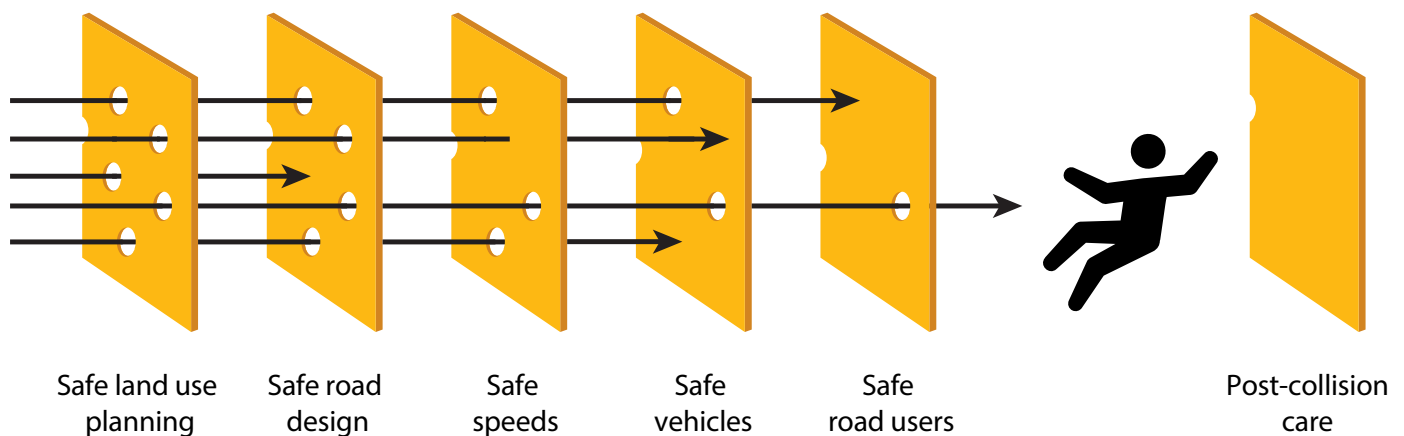
Gordon Street and Surrey Street

# The Safe System



**Vision Zero is the goal. The Safe System is our roadmap to getting there.**

The Safe System approach is fundamental for achieving Vision Zero. It takes a holistic view of our transportation system, considering the interactions between people, vehicles and the environment.<sup>8</sup>

This can be understood like slices of Swiss cheese: each slice represents a different layer of protection, and each layer also has weaknesses, or holes. Strengthening all layers ensures greater protection—so if one layer fails, others will still keep people safe.<sup>9</sup>



The Safe System approach offers a new way of understanding and addressing road safety.

 <b>Traditional Approach</b>	Prevent collisions.	Make driving safer.	Improve human behaviour.	Control highest speeds.	React based on collision history.	Individuals are responsible.
 <b>Safe System Approach</b>	Prevent serious injuries and deaths.	Make transportation safer for all.	Design for human mistakes, limitations and differences.	Control impact.	Proactively address risk.	Shared responsibility.

We will take a closer look at each of these new statements in the following section.



# A CLOSER LOOK AT THE DATA

# Applying the Safe System to Guelph

Guided by the Safe System approach, let's look at Guelph's collision data and relevant research to inform our actions.

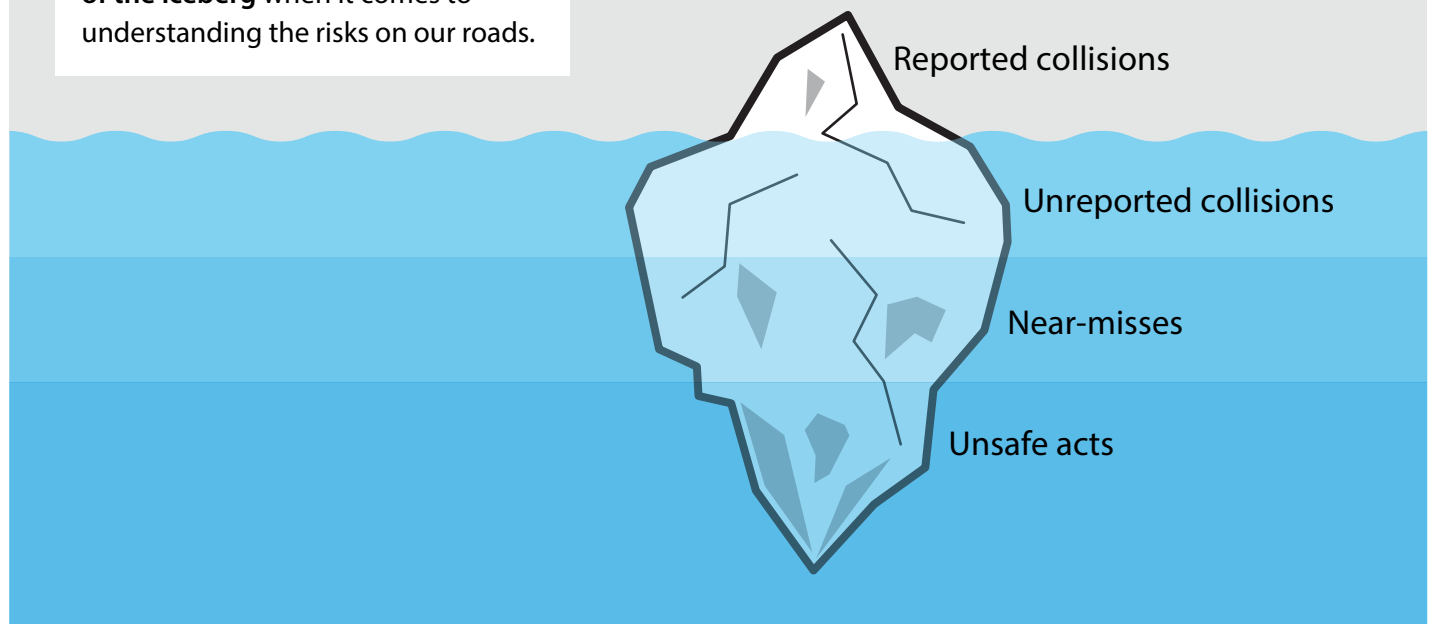
## A note on Guelph's collision data

Collision data collected from all Guelph roads, excluding the Hanlon Expressway, covers the years 2018 to 2022 (unless otherwise noted). An overview of this data is available on our [Vision Zero Dashboard](#).

Collision data guides our decisions, but it doesn't tell the whole story. Here are a few reasons:

- » **Collision trends take time.** It may take five to 10 years of data about collision-related injuries and deaths to reveal patterns.
- » **Exact circumstances are difficult to document.** Data is collected only after a collision occurs. Details about driver actions just before a collision often remain unknown.
- » **Not all collisions are reported.** Some people don't feel comfortable reporting incidents to authorities. Data is also limited in the cases of hit-and-run collisions.

**Reported collisions are just the tip of the iceberg** when it comes to understanding the risks on our roads.





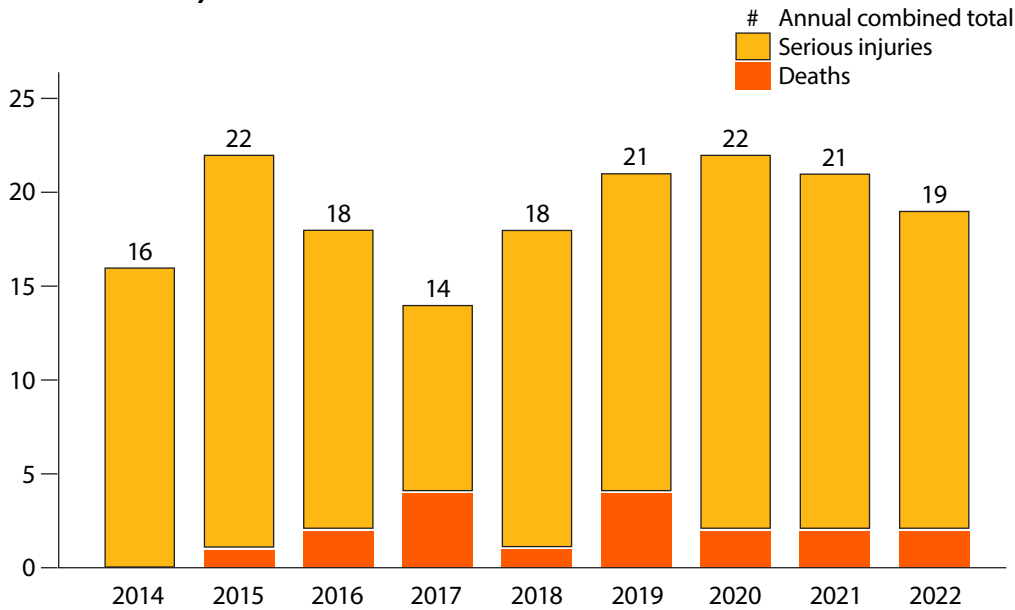
# Prevent serious injuries and deaths

To achieve Vision Zero, it's crucial to understand who is most harmed and why.

Counting collisions alone can misdirect our attention. While there were **9,392 collisions** in Guelph between 2018 and 2022, most people involved were left unharmed. In fact, only **0.4 per cent** of **vehicle-only collisions** resulted in a serious injury or death.

By focusing on those who are most harmed, we see that **101 people** were killed or seriously injured. Looking back further, the annual impact has remained consistent.

## Collision-related serious injuries and deaths in Guelph (2014–2022)<sup>10</sup>



### How serious is a “serious injury”?

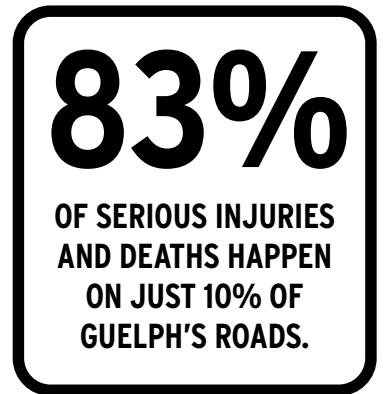
In this context, a serious—or major—injury means a person required admission to a hospital, not just emergency treatment. These injuries are often life-threatening and can have lasting consequences.<sup>11</sup>

The vast majority of serious injuries and deaths happened on just **10 per cent** of Guelph’s roads.

The solution is not as simple as changing these roads alone. Most of these serious injuries could be considered isolated or unpredictable as only **28 per cent** of them were in repeat locations. Yet, over time, patterns emerge that help us understand the risk associated with these outcomes.

### Takeaway

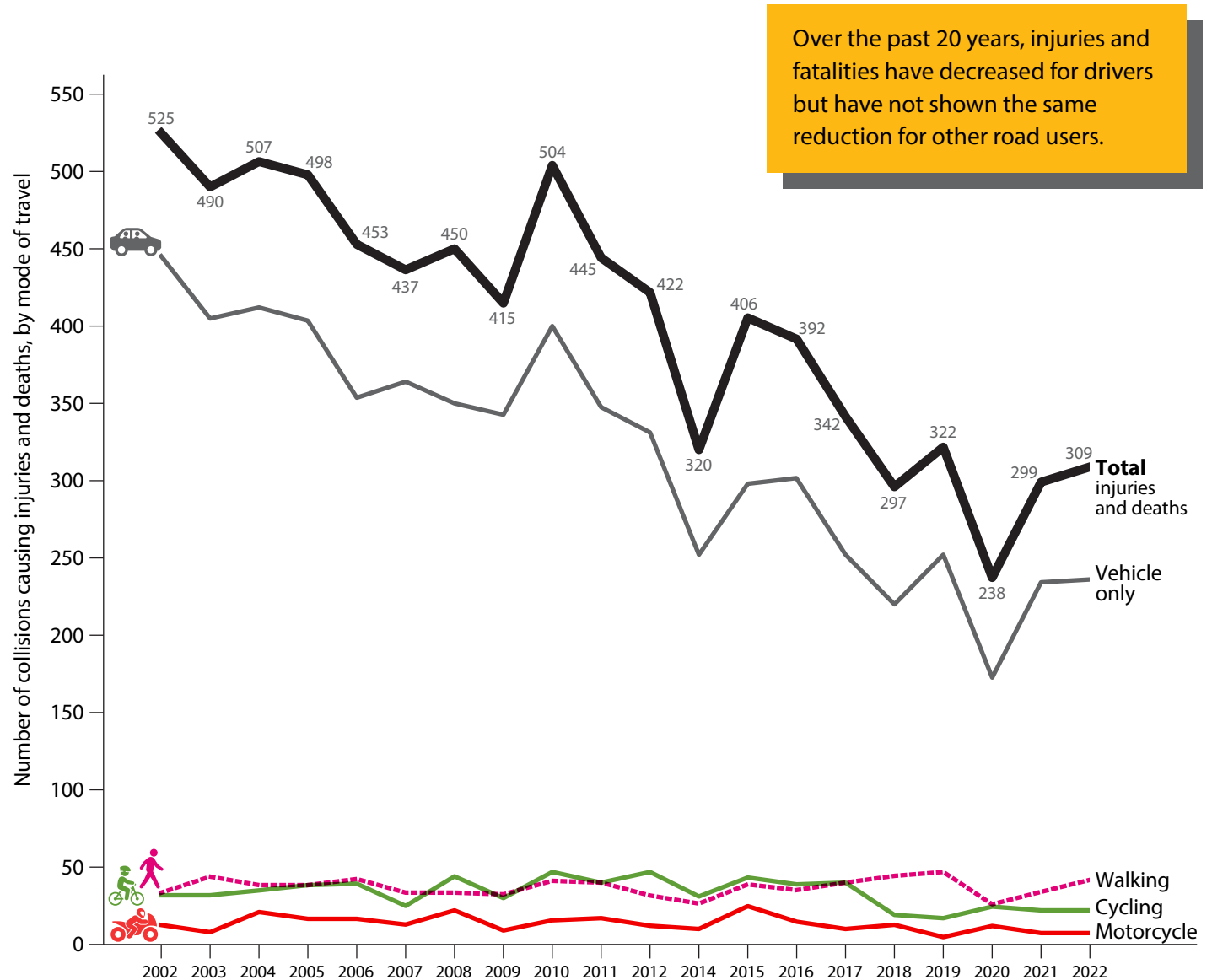
- » Investigate and report on collision-related serious injuries and deaths over extended periods of time rather than reacting to collision counts alone.





# Make transportation safer for all

## Collisions causing injuries and deaths, by mode of travel in Guelph (2002–2022)<sup>12</sup>

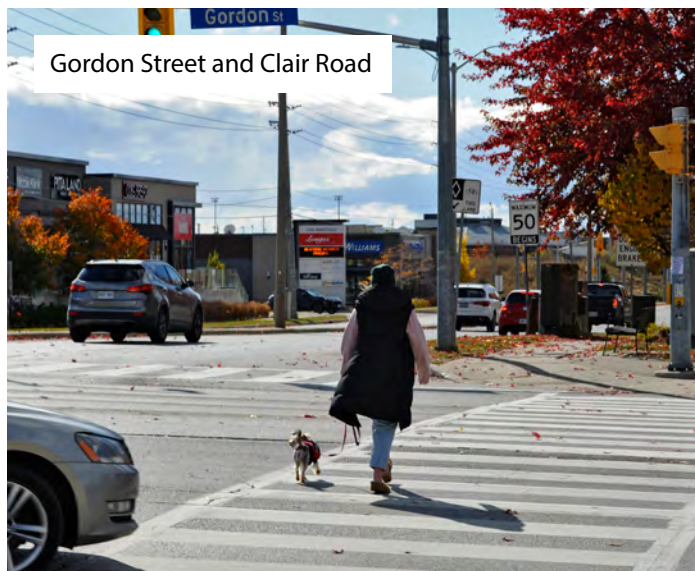
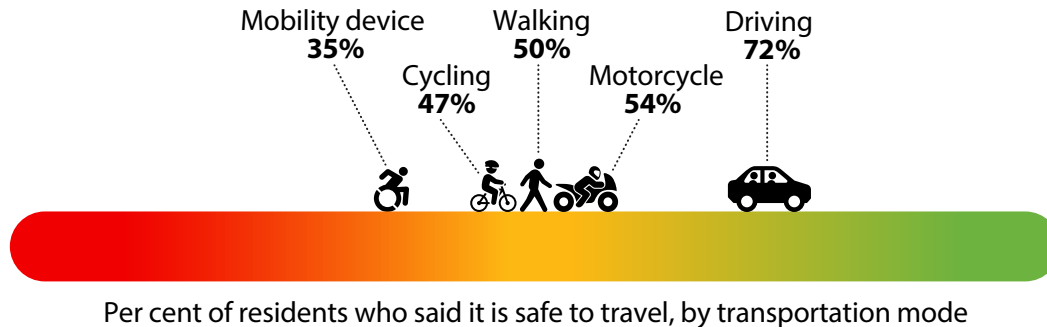


From buses to mopeds, people move around Guelph in many different ways. Traditionally, road safety efforts have prioritized people inside cars through measures like seat belts and airbags—safety improvements<sup>12</sup> that have proven effective.

Twenty years of collision data proves this effort was successful. Serious injuries and deaths have decreased for people driving. But for people walking and other road users, the trend has remained the same, showing little progress.

## How safe do we feel?

A recent survey highlights a stark contrast in perceived road safety. While 72 per cent of residents said it is “safe” to travel by vehicle in Guelph, far fewer felt safe travelling in other ways.



People who are walking,<sup>13</sup> cycling or riding a motorcycle are considered **vulnerable road users**. They don't have the protective shell of a motor vehicle, making them more vulnerable to serious injuries in a collision. People aren't naturally vulnerable—it's the way our transportation system is designed that puts them in danger.

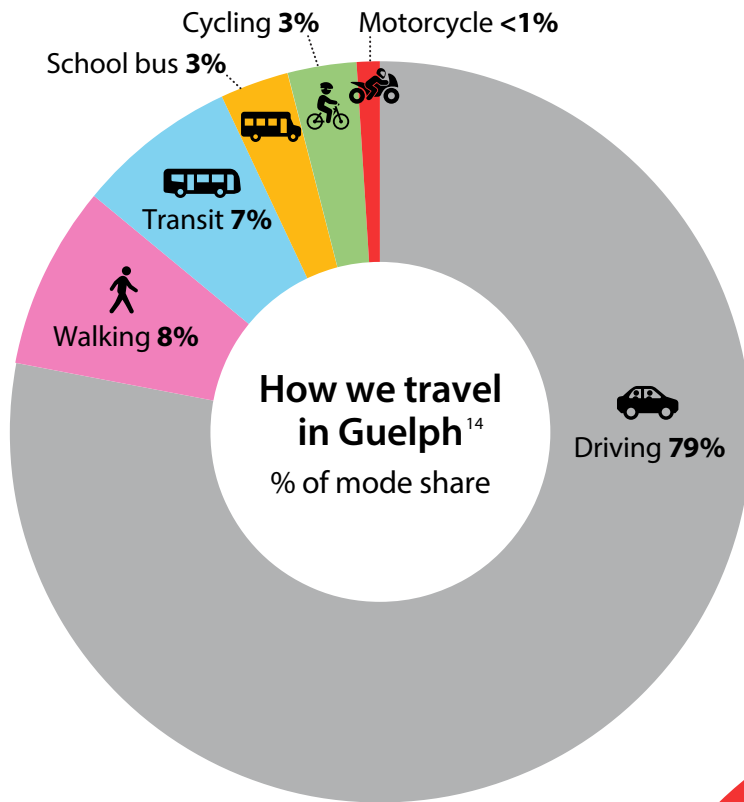
Most of us become vulnerable road users at some point in our day—even if it's just while walking across a parking lot after getting out of our car. Our data only notes a moment in time when someone chose one way to move around Guelph. Ultimately, a transportation system that protects vulnerable road users benefits everyone.



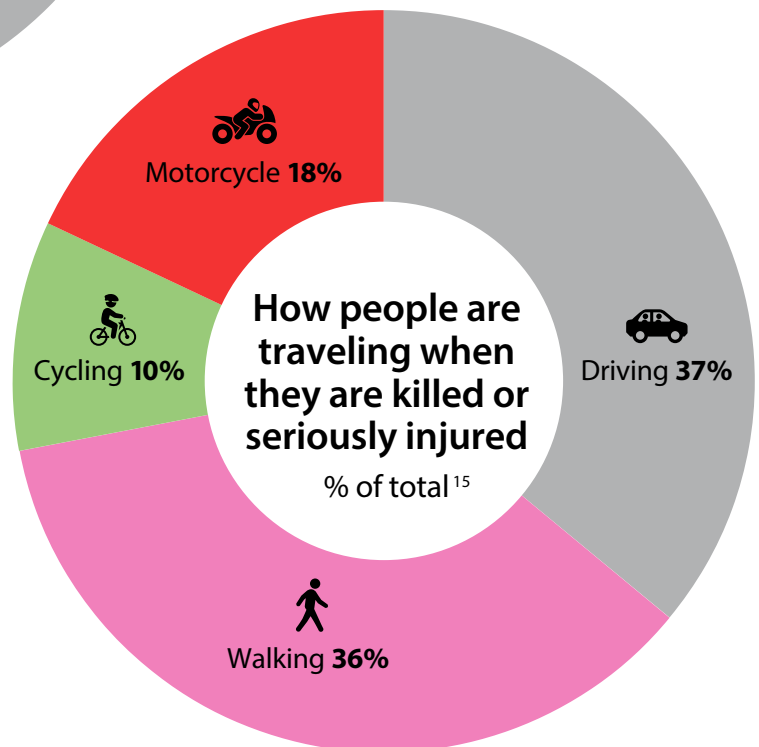
## Travel by mode share and injury

Most travel in Guelph happens by car. Despite representing a small per cent of our overall mode share, people who walk, bike and motorcycle are overrepresented in the number of collision-related serious injuries and deaths. Meanwhile, public transit and school buses remain the safest ways to move around Guelph.

**63%**  
**OF ALL DEATHS AND  
 SERIOUS INJURIES FROM  
 COLLISIONS IN GUELPH ARE  
 VULNERABLE ROAD USERS.**



While only 12 per cent of Guelph's residents walk, bike or use motorcycles for their daily commute, they account for 63 per cent of all serious injuries and deaths.



## People who bike

While there were 106 reported collisions with people who were cycling between 2018 and 2022, the actual amount is likely more. Reviewing City of Guelph collision data against data from the Guelph General Hospital's emergency department found that the City's collision data may be underreporting collisions involving people who cycle by **30 per cent**.

## New ways to get around

There are new forms of 'micromobility' that are becoming more popular for people to get around Guelph, such as e-scooters, e-bikes and e-skateboards. Although the way collisions are classified is adapting to these new modes, our collision data does not yet categorize collisions involving micromobility devices.



Carden Street

## Protected and separated bike infrastructure improve safety outcomes for everyone on the road—including people who drive.

More bike infrastructure leads to more people feeling safe to cycle, which leads to more people biking. Research shows that these factors work together to reduce vehicle speeds, ultimately lowering the risk of injury for all road users.<sup>16</sup>

### Why do people sometimes bike on the sidewalk?

According to a recent survey, **only half** of Guelph residents feel that biking is safe in the city. This number drops to just 30 per cent for residents aged 65 and older. It's understandable, then, that people feel safer biking on the sidewalk—especially on roads without protected bike lanes or multi-use paths. The evidence supports this as well: protected bike lanes reduce collisions involving people who bike.<sup>17</sup>

Victoria Road South near Clair Road East



### Takeaways

- » A transportation system that prioritizes vulnerable road users benefits everyone.
- » Protect vulnerable road users as they account for the majority of collision-related serious injuries and deaths.
- » Use physical road infrastructure to protect and separate vulnerable road users from vehicles.
- » Investigate the safety implications of new micromobility devices.



# Design for human mistakes, limitations and differences

None of us are perfect. We all make mistakes. We also have unique bodies, ages, abilities and attention levels. All these differences matter. When we design roads, we need to account for human error and avoid one-size-fits-all solutions.

## The impacts of car-centric road design

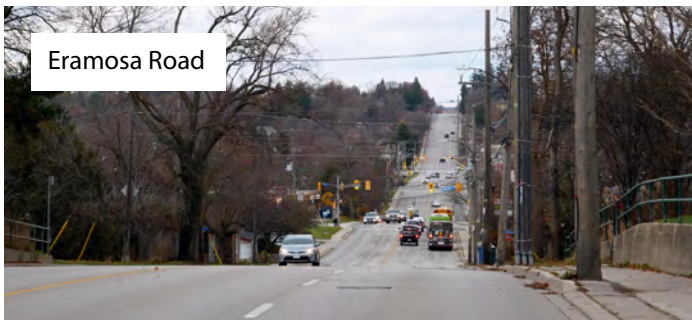
Guelph's roads are designed to move vehicles. These design choices create higher levels of risk on wide roads and at intersections for all road users.

## Wide roads

Most serious injuries and deaths from collisions happen on arterial or collector roads—wide roads designed for higher volume and higher vehicle speeds. In Guelph, arterial roads account for most collision-related serious injuries and deaths, even though they represent only a small portion of the road network.

Research backs these findings. Wider roads increase collision frequency<sup>18</sup> and severity<sup>19</sup> and increase vehicle speeds when compared to narrower roads. This is because narrower roads feel more dangerous to people who drive, prompting them to slow down and make fewer risky movements.<sup>20</sup>

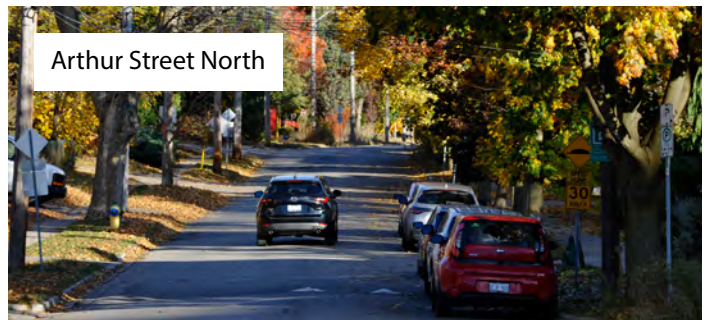
**63%**  
OF COLLISIONS THAT INVOLVE PEOPLE WALKING TAKE PLACE ON ARTERIAL ROADS.



Eramosa Road

### Arterial roads

- » wide, with high traffic volume and higher speeds
- » **23 per cent** of Guelph's road network
- » nearly **60 per cent** of collision-related serious injuries and deaths



Arthur Street North

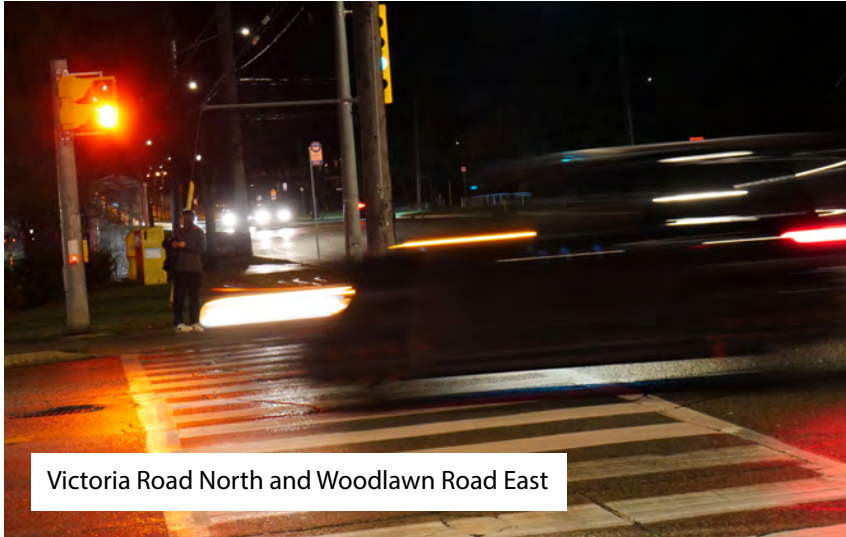
### Local streets

- » narrower, with lower speeds
- » **77 per cent** of Guelph's road network
- » **20 per cent** of collision-related serious injuries and deaths

## Intersection dangers

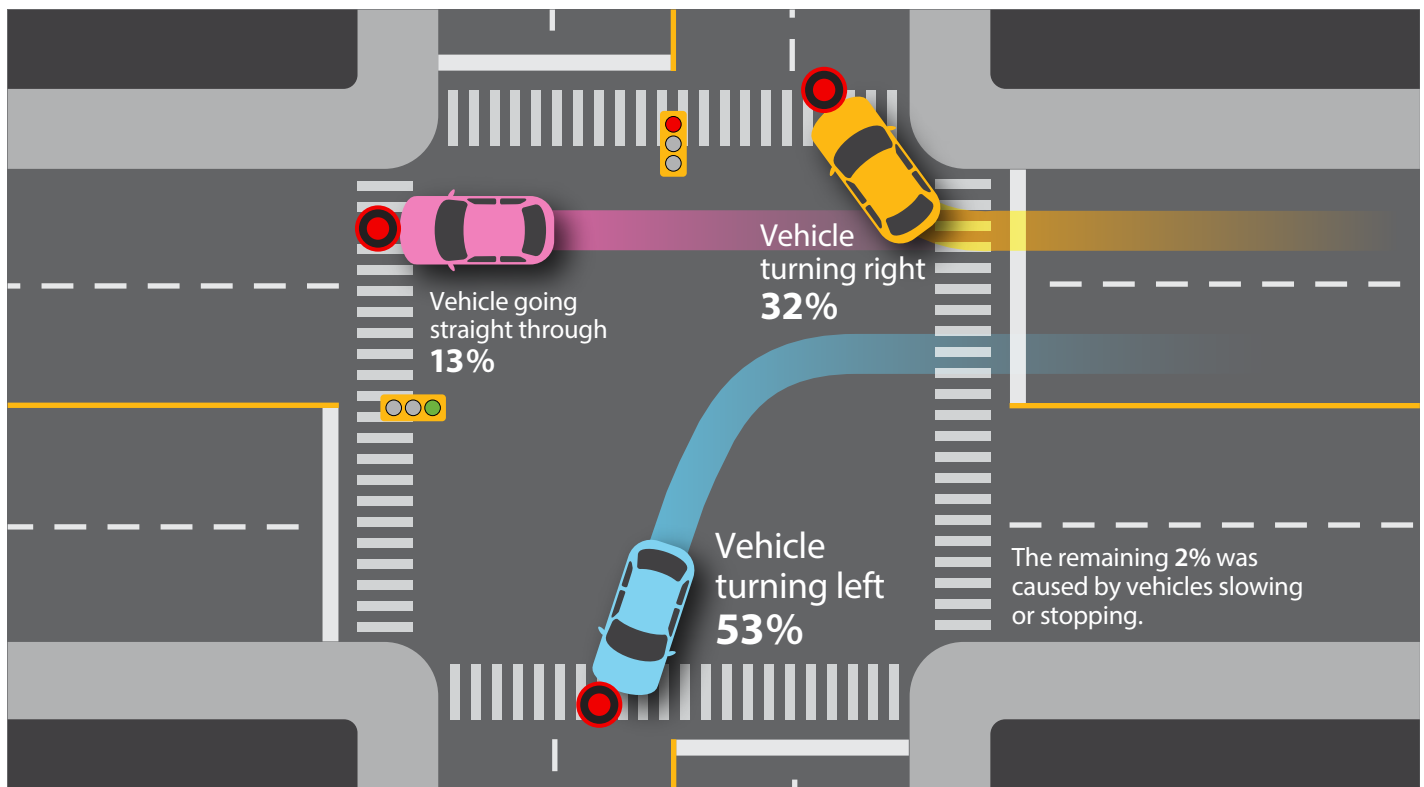
Intersections are another key component of our transportation system where risk is heightened. Seventy-two per cent of all collisions in Guelph happen at intersections, as well as most collisions involving vulnerable road users.

Left turns are especially dangerous. A quarter of all serious injuries and deaths occurred with a left-turning vehicle. This trend is particularly pronounced for people walking: **50 per cent** of all injuries to people who were walking occurred due to a vehicle making a left turn.



**72%**  
OF COLLISIONS IN GUELPH  
OCCUR AT INTERSECTIONS.

## How people were hit at signalized intersections while walking (2018–2022)



## Designing for people

Road designs must accommodate, account for, and protect all types of people. This means creating roads that accept human limitations, mistakes and differences in our physical bodies.



## How speed narrows our field of vision

Because of the way our brain works, it is difficult to stay fully aware of everything around us, especially while driving. For example, as a person drives faster, their field of vision narrows, reducing what they can see and react to.<sup>21</sup>

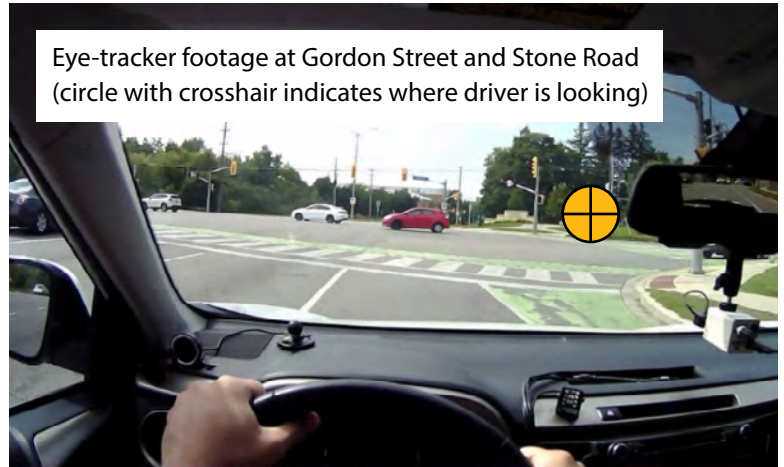


Cassino Avenue

## Checking for vulnerable road users

In 2023, a study conducted by University of Toronto researchers, in collaboration with the City of Guelph and other cities, tracked the eye movements of people driving. The research found that 50 per cent of participants did not look for people walking or cycling when making right turns.<sup>22</sup> This suggests that many people who are driving neglect to scan for other people at intersections.

**50%**  
**OF PEOPLE DRIVING DON'T  
CHECK FOR PEOPLE WALKING OR  
BIKING WHEN TURNING RIGHT.**



## Distracted by phones

Smartphone use while driving adds another element of risk. Guelph Police Service began tracking smartphone-related collision data in 2023, and evidence shows that using a handheld phone when driving makes collisions 3.6 times more likely.<sup>23</sup>

**3.6x**  
**INCREASED RISK OF A COLLISION  
WHEN USING A HANDHELD  
PHONE WHILE DRIVING.**

### What happens if you're caught driving while looking at your smartphone?

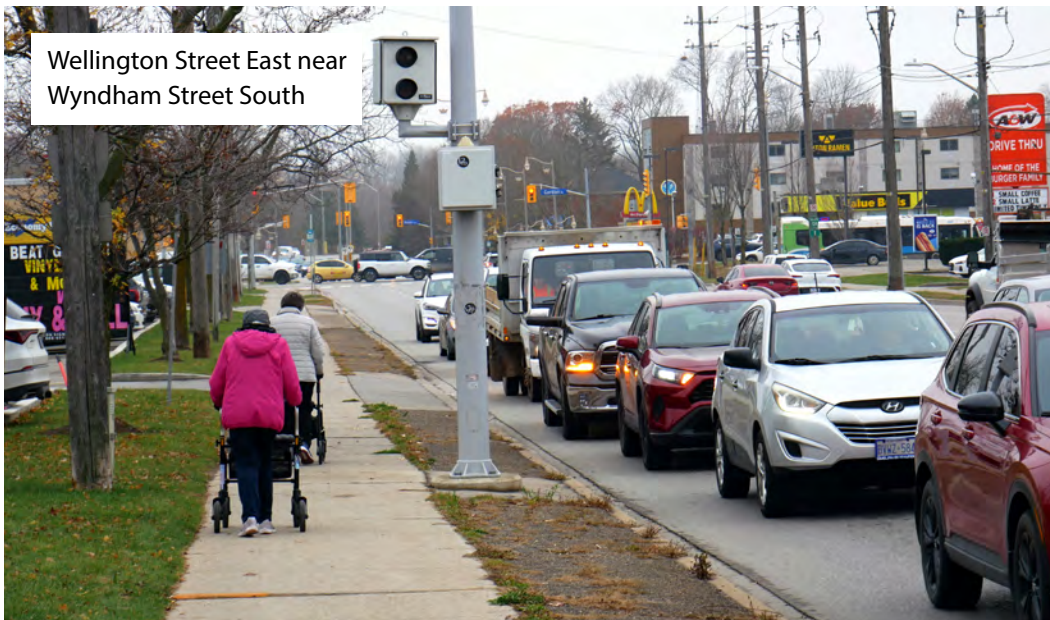
Just like with impaired driving, your insurance can list you as a high-risk driver—requiring you to pay much more for insurance every year that you drive. That's on top of risks to your life, to those outside your car and potential criminal charges.



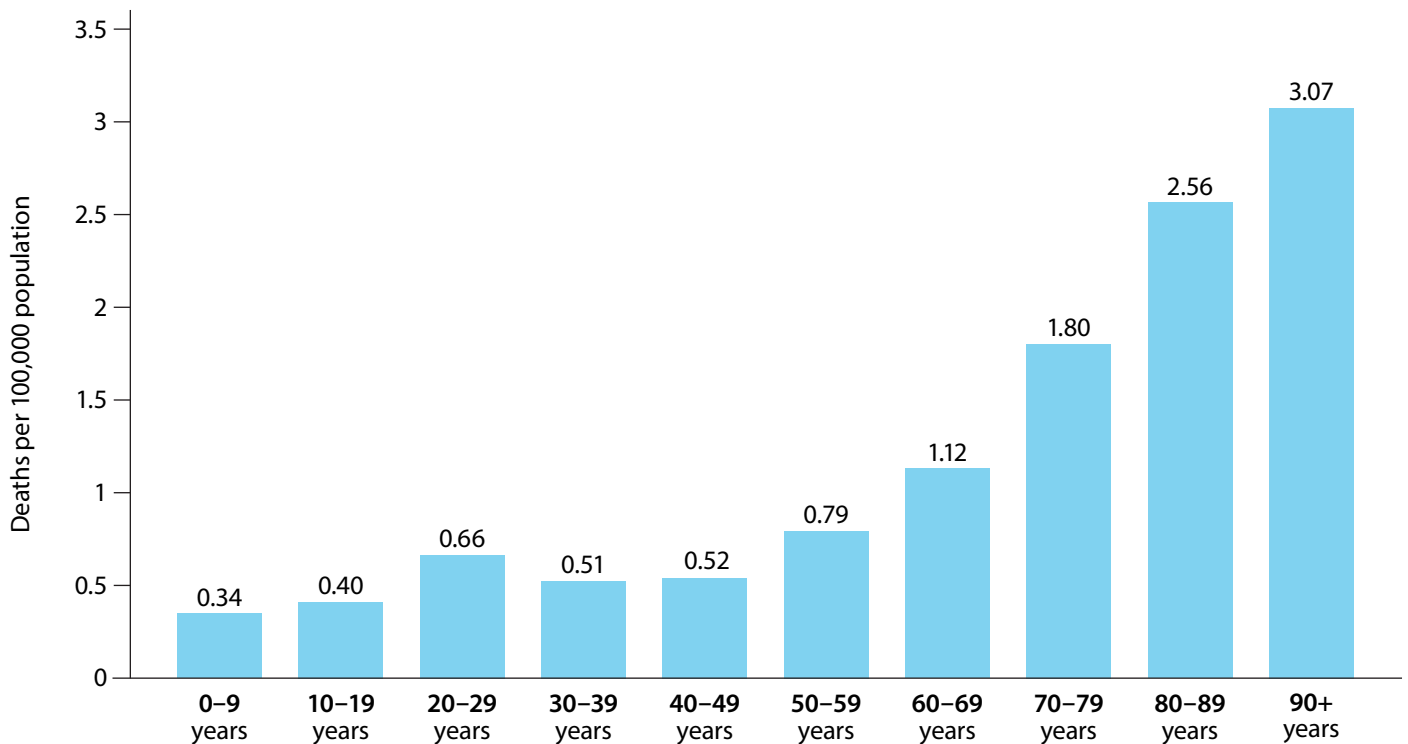
## We have different bodies

The impact that a human body can withstand in a collision depends on many factors, including age. Older adults, for instance, are often more frail, increasing their risk of severe injury in a collision.<sup>24</sup>

In the City of Guelph, the mortality rate for pedestrian and cyclist transportation-related injuries is highest among those aged **75 years and older**.<sup>25</sup> Across Canada, seniors aged 70 and older face the highest risk of being killed while walking.<sup>26</sup>



## Pedestrian death rates by age in Canada (2018–2020)<sup>27</sup>



## Shorter bodies, bigger blind spots

Shorter people and children are less visible in the blind spots of larger vehicles. The taller the vehicle, the less a person who is driving is able to see in front of them, especially while making a turn.<sup>28</sup>



**71%**  
OF GUELPH RESIDENTS  
SURVEYED AGREE THAT  
EVERYONE MAKES MISTAKES, SO  
ROADS SHOULD BE DESIGNED TO  
ACCOUNT FOR HUMAN ERROR.

### Takeaways

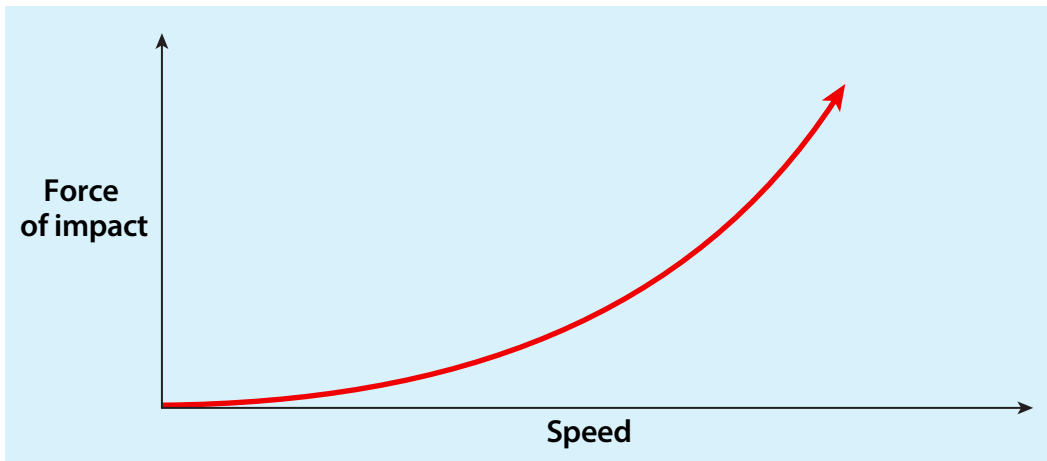
- » Narrow lanes, reduce speeds and add physical protections on fast-moving, high-traffic roads.
- » Improve intersections to protect vulnerable road users, particularly from people who are turning left in a vehicle.
- » Prioritize the safety and mobility needs of older people who walk.
- » Limit the ways tall vehicles, such as trucks, interact with routes frequently used by vulnerable road users, especially children.

# Control impact

The traditional approach to improving road safety has focused on limiting high vehicle speeds. In contrast, the Safe System approach considers the transfer of kinetic energy from one object to another during collisions, or in other words, the full impact of speed.

## The science of speed

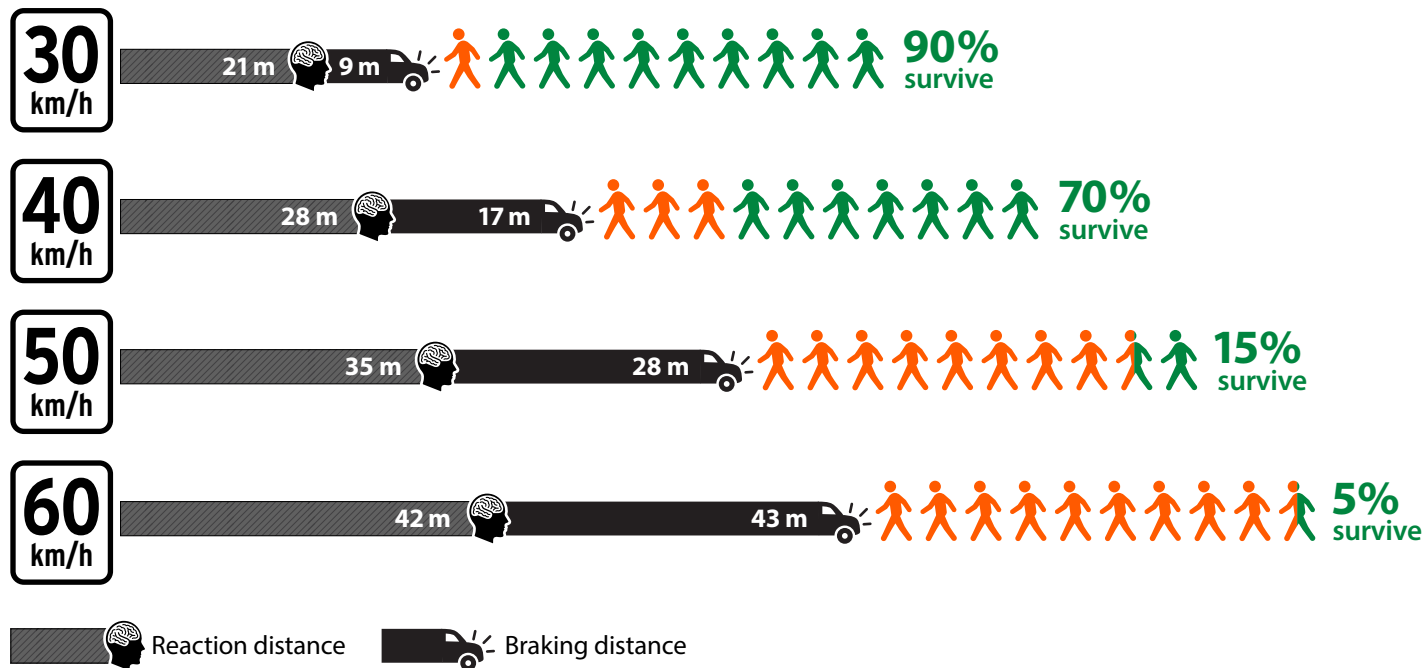
Speed increases both the likelihood and severity of collisions. Collisions at higher speeds are more forceful, making them more likely to be fatal.<sup>29</sup>



ONLY  
**26%**  
OF GUELPH RESIDENTS  
SURVEYED THINK THAT  
SPEEDING IN GUELPH  
RESULTS IN A TICKET.

## How vehicle speed impacts survival rate in collisions

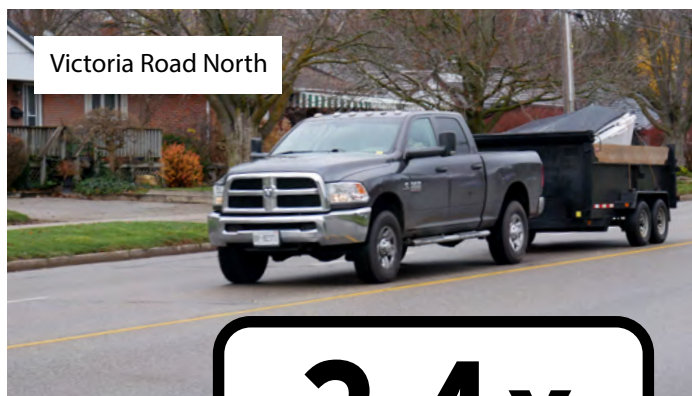
Higher speeds increase reaction distances and braking distances, which lowers survival rates. If a person walking is struck by a person driving a vehicle at 30 km/h (kilometres per hour), they have a 90 per cent chance of survival. If the vehicle is moving at 50 km/h, the survival rate of the person walking drops dramatically to only 15 per cent.<sup>30</sup>



## Vehicle weight and design

Heavier vehicles have a greater impact in a collision, increasing the risk of severe injuries or deaths.

And these days, we have more heavy vehicles than ever before. In 2022, SUVs and trucks accounted for 80 per cent of new car sales in Canada.<sup>31</sup> Because of their design, height and weight, studies have shown that people walking are 3.4 times more likely to die when struck by an SUV or a light truck than in a collision with a conventional car.<sup>32</sup>



**3.4x**  
**HIGHER RISK OF DEATH**  
**WHEN A PERSON WALKING**  
**IS STRUCK BY AN SUV OR**  
**LIGHT TRUCK COMPARED**  
**TO A CONVENTIONAL CAR.**

### Takeaways

- » Prioritize measures that lower and control vehicle speeds.
- » Create separation between vulnerable road users and fast-moving vehicles.



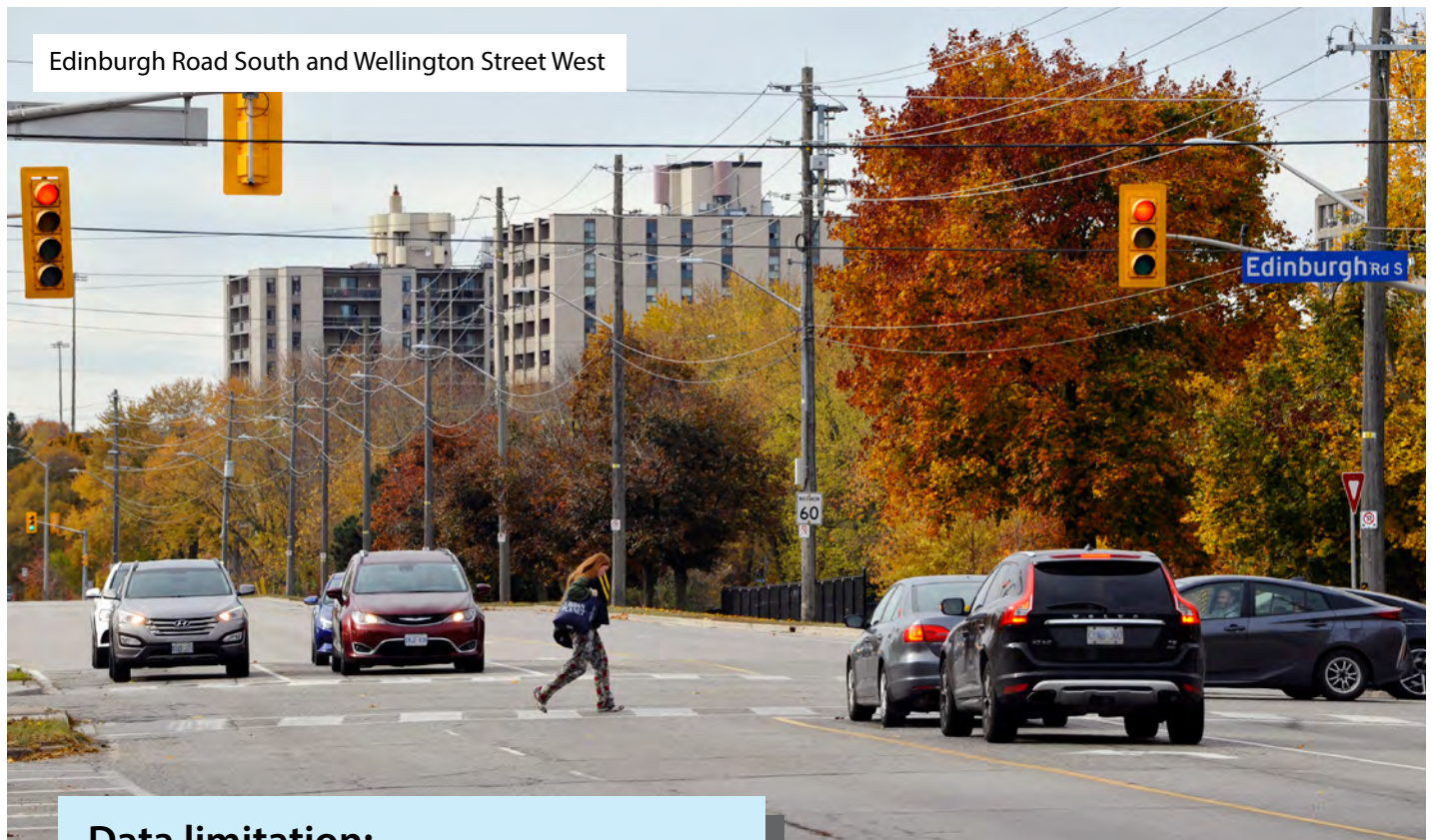
# Proactively address risk

**Shifting our approach from simply reacting to past collisions, we can instead focus on addressing risk factors that increase people’s exposure to moving vehicles.**

Some people are more exposed to moving vehicles than others depending on who they are, where they live and how they get around. More time spent travelling—for example, by driving or walking—raises the risk of collision.

In Guelph, data shows that residents who live in our marginalized areas—based on factors like income, housing status and newcomer status—are more likely to live on busier roads, increasing exposure and risk, than those who live in less marginalized areas.<sup>33</sup>

Across North America, many communities face higher levels of exposure to moving vehicles. These include people with lower incomes, racialized groups, those who are unhoused and people with disabilities.<sup>34</sup>



## Data limitation:

Collision data does not capture demographic details, such as newcomer status, race and housing status.

## Rethinking complaint-based traffic studies

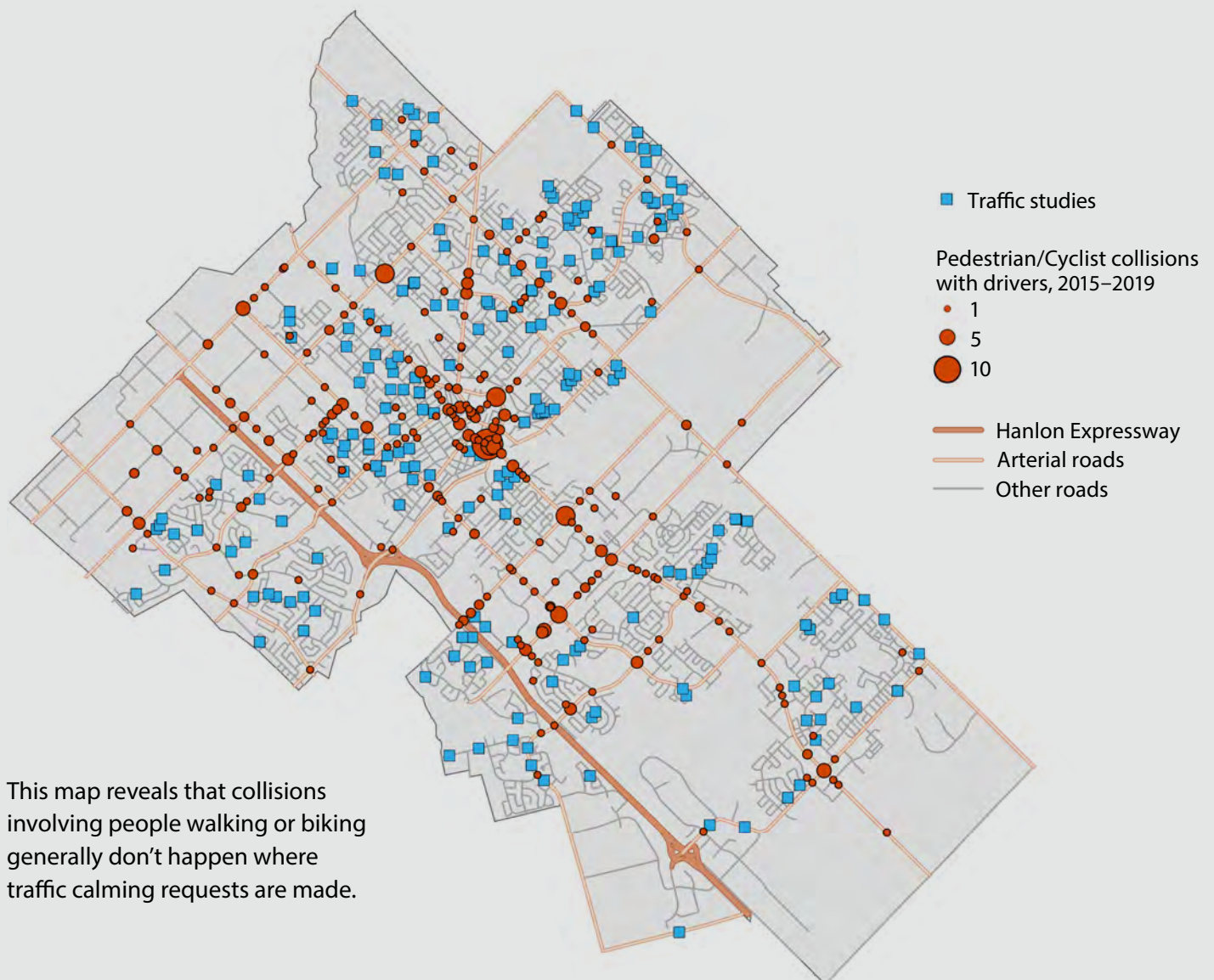
Road safety measures are often initiated when a resident makes a formal complaint which leads to a traffic study.

A review performed with the University of Guelph found that Guelph's **most marginalized areas receive half as many traffic studies** as compared to the least marginalized areas, even though they experience **double the number of collisions**.<sup>35</sup> These findings suggest that a complaint-based approach to traffic calming is inequitable, and its use will continue to misdirect attention away from other risk factors.

While this research speaks only to one municipal policy, it underscores the importance of considering equity into all road safety request policies.



## Relationship between traffic studies and collisions involving vulnerable road users



This map reveals that collisions involving people walking or biking generally don't happen where traffic calming requests are made.

## Driving is a risk factor

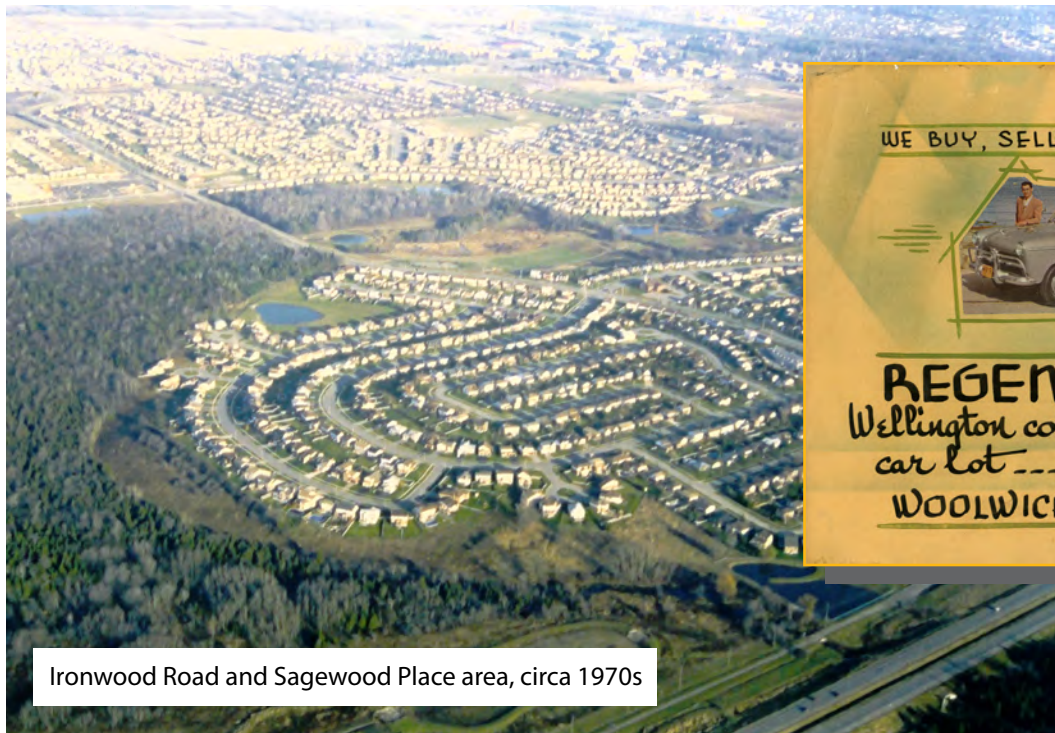
The more people drive, the more people die in collisions.<sup>36</sup> The consequences of this fact are far-reaching. Relying on driving for daily activities increases the risks to those inside vehicles and, even more critically, to those outside of them.

Guelph wasn't always built around the car. A hundred years ago, people walked, biked and rode streetcars. It's not easy to go back given the choices we have made. Like many Canadian cities, much of Guelph's development since the 1950s has been intentionally spread out and designed for low-density housing.



Streetcars in St. George's Square, circa 1895

Guelph Museums - 1975.21.95



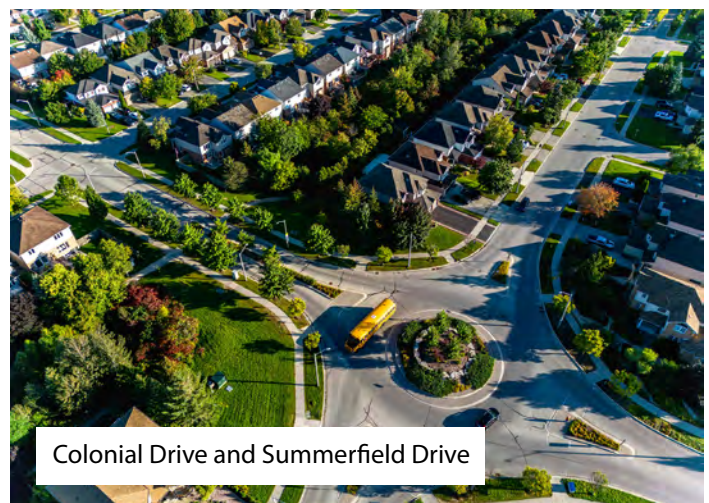
Ironwood Road and Sagewood Place area, circa 1970s



Advertisement for Regent Motors, circa 1950

Guelph Museums - 1981.84.2

Currently, the majority of Guelph's residential land contains only single-detached houses. This is the type of land most associated with severe collisions causing death.<sup>37</sup> Even if density were to increase, residential areas typically don't allow for everyday destinations like grocery stores or office buildings. As a result, many people need to drive frequently to go about their day, further increasing the risk to all of us.

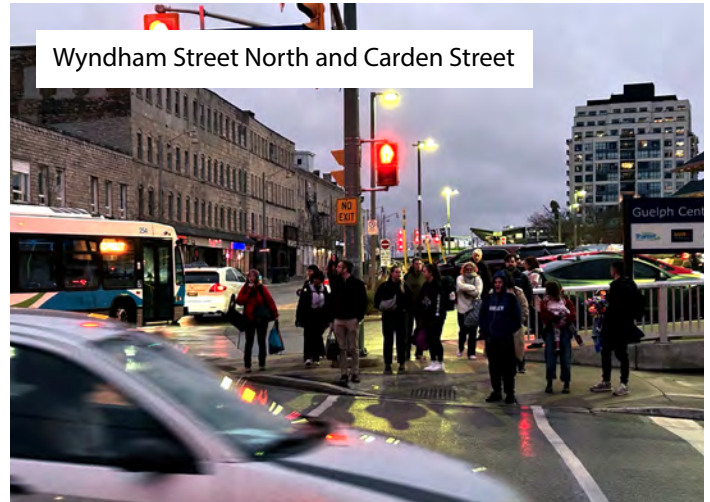
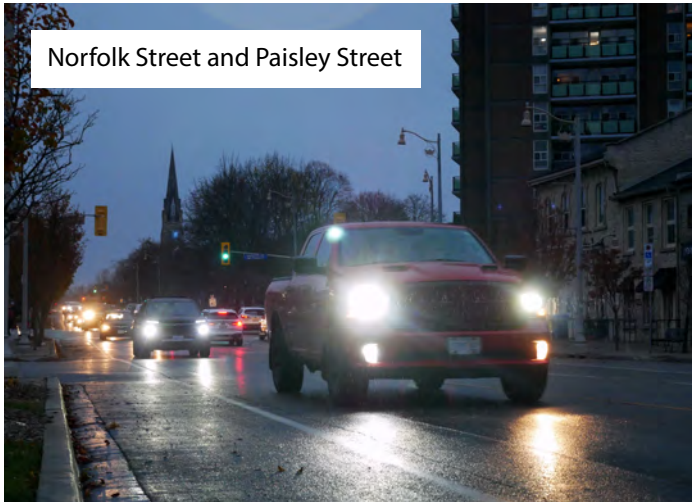


Colonial Drive and Summerfield Drive

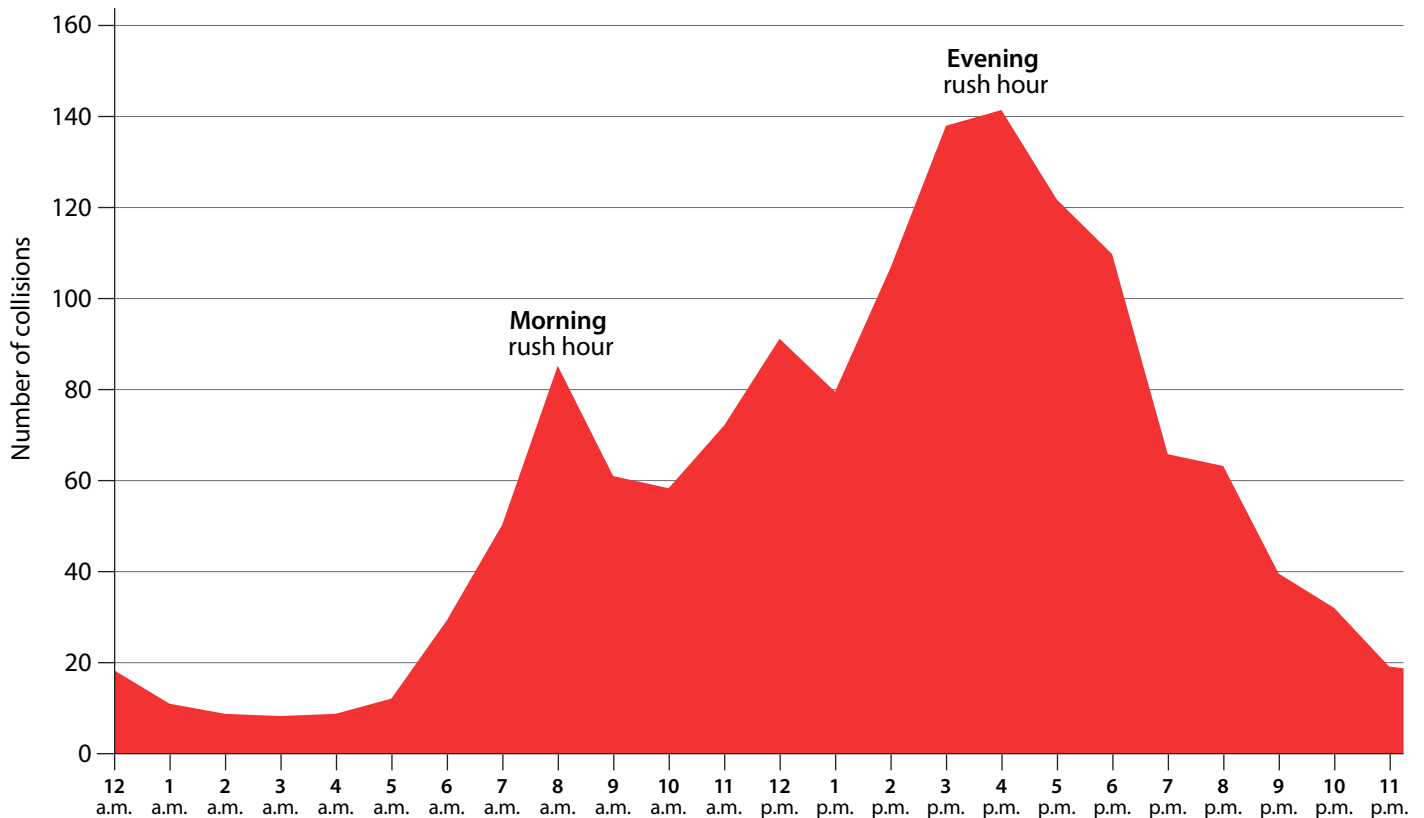
## Times of increased risk

When we drive a lot, and more people are outside, the risk of collision increases. In Guelph, vulnerable road users are, on average, **five to 10 times more likely** to be injured in collisions between **early September and early October**, compared to the quieter months of January and February.

The same pattern holds true for rush hour. Collisions are most frequent in the evening rush hour, between 3 p.m. and 7 p.m. At this time of day, our exposure to risk increases across the city.



## Collisions by time of day (2018–2022)



## Collisions involving vulnerable road users, by ward (2018–2022)



### How does your neighbourhood compare?

Out of Guelph's six wards, **Ward 2** experiences the highest number of collisions overall, as well as the highest number involving vulnerable road users.

Sources: Province of Ontario, Esri Canada, Esri, TomTom, Garmin, Safe Graph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

### Takeaways

- » Prioritize actions that increase safety for those who have higher exposure to moving vehicles, based on where they live and work.
- » Ensure that the process of making road safety service requests to the City of Guelph is equitable for all residents.
- » Support policies that provide more transportation options, reducing dependency on cars to move around the city.



# Shared responsibility

**While everyone has a responsibility to care for themselves and others on our roads, those who design and build our transportation system also share this responsibility.**

This includes planners, engineers, elected officials and governmental bodies, who direct, approve and fund the transportation system.

By sharing responsibility, we expand the ways we can solve a problem. Take impaired driving, for example. In Guelph between 2018 and 2022, nine collisions resulting in death or serious injury involved alcohol or drugs. The traditional approach to combating impaired driving has focused on changing individual behaviour, such as through educational campaigns. In contrast, the Safe System approach requires us to work more holistically with land use planning, transit planning and vehicle design.

## Traditional actions:

- » Educational campaigns
- » Sobriety checkpoints



## Safe System options:

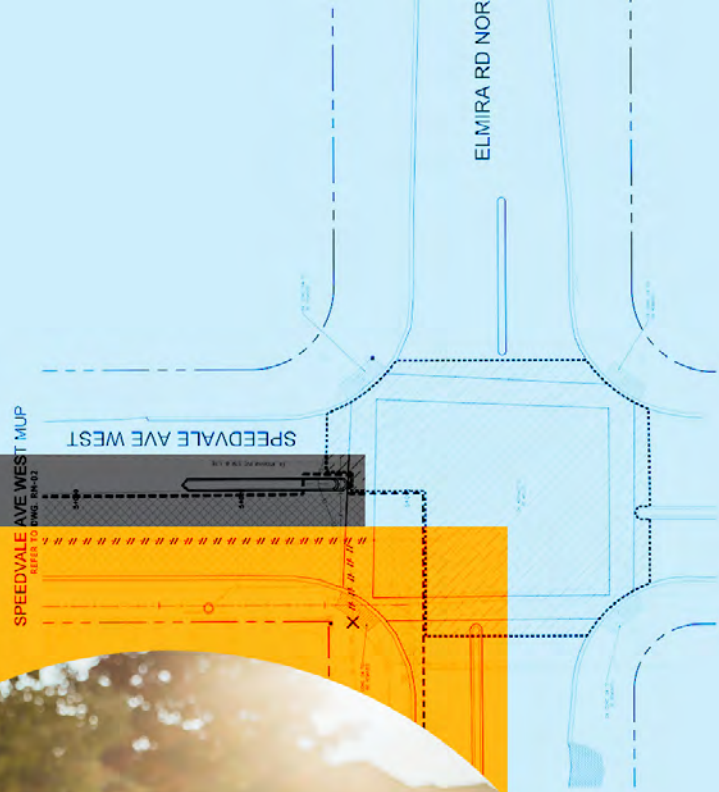
- » Enhanced public transit at night and on weekends
- » Neighbourhoods that allow restaurants
- » Alcohol interlock systems in all heavy vehicles<sup>38</sup>



## Takeaway

- » Advocate, collaborate with, and provide educational opportunities to a wide variety of municipal departments, partners, professions and governmental bodies.

# ZERO IS POSSIBLE



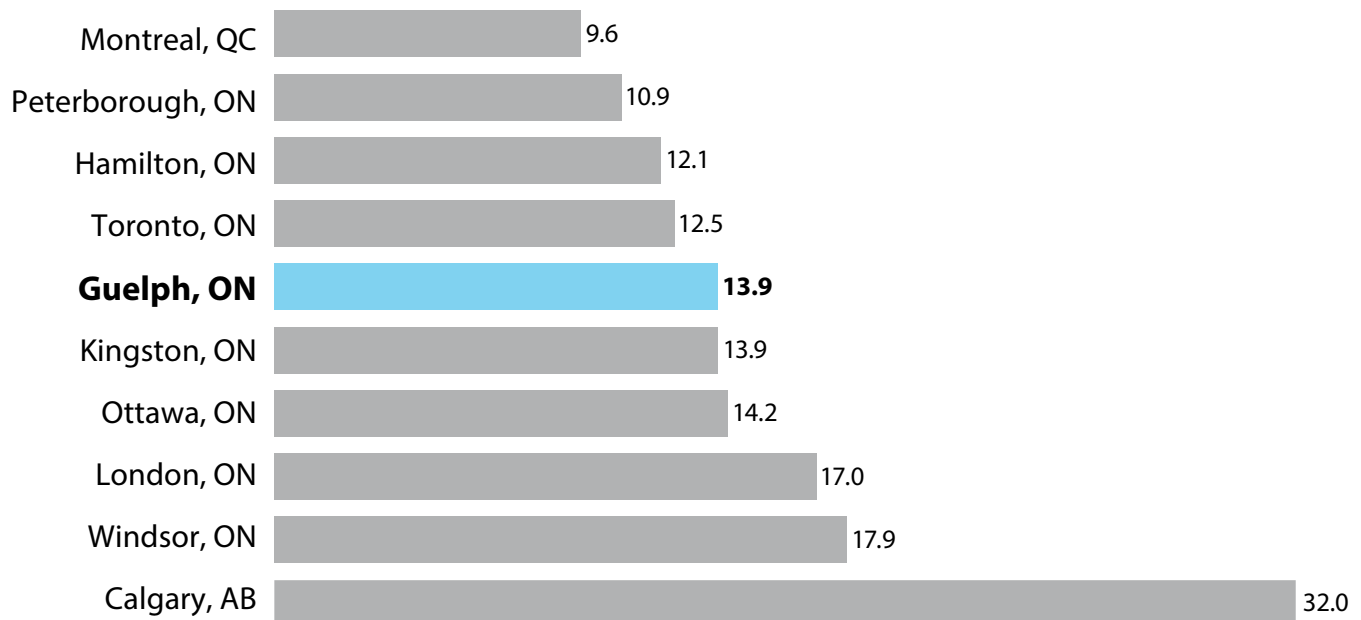
# Where we are now

**While there is work ahead to reach zero, we should recognize the progress we've already made.**

In 2022, Guelph achieved **346 days** without a single collision-related serious injury or death on our roads.

Our streets are as safe as other Ontario cities, but we have room to improve, even as Guelph's population continues to grow. Larger Canadian cities like Toronto, Hamilton and Montreal have a lower per capita rate of deaths and serious injuries than Guelph.

## **Average annual number of people seriously injured or killed by a vehicle per 100,000 population<sup>39</sup>**



We know through Vision Zero, we can do better. The concept of Vision Zero was first introduced in Sweden in 1997, and has proven to be very successful in reducing collision-related deaths worldwide. Today, Vision Zero has been widely adopted around the globe and is endorsed by 25 cities across Canada.<sup>40</sup>

# Success stories

## Vision Zero is working in North American cities:



### Edmonton, Alberta

Collision-related deaths decreased by **50 per cent** since adopting Vision Zero in 2015.<sup>41</sup>



### Montreal, Quebec

Collision-related serious injuries and deaths decreased by **65 per cent** since 2005.<sup>42</sup>



### Hoboken, New Jersey

**Seven** consecutive years without a death caused by a collision.<sup>43</sup>

## Around the world, many cities are already there.

Between 2018 and 2022, more than **40 major European cities** with larger populations than Guelph achieved Vision Zero.<sup>44</sup> Bold steps produce results:

- » **30 km/h speed limit:** Cities across Europe have chosen the **City 30** model, implementing a city-wide speed limit of 30 km/h. This has led to a **37 per cent** reduction in collision-related deaths.<sup>45</sup>
- » **Intelligent Speed Assistance (ISA):** ISA technologies, also called speed limiters, can actively prevent a vehicle from exceeding the speed limit according to where it is being driven. Washington, DC mandates all convicted drivers of major speeding offences to have ISA devices installed in their vehicles.<sup>46</sup>
- » **No right turn on red:** Most countries in the world prohibit right turns on red unless otherwise signed. Montreal has banned right turns on red since 2003. Ontario cities, including Mississauga, are considering expanding such prohibitions as part of their Vision Zero Action Plan.<sup>47</sup>
- » **Roundabouts:** Carmel, Indiana, with a population of about 100,000, has 150 roundabouts, the most of any city in the United States. Since their introduction, the city has seen an **80 per cent** reduction in collisions causing injury.<sup>48</sup>

These cities show us that change is possible, and that Vision Zero is not just an aspirational goal, but a practical approach that delivers real, measurable improvements in road safety.



# OUR ACTION PLAN



# Our Action Plan

The City of Guelph endorsed Vision Zero in 2022. Since then, we have established a made-in-Guelph plan with cross-department actions that reflect the needs of our city.



Douglas Street

## Where did the actions come from?

The actions reflect Vision Zero principles, the Safe System approach and insights drawn from collision data and research. We reviewed strategies from leading Vision Zero municipalities, adapting relevant and effective actions for the Guelph context. The actions expand upon our existing Community Road Safety Strategy, while aligning with road safety measures and community engagement findings outlined in the Transportation Master Plan.

All actions were developed with the guidance of the City of Guelph's Vision Zero Steering Committee. It includes representatives from the City of Guelph, Wellington-Dufferin-Guelph Public Health, Guelph Police Service and the Ministry of Transportation.

## How will we fund this work?

Implementing this plan will require both capital and operating costs. The success of each action depends on sustained funding from the City of Guelph and other government partners.

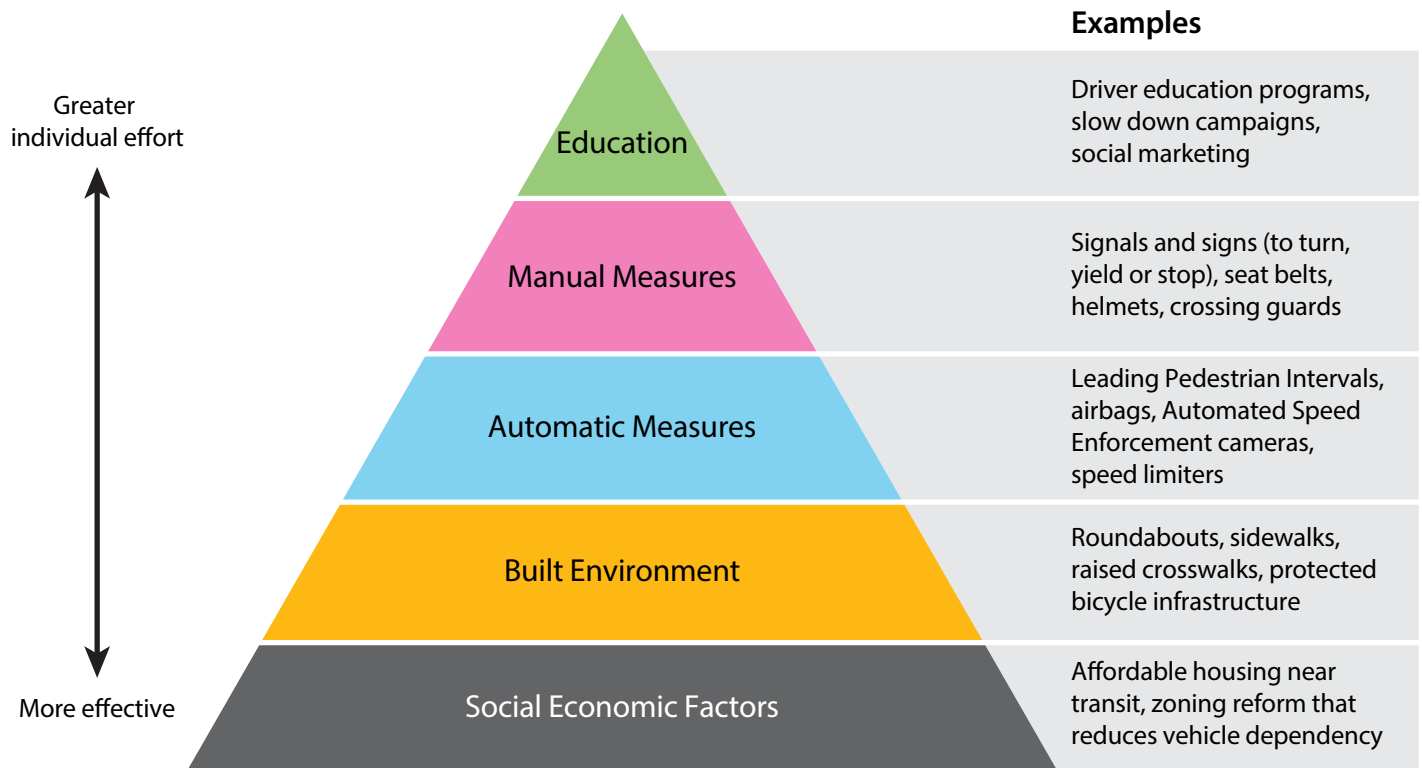
The City will review the capital budget forecast annually and recommend projects that advance Vision Zero and ensure the operating budget provides the staff capacity for implementation.

## Which actions work best?

Actions are most effective if they reduce and prevent the **transfer of kinetic energy**—the collision impact itself—to the greatest number of people in ways that require little or no individual effort. This approach comes from public health practitioners and is known as the **Safe Systems Pyramid**.<sup>49</sup>

Airbags are a great example of the Safe Systems Pyramid at work. Airbags reduce the impact of a driver hitting the steering wheel in a collision. As a driver, you don't need to learn how the airbag works or remember to turn it on—it is simply there, working all the time, always ready to protect. That's an example of an automatic measure.

## Safe Systems Pyramid<sup>50</sup>



# Focus areas

There are 68 actions, grouped into eight focus areas.

Each focus area features related actions. For a full list of actions, along with timelines and deliverables for each, please refer to the [Appendix](#).



Arkell Road and Victoria Road South

**1**  
ACTION PLAN

**8**  
FOCUS AREAS

**68**  
ACTIONS

# 1 Plan better ways to grow

Driving is risky. We will create more ways to get around and make it easier to access everyday needs close to home, reducing the risks that come with driving.

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## Featured actions

- » Develop **Green Development Standards** to require all new development applications to support the achievement of complete streets, compact, transit-supportive and complete communities, promote transit and active transportation and align with other priorities identified in the Transportation Master Plan.
- » Remove exclusionary zoning in Guelph's **Comprehensive Zoning Bylaw** to require residential zones to allow for **more diverse housing options**, beyond just single-dwelling units.
- » Implement the **Quality Transit Network**, including the conversion of general traffic lanes to dedicated transit lanes.
- » Complete and implement the **Transportation Demand Management Action Plan**, a social marketing strategy, to shift single-occupancy vehicle trips to other modes and disperse travel away from peak demand times and routes.

## Local solutions

Guelph's **Comprehensive Zoning Bylaw** was approved by City Council in 2023, allowing for more mixed-use zones, reducing parking requirements and introducing new bicycle parking requirements across the city. When we have more uses closer to where we live, and more ways to travel, we reduce the number and length of our trips by car, effectively lowering our collective risk.



## 2 Identify risk

**We won't wait for a collision to happen before we act. We will proactively investigate, identify and address the risk of collision-related injuries and deaths before they occur.**

### Featured actions

- » Incorporate the **High-Risk Network** into the City of Guelph's Capital Plan prioritization process. (The High-Risk Network identifies roads with the highest risk of collisions causing serious injuries and deaths as described in the corresponding local solution and the following page.)
- » Host **public engagement** events with residents who live and work near the High-Risk Network to better understand and respond to road safety concerns and mobility needs.
- » Perform **road safety** audits in areas identified as priorities within the High-Risk Network or in advance of road design or reconstruction.
- » Partner with Wellington-Dufferin-Guelph Public Health to evaluate **local data** and identify trends and risk factors for serious injuries and fatalities on Guelph's roads.



### Local solutions

Based on the risks previously identified, we created a new way to evaluate our roads that we're calling the **High-Risk Network**. Guelph's High-Risk Network is the first map of its kind in Canada, shown on the following page.

Every kilometre of Guelph's 600-kilometre street network was evaluated using known risk factors that increase frequency and severity of collisions causing serious injuries and deaths. This approach also accounts for historical collision data, prioritizing collisions that involved vulnerable road users.

The following factors were used to identify the High-Risk Network:

- » Historical collision data
- » Average daily vehicle volume
- » Average vehicle speed
- » Average daily pedestrian volume
- » Average daily cyclist volume
- » Percentage of population over the age of 65
- » Percentage of low-income population

# High-Risk Network

- Highest priority roads
- High priority roads



The High-Risk Network, shown by red and yellow lines on this map, helps us prioritize our Vision Zero actions. Solid red lines indicate a higher level of priority compared to the dotted yellow lines. Together they highlight the areas of highest risk within Guelph's entire road network.

Whether we're planning intersection upgrades, adding pedestrian crossings, focusing speed enforcement, or learning about local safety concerns, we're directing our actions where the highest risks exist in the city.

Sources: Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCAN, Parks Canada

# 3 Protect vulnerable people

People who walk, bike, use mobility devices and ride motorcycles need protection. We will pinpoint where vulnerable road users are most at risk and install infrastructure that protects them from collisions with vehicles.

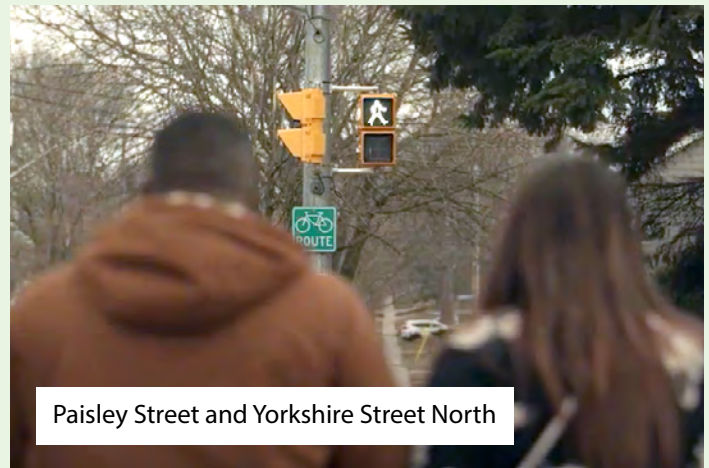
## Featured actions

- » Expand **Community Safety Zones** designation beyond school zones to align with the High-Risk Network.
- » Install safety measures that protect **vulnerable road users** based on the High-Risk Network, mobility needs and concerns of local residents.
- » Implement cycling facility improvements, particularly at intersections, as identified in the **Cycling Spine Network** and the **Cycling Master Plan**.
- » Expand the installation of **Leading Pedestrian Intervals (LPIs)** and **Leading Bike Intervals (LBIs)**.
- » Study travel patterns and safety concerns of **older residents** who live near the High-Risk Network.
- » Develop a **Pedestrian Master Plan** that enhances pedestrian safety within the built environment as identified in the Transportation Master Plan.

## Local solutions

**Leading Pedestrian Intervals** are currently active in 12 locations across Guelph. These signals allow pedestrians to begin crossing the road before vehicles move, giving drivers more time to notice them.

Research conducted in Guelph with Transport Canada found that LPIs reduced potential conflicts between people driving and people walking by **52 per cent**.



Paisley Street and Yorkshire Street North

# 4 Design safe streets

All road users need to be safe on our streets. We will apply new design standards to roads we add or change, especially at intersections, to address known safety issues.

## Featured actions

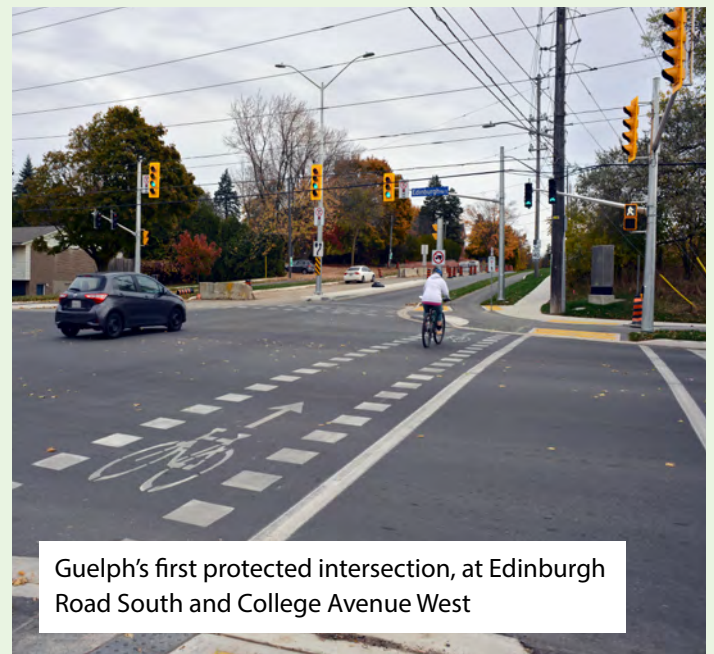
- » Reference the **Complete Streets Design Guide** and **Multi-Modal Level of Service Guidelines** to inform all future street design and road reconstructions.
- » Implement the **Downtown Infrastructure Renewal Program**, increasing buffers between pedestrian walkways and the road, and introducing mid-block crossings where appropriate.
- » Create a city-wide strategy for planning and designing **roundabouts**.
- » Implement Guelph's first **neighbourhood bike boulevard**, using modal filters to increase safety and enhance mobility for those who bike.
- » Investigate implementing a **No Right Turn on Red** policy along the High-Risk Network and throughout Guelph.



## Local solutions

**Complete Streets Designs** are road designs meant to consider the surrounding area, various uses and the needs of all users, including those who walk, bike, take transit and drive. Importantly, Complete Streets Designs are meant for **All Ages and All Abilities**, often called AAA ("Triple A"). This design approach makes the road safer for everyone—not only vulnerable road users, but also people driving—offering more options for people to choose from.

Guelph's first **protected intersection** was installed at Edinburgh Road South and College Avenue West in 2024. The design includes increased physical separation between people who walk and bike and turning vehicles, enhancing overall safety at the intersection.



# 5 Reduce speeds

Speed predicts the survival rate of those impacted by a collision. We will prioritize actions that reduce vehicle speeds so that when collisions happen, fewer people will be seriously injured or killed.

## Featured actions

- » Administer, evaluate and expand the **Automated Speed Enforcement (ASE) camera** and **red light camera** programs based on proven effectiveness.
- » Review and adjust **signal progression timing** in ways that guide drivers to comply with speed limits, especially along the High-Risk Network.
- » Review and update the City's **Traffic Calming Policy** every five years.

## Local solutions

**Automated Speed Enforcement** cameras were first installed in August 2023, covering eight designated school zones across the city. Data shows that the presence of ASE cameras has **reduced average speeds by 20 per cent** (9 km/h), with drivers now three times more likely to stay under the posted speed limit.

In all residential neighbourhoods across Guelph, **speed limits** were lowered from 50 km/h to 40 km/h. Currently, 68 per cent of Guelph's roads have a speed limit of **40 km/h** or less.



# 6 Be data-driven

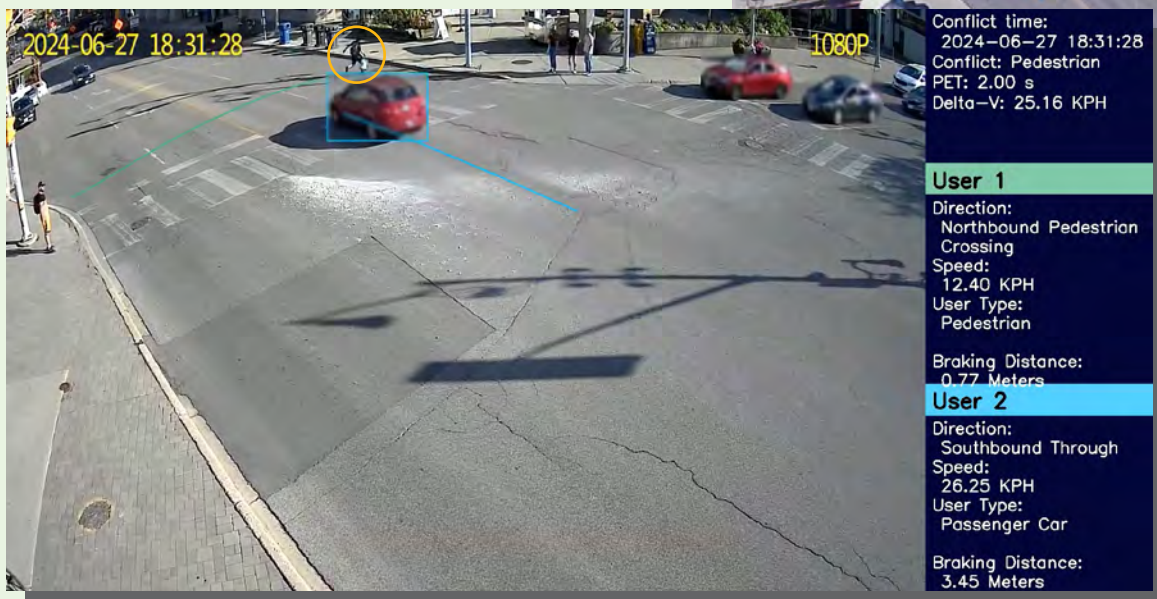
Data guides all our decisions. We have captured new risk-based data sets and will actively pursue research partnerships to help analyze and interpret our data.

## Featured actions

- » Integrate the use of conflict-based road safety analysis to capture **near-miss collisions**.
- » Collect and analyze **traffic volume data**, including crowd-sourced data sets on walking and cycling.
- » Review pedestrian, cyclist, e-scooter and motorcycle **injury data** records from the local emergency department to inform design and maintenance of off-road trails and on-road infrastructure that can prevent future injuries.
- » Investigate the installation of **telematics systems** within the City's fleet in order to record, evaluate and adjust driver behaviour. (Telematics systems track vehicle movements and location data, including speed, braking and sudden stops.)

## Local solutions

By using **video, radar and connected vehicle data** technologies, we are now able to detect near-miss conflicts. While a collision didn't occur, we can identify specific areas where vehicles frequently come close to a collision, enabling us to take proactive measures to prevent future harm.



Sample views of our data technologies showing near-miss conflicts at Quebec Street and Wyndham Street North, including a near-miss where a person walking was nearly hit by someone driving.

# 7 Work together

Road safety is a shared responsibility. We will collaborate with our partners to amplify road safety measures and communicate needs and solutions at the local, provincial and national levels.

## Featured actions

- » Partner with **Guelph Police Service** to support enforcement initiatives, identify unsafe travel behaviours and collaborate on road safety awareness campaigns.
- » Advise and support the **Wellington-Dufferin-Guelph Active and Safe Routes to School Committee**.
- » Partner with **Guelph General Hospital** to investigate trends in serious injuries and fatalities on Guelph roads, and explore solutions to enhance post-collision care.
- » Advocate to **Transport Canada** to advance driver assistance systems, intelligent speed assistance systems and autonomous vehicle safety standards in Canada.

## Local solutions

The first **Vision Zero Walkshop** took place in October 2023 in the **Onward Willow** neighbourhood, supported by Parachute, a national charity dedicated to injury prevention. This neighbourhood was previously identified as an underrepresented and high-priority area based on our traffic calming request study.

The event brought together 55 participants, including municipal staff, road safety advocates and local residents. They walked together to experience what road safety looks and feels like, and to discuss the opportunities and challenges to achieving Vision Zero.



Walkshop event in Onward Willow

# 8 Learn together

Changing our streets starts with changing our mindset. We will be transparent about why we are making changes and create opportunities for people to view roads as shared public spaces that belong to all of us.

## Featured actions

- » Host a **child and youth competition** to complement a Vision Zero **awareness campaign**.
- » Create and present sustainable transportation and road safety topics in **schools**.
- » Update City of Guelph's **Vision Zero Dashboard** with latest collision data and add new micromobility data.
- » Establish an **Open Streets** pilot program.
- » Explore the use of **road murals and placemaking** features as tools to enhance the safety of vulnerable road users.

## Local solutions

Changing the way we think about our roads requires new partners and skills. Moving beyond road safety messaging, we need to help residents experience what more public space feels like.

The City's Culture and Recreation department is an integral part of Vision Zero. With their help, we are exploring how residents and artists can work together to make road murals that both beautify and reinforce existing protective road infrastructure. The department is also establishing Guelph's first Open Streets pilot program. An **Open Street** temporarily opens a street to people, and closes it to cars, to create free recreational programming and activities for all ages and abilities.



Road mural at Fountain Street West and Dublin Street South, painted in 2017 by local residents including kids

# Key Performance Indicators

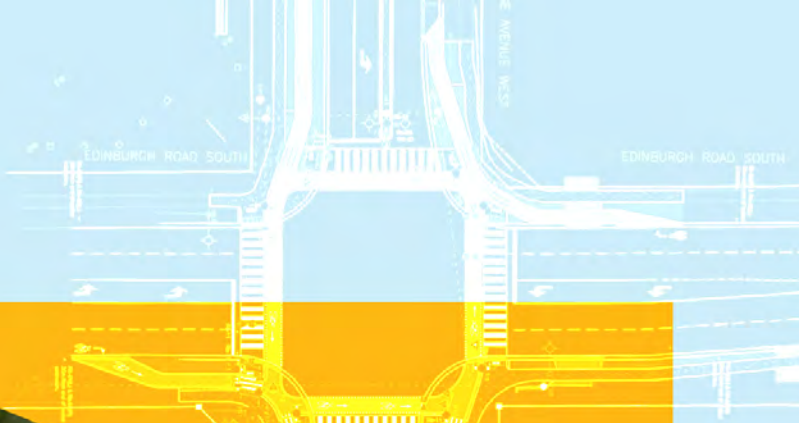
Key Performance Indicators (KPIs) help measure our progress.

While achieving zero serious injuries and deaths is our ultimate goal, there are several other indicators that can indicate the effectiveness and success of our strategy:

- » Annual number of **people killed/seriously injured** as a result of a motor vehicle collision per 100,000 population
- » Number of **road safety audits** performed per year
- » Number of **safety improvements** installed on the High-Risk Network per year
- » Percentage change in **vehicle speeds** along the High-Risk Network
- » Resident **awareness** of Vision Zero
- » User **perception of safety** by modality

These KPIs will be tracked and evaluated annually to ensure we are on course to achieve Vision Zero, and to guide adjustments to our strategy where necessary.





**NEXT  
STEPS**



# The road ahead

## The Action Plan for Safe Streets provides our first comprehensive roadmap for Vision Zero in Guelph.

Following the launch of our Action Plan in 2025, we will begin introducing Vision Zero, including the Safe System approach, our focus areas and specific actions, to our partners, the media and all Guelph residents. In this first year, our goal will be to share our message widely, gather insights and refine our actions to best serve the people of Guelph.

The Appendix details each action, identifying the responsible City departments and divisions, and a timeline. Every year, we will update our Vision Zero Dashboard with collision data, emerging trends and progress toward our Key Performance Indicators. Throughout this period, the City of Guelph's Vision Zero Steering Committee will continue to meet quarterly and support each partner's road safety efforts. In 2028–2029, we will publish an update on our Action Plan progress and adjust our Action Plan as needed to reflect our current understanding and priorities.

While this goal is ambitious, cities around the world have proven it's possible to reach zero by addressing the root causes of serious injuries and deaths. Vision Zero is a choice. We choose to put safety first, above all else. We choose to make our streets and communities safe for all road users. **We chose Vision Zero. Now it's time to act.**



# APPENDIX

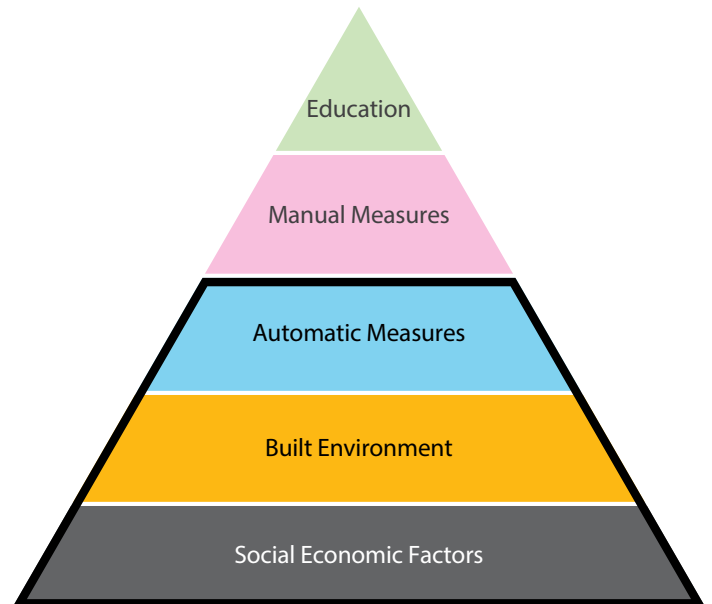


# Detailed actions

The Action Plan is made up of 68 actions. Each action has a deliverable or activity, timeline and responsible City departments and divisions.

These details are outlined in the table spread over the following pages.

In the following table, a pyramid symbol ( $\Delta$ ) next to an action number is used to highlight actions that are highly effective according to the three base layers of the Safe Systems Pyramid. These actions prioritize automatic measures, the built environment and social economic factors.



Three base layers of the Safe Systems Pyramid



Action no.	Action	Focus area	Deliverable / Activities	Timeline	Departments / Divisions
1 Δ	Require all development applications to address policies that support the establishment of complete communities and transit-supportive development in the Clair-Maltby Secondary Plan Area and the City's Strategic Growth Areas.	Plan better ways to grow	City of Guelph Official Plan; Clair-Maltby Secondary Plan	Medium-term (3–5 years)	Transportation Planning; Transportation Engineering; Guelph Transit; Planning and Building Services
2 Δ	Develop Green Development Standards to require all new development applications to support the achievement of complete streets, compact, transit-supportive and complete communities, promote transit and active transportation and align with other priorities identified in the Transportation Master Plan.	Plan better ways to grow	Criteria document	Short-term (1–2 years)	Transportation Planning; Guelph Transit; Planning and Building Services
3 Δ	Remove exclusionary zoning in Guelph's Comprehensive Zoning Bylaw to require residential zones to allow for more diverse housing options, beyond just single-dwelling units.	Plan better ways to grow	Comprehensive Zoning Bylaw adopted (2023)	Initiated	Planning and Building Services
4 Δ	Implement the Quality Transit Network, including the conversion of general traffic lanes to dedicated transit lanes.	Plan better ways to grow	Quality Transit Network Plan	Medium-term (3–5 years)	Transportation Planning; Transportation Engineering; Guelph Transit
5	Reduce the parking requirements on affordable housing developments as part of Guelph's Housing Affordability Strategy.	Plan better ways to grow	Housing Affordability Strategy	Short-term (1–2 years)	Planning and Building Services; Transportation Planning
6	Complete and implement the Transportation Demand Management (TDM) Action Plan, a social marketing strategy, to shift single-occupancy vehicle trips to other modes and disperse travel away from peak demand times and routes.	Plan better ways to grow	TDM Action Plan	Initiated	Transportation Planning; Transportation Engineering
7	Prepare a Goods Movement Strategy that aims to reduce the risk to vulnerable road users from heavy and large vehicles.	Plan better ways to grow	Goods Movement Strategy	Initiated	Transportation Planning; Transportation Engineering
8	Develop a Connectivity Index to track how well the various transportation networks are complete and connected throughout the community.	Plan better ways to grow	Connectivity Report	Medium-term (3–5 years)	Transportation Planning; Transportation Engineering
9	Ensure safety through design is referenced in the City of Guelph's next Official Plan update.	Plan better ways to grow	Official Plan update	Long-term (5–10+ years)	Transportation Planning; Transportation Engineering; Planning and Building Services
10 Δ	Incorporate the High-Risk Network into the City of Guelph's Capital Plan prioritization process.	Identify risk	Updated decision matrix tool	Short-term (1–2 years)	Transportation Engineering

Action no.	Action	Focus area	Deliverable / Activities	Timeline	Departments / Divisions
11	Review and incorporate the High-Risk Network into priorities and plans identified within the Transportation Master Plan and Trails Master Plan.	Identify risk	Standard operating procedure	Short-term (1–2 years)	Transportation Planning; Transportation Engineering; Parks
12	Host public engagement events with residents who live and work near the High-Risk Network to better understand and respond to road safety concerns and mobility needs.	Identify risk	Public engagement events	Annual	Transportation Engineering; Strategic Comms and Community Engagement
13	Establish road safety audit process and criteria guided by a Safe System approach.	Identify risk	Road safety audit process and criteria	Short-term (1–2 years)	Transportation Engineering
14	Perform road safety audits in areas identified as priorities within the High-Risk Network or in advance of road design or reconstruction.	Identify risk	Road safety audit report	Short-term (1–2 years)	Transportation Engineering
15	Perform an on-site fatal collision site analysis and recommendation report following every fatal collision in Guelph.	Identify risk	Fatal collision reports	Initiated	Transportation Engineering
16	Partner with Wellington-Dufferin-Guelph Public Health to evaluate local data and identify trends and risk factors for serious injuries and fatalities on Guelph's roads.	Identify risk	Meetings	Annual	Transportation Planning; Transportation Engineering
17 Δ	Expand Community Safety Zones designation beyond school zones to align with the High-Risk Network.	Protect vulnerable people	Policy	Initiated	Transportation Engineering
18 Δ	Install safety measures that protect vulnerable road users based on the High-Risk Network, mobility needs and concerns of local residents.	Protect vulnerable people	Annual road safety project completion	Annual	Transportation Engineering
19 Δ	Implement cycling facility improvements, particularly at intersections, as identified in the Cycling Spine Network and the Cycling Master Plan.	Protect vulnerable people	New cycling infrastructure	Medium-term (3–5 years)	Transportation Planning; Transportation Engineering; Design and Construction
20 Δ	Continue to implement the Sidewalk Infill Program.	Protect vulnerable people	New sidewalk infrastructure	Annual	Transportation Planning; Transportation Engineering
21 Δ	Expand the installation of Leading Pedestrian Intervals (LPIs) and Leading Bike Intervals (LBIs).	Protect vulnerable people	LPI and LBI standard operating procedure update; LPI and LBI installation	Medium-term (3–5 years)	Transportation Engineering
22 Δ	Purchase Guelph Transit buses with collision avoidance systems.	Protect vulnerable people	New Guelph Transit buses	Initiated	Guelph Transit; Fleet Services

Action no.	Action	Focus area	Deliverable / Activities	Timeline	Departments / Divisions
23	Study travel patterns and safety concerns of older residents who live near the High-Risk Network.	Protect vulnerable people	Public event	Short-term (1–2 years)	Transportation Engineering; Strategic Comms and Community Engagement; Recreation Services
24	Develop a Pedestrian Master Plan that enhances pedestrian safety within the built environment, as identified in the Transportation Master Plan.	Protect vulnerable people	Pedestrian Master Plan	Medium-term (3–5 years)	Transportation Planning; Transportation Engineering
25	Create a micromobility strategy directed by a Safe System approach.	Protect vulnerable people	Recommendation report	Short-term (1–2 years)	Transportation Planning; Transportation Engineering
26	Develop a list of locations where trails meet a road mid-block, and enhanced pedestrian and cycling crossings could be prioritized for consideration.	Protect vulnerable people	List	Short-term (1–2 years)	Parks; Transportation Engineering
27	Review mid-block bus stop locations and evaluate the safety of pedestrian crossings.	Protect vulnerable people	List of mid-block bus stop locations; recommendation report	Short-term (1–2 years)	Transportation Engineering; Guelph Transit
28	Review the City of Guelph’s standard operating procedures and warrant criteria for all pedestrian crossings and crossing times at signalized intersections and strategize to incorporate equity considerations.	Protect vulnerable people	Updated standard operating procedure	Short-term (1–2 years)	Transportation Engineering
29	Administer the school crossing guard program.	Protect vulnerable people	School crossing guards at 35 locations	Annual	Transportation Engineering
30 Δ	Reference the Complete Streets Design Guide and Multi-Modal Level of Service Guidelines to inform all future street design and road reconstructions.	Design safe streets	Complete Streets Design Guide	Short-term (1–2 years)	Transportation Planning; Transportation Engineering; Development and Environmental Engineering; Design and Construction
31 Δ	Implement the Downtown Infrastructure Renewal Program, increasing buffers between pedestrian walkways and the road, and introducing mid-block crossings where appropriate.	Design safe streets	Downtown Infrastructure Renewal Program	Medium-term (3–5 years)	Transportation Planning; Transportation Engineering; Design and Construction
32 Δ	Create a city-wide strategy for planning and designing roundabouts.	Design safe streets	Roundabout policy	Medium-term (3–5 years)	Transportation Planning

Action no.	Action	Focus area	Deliverable / Activities	Timeline	Departments / Divisions
33 Δ	Implement Guelph's first neighbourhood bike boulevard, using modal filters to increase safety and enhance mobility for those who bike.	Design safe streets	New cycling infrastructure	Medium-term (3–5 years)	Transportation Planning
34 Δ	Upgrade temporary and seasonal traffic calming materials to permanent materials where effectiveness has been proven.	Design safe streets	Permanent traffic calming installation	Annual	Transportation Engineering
35	Investigate implementing a No Right Turn on Red policy along the High-Risk Network and throughout Guelph.	Design safe streets	Policy scan	Medium-term (3–5 years)	Transportation Planning; Transportation Engineering
36	Continue to ensure that provincial street lighting standards are being met across entire road network.	Design safe streets	Street lighting review	Medium-term (3–5 years)	Transportation Engineering
37	Pursue provincial and federal funding to support significant infrastructure improvements that enhance road safety.	Design safe streets	Inter-governmental scan	Annual	Transportation Engineering
38	Advocate to Ontario's Ministry of Transportation for the long-term replacement of all at-grade intersections on the Hanlon Expressway with interchanges, overpasses or underpasses; and advocate for interim measures to improve conditions for people who walk and cycle across the Hanlon Expressway.	Design safe streets	Meetings; letters; technical drawing review; new infrastructure	Annual	Transportation Planning; Transportation Engineering
39 Δ	Administer, evaluate and expand the Automated Speed Enforcement (ASE) camera program based on proven effectiveness.	Reduce speeds	Annual evaluation of ASE program; purchase of new ASE cameras	Short-term (1–2 years)	Transportation Engineering; Court Services
40 Δ	Administer, evaluate and expand the red light camera program, building on its proven effectiveness.	Reduce speeds	Annual evaluation of red light camera program; purchase of new red light cameras; standard operating procedure	Short-term (1–2 years)	Transportation Engineering; Court Services
41 Δ	Review and adjust signal progression timing in ways that guide drivers to comply with speed limits, especially along the High-Risk Network.	Reduce speeds	Signal timing review	Medium-term (3–5 years)	Transportation Engineering
42	Administer, evaluate and expand permanent and mobile speed boards based on their proven effectiveness.	Reduce speeds	Summary report	Short-term (1–2 years)	Transportation Engineering
43	Establish speed limit reduction criteria for an annual review of arterial roads.	Reduce speeds	Criteria for speed limit reduction	Short-term (1–2 years)	Transportation Engineering
44	Perform speed limit reviews for arterial roads and submit recommendations to City Council for speed limit changes.	Reduce speeds	Report	Annual	Transportation Engineering

Action no.	Action	Focus area	Deliverable / Activities	Timeline	Departments / Divisions
45	Review and update the City's Traffic Calming Policy every five years.	Reduce speeds	Updated Traffic Calming Policy (in 2025)	Short-term (1–2 years)	Transportation Engineering
46	Integrate the use of conflict-based road safety analysis to capture near-miss collisions.	Be data-driven	Standard operating procedure	Short-term (1–2 years)	Transportation Engineering
47	Collect and analyze traffic volume data, including crowd-sourced data sets on walking and cycling.	Be data-driven	Data set	Annual	Transportation Engineering
48	Review pedestrian, cyclist, e-scooter and motorcycle injury data records from the local emergency department to inform design and maintenance of off-road trails and on-road infrastructure that can prevent future injuries.	Be data-driven	Recommendation report	Initiated	Parks; Transportation Engineering; Transportation Planning
49	Enhance the High-Risk Network with new and updated data sets.	Be data-driven	Data-sharing agreements; updated High-Risk Network map	Initiated	Transportation Engineering
50	Investigate the installation of telematics systems within the City's fleet in order to record, evaluate and adjust driver behaviour.	Be data-driven	Telematics pilot program	Short-term (1–2 years)	Fleet Services
51	Create streamlined process for collaborating with road safety research partners.	Be data-driven	Standard operating procedure	Initiated	Transportation Engineering
52	Collaborate with Vision Zero Steering Committee to support knowledge sharing, event coordination and the achievement of Guelph's Action Plan for Safe Streets and other road safety efforts.	Work together	Meetings	Annual	Transportation Planning
53	Partner with Guelph Police Service to support enforcement initiatives, identify unsafe travel behaviours and collaborate on road safety awareness campaigns.	Work together	Meetings	Annual	Transportation Engineering
54	Advise and support the Wellington-Dufferin-Guelph Active and Safe Routes to School Committee.	Work together	Meetings	Annual	Transportation Planning
55	Partner with Guelph General Hospital to investigate trends in serious injuries and fatalities on Guelph roads, and explore solutions to enhance post-collision care.	Work together	Meetings	Annual	Transportation Engineering
56	Participate in national and provincial road safety communities of practice and knowledge-sharing events including the Road Safety Coalition of Ontario, National Injury Prevention Day and Canadian Association for Road Safety Professional conference.	Work together	Event attendance	Annual	Transportation Engineering

Action no.	Action	Focus area	Deliverable / Activities	Timeline	Departments / Divisions
57	Review and support enhanced driver education, training initiatives and testing with the Ministry of Transportation.	Work together	Meetings	Annual	Transportation Engineering
58	Advocate to the Ministry of Transportation to enhance minimum maintenance standards in ways that maximize the mobility and safety for people who walk and cycle in the winter.	Work together	Meetings	Annual	Transportation Planning; Operations
59	Advocate to Transport Canada to advance driver assistance systems, intelligent speed assistance systems and autonomous vehicle safety standards in Canada.	Work together	Meetings; research partnership	Medium-term (3–5 years)	Transportation Planning
60	Create a comprehensive communication and marketing strategy to promote road safety projects, programs and initiatives that support Vision Zero objectives on City of Guelph channels.	Learn together	Strategy	Short-term (1–2 years)	Strategic Comms and Community Engagement; Transportation Engineering
61	Host a child and youth competition to complement a Vision Zero awareness campaign.	Learn together	Designs created; signs and other campaign materials ordered	Short-term (1–2 years)	Strategic Comms and Community Engagement; Transportation Engineering
62	Create and present sustainable transportation and road safety topics in schools.	Learn together	Workshop content; presentation	Short-term (1–2 years)	Transportation Planning; Transportation Engineering
63	Integrate Vision Zero content and language into City of Guelph municipal driving training materials.	Learn together	Training material	Short-term (1–2 years)	Transportation Engineering; Fleet Services
64	Update City of Guelph’s Vision Zero Dashboard with latest collision data and add new micromobility data.	Learn together	Vision Zero Dashboard web page update	Annual	Transportation Engineering
65	Monitor and report on Vision Zero Key Performance Indicators (KPIs).	Learn together	Activity report	Annual	Transportation Engineering
66	Outline the process on City website for residents to organize temporary block parties.	Learn together	Updated website	Short-term (1–2 years)	Transportation Engineering; Operations
67	Establish an Open Streets pilot program.	Learn together	Event	Short-term (1–2 years)	Transportation Planning; Transportation Engineering; Recreation Services
68	Explore the use of road murals and placemaking features as tools to enhance the safety of vulnerable road users.	Learn together	Study best practices; identify funding sources	Short-term (1–2 years)	Transportation Engineering; Museums and Culture

# Endnotes

- 1 Naomi G. Williams, *Motor vehicle collision-related injuries and deaths among Indigenous Peoples in Canada: Meta-analysis of geo-structural factors*, Canadian Journal of Rural Medicine, 2022
- 2 Data does not include the Hanlon Expressway since it is a provincial highway, not a City road. The map contains five locations where two serious injuries occurred at the same location during the same year, although it appears only one serious injury took place. These locations include Woodlawn Road West and Arrow Road, Victoria Road North and Woodlawn Road East, Wellington Street East and Macdonell Street, Edinburgh Road South and Honey Crescent, and Gordon Street and Arkell Road.
- 3 All base maps, including pages 8, 37 and 48, were created using ArcGIS® software by Esri. ArcGIS® and ArcMap™ are the intellectual property of Esri and are used herein under license. Copyright © Esri. All rights reserved.
- 4 Societal costs are derived from estimations provided by Transport Canada. These costs are calculated using values provided by the Bank of Canada and account for direct costs (property damage, emergency response services, medical and insurance costs, and traffic delays) and indirect costs (disability and workdays lost by the victims, as well as pain and suffering).
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- 6 Xiaoquan Yao, *At-a-glance – 2015 injury deaths in Canada*, Health Promotion and Chronic Disease Prevention in Canada: Research, Policy and Practice, 2019
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- 8 Government of South Australia, *The Safe System Approach - THINK! Road Safety*, 2024
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- 10 Data includes collisions that occurred on the Hanlon Expressway.
- 11 Ministry of Transportation, *Motor Vehicle Collision Report (MVCR) Manual*, 2011
- 12 The year 2013 is omitted due to the quality of data. The year 2020 saw a dip in total numbers, which can be attributed to reduced travel during the COVID-19 pandemic. Data includes collisions that occurred on the Hanlon Expressway.
- 13 Collision data that refers to pedestrians—or people walking—includes people who use e-scooters, skateboards, or wheelchairs, as well as outdoor construction workers.
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- 19 Linda Lim, *Development of Road Diet Segment and Intersection Crash Modification Factors*, Journal of the Transportation Research Board, 2022
- 20 Sami Mecheri, *The effects of lane width, shoulder width and road cross-sectional reallocation on drivers' behavioral adaptations*, Accident Analysis & Prevention, 2017
- 21 Graphic adapted from a summary of studies highlighted by the World Road Association, *The role of road engineering in combatting driver distraction and fatigue road safety risks*, 2016
- 22 Mattea Powell, University of Toronto unpublished master's thesis, *An exploration of drivers' scanning behaviors towards vulnerable road use areas at intersections: An on-road study*, 2024. (The crosshair graphic within the corresponding images has been altered from the original image.)
- 23 Thomas A. Dingus, *Driver crash risk factors and prevalence evaluation using naturalistic driving data*, Proceedings of the National Academy of Sciences, 2016

- 24** Alena Erke, *Making Vision Zero real: Prevention of accidents and injuries among elderly pedestrians*, Institute of Transport Economics, 2008
- 25** Ontario Ministry of Health and Long-Term Care, *Ontario Mortality Data [2005–2018]*, Extracted July 10, 2023
- 26** Statistics Canada, *Circumstances surrounding pedestrian fatalities, 2018 to 2020*, The Daily, 2023
- 27** Graph adapted based on data collected by the Canadian Coroner and Medical Examiner Database, 2018 to 2020, as presented in Statistics Canada, *Circumstances surrounding pedestrian fatalities, 2018 to 2020*, The Daily, 2023
- 28** Wen Hu, *Relationship of pedestrian crash types and passenger vehicle types*, Journal of Safety Research, 2022
- 29** Figure derived from NACTO, *City Limits: Setting Safe Speed Limits on Urban Streets*, 2020
- 30** Adapted from several studies referenced by the World Health Organization, *Speed management: a road safety manual for decision-makers and practitioners*, 2008
- 31** Statistics Canada, Table 20-10-0002-01, *New motor vehicle sales, by type of vehicle*, 2024
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- 33** Guelph Lab, *Enhancing equity and road safety in Guelph*, 2021
- 34** Numerous studies describe the relationship between exposure and risk depending on socio-economic status, including Robert B. Noland, *Accident Analysis & Prevention*, 2018; Wesley E. Marshall, *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 2017; Federal Highway Administration, *Promising Practices for Transportation Agencies to Address Road Safety among People Experiencing Homelessness*, 2024; and Naomi Schwartz, *Health & Place*, 2022
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Creative Direction, Graphic Design and Copyediting by [Jay Wall](#) RGD

**For more information:**

City of Guelph  
1 Carden Street  
Guelph, ON N1H 3A1  
519-822-1260  
TTY 519-826-9771  
guelph.ca

[guelph.ca/visionzero](http://guelph.ca/visionzero)

